01ˢᵗ–03ʳᵈ
December
2023

SOUVENIR

SIFS India and Clue4 Evidence Organised

4ᵗʰ INTERNATIONAL
FORENSIC SCIENCE CONFERENCE

Forensic Science beyond Interdisciplinary Applications

In Association with:

For more information:
www.forensicevents.com | www.sifs.in

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About the Conference

Forensic Science has been growing significantly over the past few decades; the essential demand for progress has been met with bright young minds putting their extensive efforts into advancements in the field. SIFS India and other fellow organizations have been substantial support pillars in establishing the mark of forensics in India and across the globe. The motive of constant learning and sharing of recent studies and advancements has been met constantly with their untiring efforts.

The 4th International Forensic Science Conference, where the intersection of science, technology, and justice converges in the pursuit of truth. Our conference is a dynamic forum that brings together forensic experts, scientists, and professionals from around the globe to explore the latest advancements in the field. From breakthroughs in DNA analysis to cutting-edge developments in digital forensics, this gathering serves as a catalyst for collaboration and knowledge exchange. With a focus on fostering interdisciplinary connections and addressing the challenges of modern investigative techniques, we are dedicated to advancing the role of forensic science in the quest for justice. Join us in this collective journey of discovery, as we delve into innovative approaches and contribute to the ever-evolving landscape of forensic science.

ORGANIZER

ABOUT SIFS

Sherlock Institute of Forensic Science has been a frontrunner in the field of forensic science. It has been conducting various events to maximise the reach of forensic science knowledge across the globe. This time it brings the 4th International Forensic Science Conference in collaboration with the University of the Philippines Manila, University of Baguio, Holy Angel University, Tarlac State University, and the Lyceum of the Philippines University, with the goal of sharing recent advancements and research happening around the globe with students and professionals to boost their knowledge and morale.Forensic science has been growing significantly over the past few decades; the essential demand for progress has been met with bright young minds putting their extensive efforts into advancements in the field. SIFS India, along with other prominent organisations, have been substantial support pillars in establishing the mark of forensics in India and worldwide. The motive of constant learning and sharing recent studies and advancements has been met constantly with their continuous efforts.

This conference provides a platform for avid learners to present their work, get better input from experienced individuals, and learn from esteemed personalities. Therefore, the conference aims to provide a platform for researchers, academicians, and professionals devoting their efforts to the domains of forensics, such as fingerprints, questioned documents, crime scene investigation, forensic odontology, forensic medicine and toxicology, forensic biology and serology, forensic psychology, cyber and digital forensics, and forensic physics, to flourish in the dimensions of the conference theme.

ORGANIZER

ABOUT
CLUE4 EVIDENCE
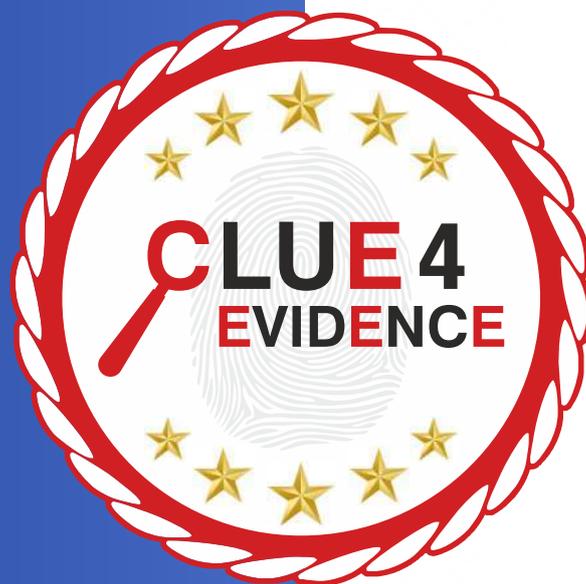
Evidence being one of the most wanted element in any legal trials/enquiries, failure in presenting appropriate authenticated evidence at suitable stage of the trial has been always a challenge in legal practice today. When criminals are acquitted while everyone blames the legal system, we had a different way to look at the situation and contribute our skills to the society and to be the reason for getting Justice to the victim.

Clue4 Evidence Forensic Investigations Private Limited (Clue4 Evidence Forensic Lab) is a dedicated corporate entity and has been recognized as the competent Forensic Laboratory in the field of testing and investigations. Incorporated in the year 2009, Clue4 Evidence Forensic Lab is now the most preferred Forensic partner for various high profile cases which are being investigated by Police and special investigation agencies across the Country. Having the corporate office at Bangalore, Clue4 Evidence Forensic Lab has been efficient in delivering various Forensic services to several clients across India and across the globe. The company has also been successful to offer Forensics as a tool to prevent the frauds and not just to investigate and has earned the clients from various sectors including banking, finance, insurance, housing development corporations, law enforcement (police and courts), educational institutions, corporate and individuals across the globe.

In the past several years of experience, the company has contributed to educate the people through numerous Workshops, Seminars and Certifications. The reports submitted by Clue4 Evidence has been a key evidence in passing judgement in several cases. Today, Clue4 Evidence Forensic Lab is known for its credibility and efficiency and as an organisation, we strive to offer the forensic needs of this society with the same spirit.

COLLABORATORS

UNIVERSITY OF THE PHILIPPINES MANILA

The University of the Philippines Manila (UP Manila) is one of the eight constituent universities within the University of the Philippines (UP) System. UP Manila is a public, secular institution of higher learning that offers academic and training programs, as well as extension services, primarily focused on the health sciences, health professions education, arts, and sciences. Its mission is to provide transformative health science-focused education, inspiring students to take creative and constructive actions in service to humanity.

COLLABORATORS

UNIVERSITY OF BAGUIO
PHILIPPINES

The University of Baguio, formerly known as Baguio Technical and Commercial Institute (Baguio Tech), is an autonomous private university located in Baguio, Philippines. Founded on August 8, 1948, by Fernando Gonzaga Bautista and Rosa Castillo Bautista, it initially had 80 students. As of 2018, the university had approximately 18,000 students at the tertiary level. The institution offers a diverse range of academic programs, including 21 undergraduate programs, 12 graduate programs, and 10 short-term programs across 11 colleges.

HOLY ANGEL UNIVERSITY
PHILIPPINES

Holy Angel University is a private Catholic research university in Angeles City, Philippines. Founded in June 1933 by Don Juan Nepomuceno and Fr. Pedro Paulo Santos, who was later named as the Archbishop of Cáceres, is considered the first lay-founded Catholic school as well as the first co-educational Catholic high school.[2] With a student population of over 21,000, it is the largest private institute of education with the largest student population in a single campus in Central Luzon.

COLLABORATORS

TARLAC STATE UNIVERSITY PHILIPPINES

Tarlac State University is a publicly-funded institution located in Tarlac City, Philippines. Established in 1906, it is the flagship academic institution of higher education in the province and offers a wide range of degree programs through its ten colleges and three campuses. The Tarlac State University aims to set a benchmark for culture and excellence in higher education. Furthermore, the university welcomes international students and has witnessed the graduation of numerous students from countries such as the USA, China, Hong Kong, Korea, and India.

LYCEUM OF THE PHILIPPINES UNIVERSITY

Lyceum of the Philippines University-Batangas (LPU-B), a private tertiary educational institution located in Region IV-A was established in 1966 by the late Senator, Dr. Sotero H. Laurel adopting the educational philosophy of his father, former President of the Philippines-Jose P. Laurel. This institution formally received its University status from the Commission on Higher Education (CHED) in 2008. Consequently, it has also maintained the Autonomous status, the highest recognition being awarded by CHED to few tertiary educational institutions in the country, after obtaining it in 2009 and 2016.

KNOWLEDGE PARTNERS MoU with

University of Philippines Manila

Holy Angel University Philippines

Atma Ram Sanatan Dharma College, University of Delhi

University of Baguio Phillipines

PSGR Krishnammal College for Women, Coimbatore

Centurion University Andhra Pradesh

Garden City University Bengaluru

Federal University of Technology Owerri Nigeria

Marathwada Mitra Mandal's Shankarrao Chavan Law College, Pune

National Post Graduate College, Lucknow

Saveetha Dental College SIMATS, Chennai

Srinivasan College of Arts & Science Perambalur, Tamil Nadu

Jaipur National University, Jaipur

K. R. Mangalam University, Gurugram

Holy Cross College Agartala

Medi-Caps University Indore

Mody University Sikar, Raj.

Lyceum of the Philippines University, Philippines

Tarlac State University Philippines

Renaissance University Indore

Guru Ghasidas University Bilaspur

Sharda University Gr. Noida

RNT University Bhopal

Galgotias University Gr. Noida

Aditya Degree & PG College Surampalem, A.P.

KNOWLEDGE PARTNERS MoU with

**Kalinga University
Naya Raipur**

**Bharti Vishwavidyalaya
Durg, Chhattisgarh**

**JECRC University
Jaipur, Raj.**

**Institute for Criminalistics,
Criminology and Security
Republic of Kosovo**

**SGT University
Gurugram, Haryana**

**SHUATS
Prayagraj, U.P.**

**Chandigarh University
Mohali, Punjab**

**Lovely Professional
University, Punjab**

**AJK College of Arts and Science,
Tamil Nadu**

**BMS College of Law
Bengaluru**

AFOHR

ORGANIZING SECRETARY

Vijay Rustagi

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Mahesh Sharma

Preeti Shah

Afreen Tarannum

Vivek Khare

Vikas Kumar

Manish Sharma

Ashi Yadav

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Banjita Priyadarshini

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Shweta Gupta

Sushmita

Somya Jinghania

Shilpa Babu

Sonali Priya

Rashi Verma

Vidushi Tripathi

Priyanka Yadav

Snehal Tripathi

Shivangi Srivastava

Dr. Ranjeet Kumar Singh
Organizing Chairman

**Phaneendar BN**
Co-Organizing Chairman

MESSAGE FROM THE ORGANIZING COMMITTEE

Sherlock Institute of Forensic Science, and Clue4 Evidence Forensic Lab, have been prominent institutions in the field of forensics. Over the past decade, they have earned recognition and appreciation for their commitment to excellence in forensic education, research, and investigation. The institutes have actively operated in various areas, aiming to rectify the historical neglect of forensics in the Indian context.

Forensic science and anthropology have witnessed significant growth in recent decades, thanks to the dedicated efforts of bright young minds. SIFS India and Clue4 Evidence, has played a crucial role in advancing the field of forensics in India and globally. They have consistently promoted continuous learning, sharing of recent studies, and staying abreast of advancements.

SIFS India and Clue4 Evidence are at the forefront of providing a platform for enthusiastic learners to showcase their work, receive valuable insights from experienced professionals, and learn from esteemed experts. I, with our organizing committee, welcome you to the conference designed to bring together researchers, academicians, and professionals dedicated to various domains of forensics, including fingerprint analysis, questioned documents, crime scene investigation, forensic odontology, forensic medicine, toxicology, biology, serology, psychology, cyber and digital forensics, and physics. The conference aims to enrich and expand the understanding of the theme within the field of forensics.

Message from the
SPEAKERS
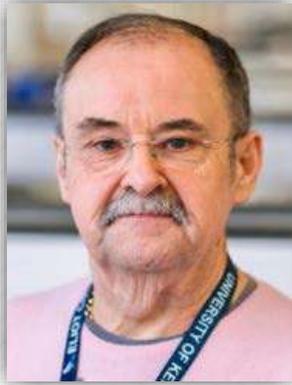
PROF. ROBERT GREEN OBE

(MA, MSc, M.Litt, DMS, SFHEA)

Fellow & Vice President, Chartered Society of Forensic Sciences, Division of Natural Sciences, University of Kent

The invitation to participate in your conference (and my first visit to India) has filled me with enthusiasm and a deep sense of privilege. I am thrilled to have the opportunity to be with you at this esteemed event and to share with you some of my experiences, over almost 40 years. The title of my talk will be 'Forensic Science at its Best'. I hope that this will underscore the massive contribution, forensic science professionals and skilled policing bring to the victims of crime and the effective delivery of justice.

The effort, dedication, and planning that has gone into bringing together experts in the field of forensic science is truly commendable and promises to be an invaluable platform for knowledge exchange, networking, and collaboration. I am certain that the conference will not only provide a chance to learn from each other but also to engage fellow professionals and researchers. I am confident that the discussions and insights shared during the conference will be instrumental in advancing our understanding and practices in forensic science, strengthening the rule of law and the effective delivery of justice.

Thank You!

PROF. (DR) MA. TERESA G. DE GUZMAN

Professor, University of the Philippines, Manila
Executive Director, Interdisciplinary Research and Development

Esteemed audience,

With great humility and appreciation, I address this esteemed audience as the keynote speaker at the 4th International Forensic Science Conference. I am honored to have the opportunity to speak before this honorable assembly of prominent individuals who possess extensive expertise, scholarly accomplishments, and practical experience in forensic science. As we gather in this assembly, it is imperative to acknowledge the significant influence our endeavors exert on society, encompassing the resolution of intricate criminal cases and the dismissal of individuals wrongfully accused. Our shared commitment to truth, justice, and the pursuit of scientific excellence drives forensic science advancement. Throughout this conference, delegates will have the opportunity to delve into pioneering research, exchange invaluable perspectives, and actively participate in substantive dialogues that will significantly influence the trajectory of our discipline. We must use this occasion to engage in mutual learning, question our current paradigms, and explore the limits of what can be achieved in forensic science. I strongly encourage everyone involved to actively participate, pose inquiries, and establish connections with other attendees. Collectively, we possess the capacity to foster innovation, enhance techniques, and eventually contribute to establishing a more secure global environment. I express my gratitude for your unwavering commitment to forensic science. I am enthusiastic about commencing this informative endeavor with all participants, and I anticipate the forthcoming significant contributions and discussions. Let us strive to ensure the success of the following 4th International Forensic Science Conference.

Thank you!

CYNTHIA MARTINEZ FLORENDO

Regional Trial Court Judge
Lecturer in the College of Law
Philippine Delegate

Greetings to all participants from different universities all over the globe. To the Organizers, Sherlock Institute of Forensic Science and Club 4 Evidence Forensic Lab, congratulations for this endeavor. With your concerted efforts and dedication, your hard work will surely come into fruition. This event will surely enhance our knowledge, students, speakers, and participants alike, in handling evidence applying science principles and methods both in criminal and civil cases brought before the courts. Thus, enabling all court users and stakeholders to achieve the purpose of Rule of Law and to provide justice to all who seek for it. As we come from different parts of the globe, we will learn from each other with this exchange of ideas and knowledge with the end goal of bringing home all the learnings and applying everything, to our own jurisdiction. As a bonus to all who attend the seminar face to face in New Delhi, India, we are fortunate to experience the warm welcome of the organizers personally and to have a tour of the location of India's government which is of great historical significance as a home of powerful people.

From the Philippines, Thank you! Maraming Salamat!

PROF. (DR.) MUKESH YADAV

B.Sc., MBBS, MD, MBA (HCA), LL.B., PGDHOQM
Additional Director Medical Education, State of U.P.
Attached Principal, R.D.M.C. Banda, U.P.

It gives me immense pleasure to know that Sherlock Institute of Forensic Science, and Clue4 Evidence Forensic Lab, which are prominent institutions in the field of forensics, organizing 4th International Forensic Science Conference at Vallabhbhai Patel Chest Institute, University of Delhi, Delhi from 1st December to 3rd December, 2023. Theme of the conference: Forensic Science beyond Interdisciplinary Application is very pertinent in current global scenario to learn from each other for larger public interest. I hope and wish all the delegates to get benefitted from sharing of experiences of speakers with vast experience and knowledge in their field of expertise during three days of academic feast.

I wish grand success to organizing team for making this International Conference a grand success.

DR. HARSH SHARMA

M.Sc, Ph.D., DFC & Tox., FIAMLE
Officer on Special Duty, National Forensic Sciences
University, Bhopal Campus

I am very much delighted to learn that Sherlock Institute of Forensic Science India and Clue4 Evidence have organized the 4th International Forensic science conference titled Forensic Science beyond interdisciplinary applications at New Delhi from first to 3rd December 2023.

I anticipate that the scheduled talks across various fields during the conference will significantly benefit the attendees and delegates, offering valuable insights through informative lectures. I encourage all delegates to engage actively in the diverse discussions, contributing to the success of the conference. The forensic science landscape in India is on the brink of substantial transformation. As the development of forensic science directly impacts criminal investigations, it holds a pivotal role in fortifying the effectiveness of the criminal justice system. I trust that the conversations during the conference will augment our capacities in this area.

Let us seize this opportunity to collectively propel forensic science forward and ensure a stronger, more effective foundation for our criminal justice system.

I extend my warm felicitation to the participants and Organizers and wish success in their endeavor.

DR. RAKESH KR. GOREA

Professor and Head, Forensic Medicine & Toxicology, Gian Sagar Medical College, Ram Nagar, Punjab, India

It gives me immense pleasure to know that a souvenir is being published for the inaugural ceremony of the 4th International Forensic Science Conference which is being organized by the SIFS India and Clue4Evidence. I congratulate Dr. Ranjeet Kumar Singh, Organizing Chairman, and Dr. Phaneendar B N, Co-Organizing Chairman for taking the lead and organizing this conference at Vallabhbhai Patel Chest Institute, University of Delhi.

I hope this conference will give insights and advancements in Forensic Science to all those attending the conference and it will enhance their knowledge. This upgradation of knowledge will help scientists serve society in a better manner by improving the collection, preservation and analysis of shreds of evidence in criminal cases and helping the investigative and judicial systems of our countries.

The theme of the conference "Forensic Science beyond Interdisciplinary Applications" is very apt for the conference as the application of Forensic Science is touching the new dimensions in various fields during the present century.

I convey my good wishes for the success of this conference and hope this conference will benefit all the participants by enhancing their knowledge and skills and altering their attitudes toward dealing with criminal cases which ultimately will lead to enhancing the successful prosecution rate.

JAY T. DALET, PHD

Associate Professor and Chair
Department of Biology, University of the Philippines Manila,
College of Arts and Sciences

Greetings!

This conference is a wonderful opportunity for us to gather and be reminded of the important role forensic science plays in the pursuit of justice. As forensic sciences encompass a variety of scientific disciplines, new challenges and complexities emerge. The objective analysis of evidence such as biological evidence is essential in providing unbiased information on legal issues, and helps in solving complex cases. We rightly continue to share our new found knowledge and realizations in our various disciplines. While we dedicate ourselves to scientific rigor, our collective wisdom will help provide a driving force to overcome obstacles, and to push for improvement toward a more ethical and fair justice system. There is always room for improvement! Looking forward to insightful discussions and meaningful partnerships. Wishing everyone a resounding success in this great endeavor.

Thank you very much.
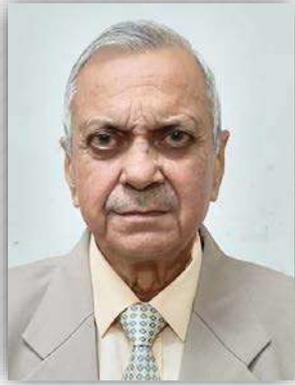
MOHINDER SINGH

Emeritus Resource Faculty, School of Forensics, Risk Management & National Security (SFSRMNS)
**Former Government Examiner of Questioned Documents, Govt. Of India, CFSL, Hyderabad**

Day in and day out, forensic science has been making noticeable advancements in laboratory methods and techniques and, practically speaking, this multidisciplinary applied science has made substantial inroads in almost every walk of life, especially at a time when there are no global boundaries as far as the commission, detection and investigation of crime is concerned. This being so, the complexity of crime, its scope of investigation, laboratory examination and court testimony is ever increasing. As the expansion of scientific investigation and laboratory facilities over the years appears to be incommensurate with the increased crime rate, the role played by just a few existing laboratories in the private sector, especially in India, becomes quite significant in this regard, because such facilities are not too many and those already existing in the Govt. or the public sector are buckling under onerous workload and lack of appropriate infrastructural facilities. It is heartening to state that, over the past decade, the SIFS India and the C4EFL laboratories have earned appreciation and recognition for their commitment to excellence in forensic education, research, and investigation. Operating in various areas of forensic sciences, these laboratories aim to fill the apparent gap between demand and supply of forensic services in the country.

'Forensic Science beyond Interdisciplinary Applications' is the theme of the 4th International Forensic Science Conference being organized by SIFS India and Clue4 Evidence which is aimed to bring together various researchers, academicians, and professionals from different countries who are dedicated to various domains of forensics, including fingerprint analysis, questioned documents, CSI, forensic odontology, forensic medicine, toxicology, biology, serology, psychology, cyber and digital forensics, and physics, etc. Commensurate with the theme of the conference, there is enough scope for further addition to these domains as we continue to make significant advances to shift our focus from the present multidisciplinarity and interdisciplinarity to the futuristic transdisciplinarity or holistic approach.

My best wishes to the conference organizers for grand success of the ensuing International Conference!

Meet our
SPEAKERS
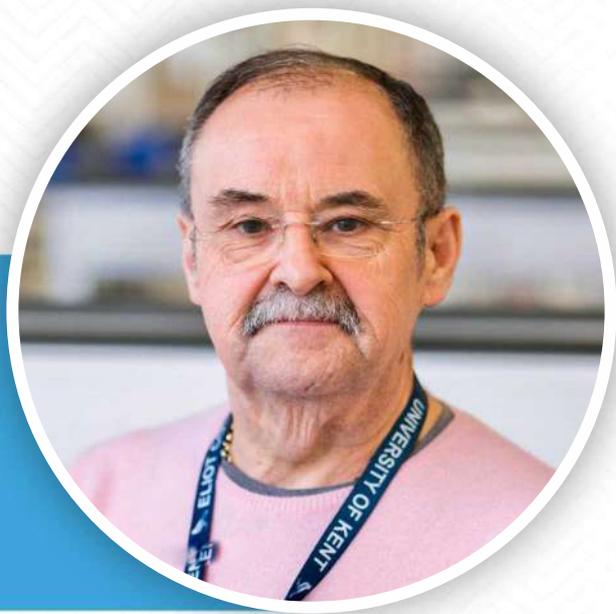
PROF. ROBERT GREEN OBE

Fellow & Vice President,
Chartered Society of Forensic Sciences, Division of Natural Sciences
University of Kent

Profile

Prof. Robert Green is currently a Reader in Forensic Science and the Director of Student Engagement within the School of Physical Sciences at the University of Kent, UK, as well as teaching extensively on the forensic science program within the school. Before joining the University, he worked in Research and Service Development at the Forensic Science Service and later led the Science and Technology Unit within the Police Standards Unit at the UK Home Office. Most notably he was responsible for initiating the Home Office work on performance improvements, using computer simulation to ensure the most effective business processes are adopted across the forensic science services. He is well known for developing and leading the national program of cold case rape investigation – Operation Advance as well as being a national and international speaker on the development of DNA and other biometric databases. Throughout his career, he has managed many national and international projects namely, CCTV, street crime and homicide reduction initiatives to ensure the most effective use of technology to combat crime. He was made an OBE in the Queen's Birthday Honours list of 2008 for his services to forensic science. Over 34 years he has led a large number of consultancies both in the UK and abroad, dealing with science, technology and how to maximise business processes to get the best from the investment in science.

PROF. (DR.) MA. TERESA G. DE GUZMAN

Professor, University of the Philippines, Manila
Executive Director, Interdisciplinary Research and Development

Profile

Prof. (Dr.) Ma. Teresa G. De Guzman is a Professor at the Department of Behavioural Sciences College of Arts and Sciences, University of the Philippines Manila. A practising applied anthropologist who graduated from the University of the Philippines with a degree of Ph.D. in Anthropology with a specialization in Cultural Anthropology. She has worked extensively with different Ethnolinguistic groups in the Philippines, particularly with Aeta, Mangyan, and Manobo. She has been in the academe for the past 25 years, complemented by 20 years of fieldwork. Her research interests and work are mostly concentrated on Indigenous groups, Indigenous Knowledge (IK), Cultural Heritage Impact Assessment, Health and Social Impact Assessment, Disaster Risk Management, and others. A former chair of the Department of Behavioural Sciences for six years and currently the convenor of the Manila studies program, Chair of the Ethics Committee Panel 5, and screening committee member of the PhD by Research. She is also the current Executive Director of the Interdisciplinary Research and Development (IRD) research and Development consultancy group.

DR. MARIA CORAZON A. DE UNGRIA

Head, DNA Analysis Laboratory, NSRI
University of the Philippines Diliman
Academician, NAST

Profile

Dr. Maria Corazon A. De Ungria heads the DNA Analysis Laboratory of the Natural Sciences Research Institute, University of the Philippines, Diliman, and is an academician of the National Academy of Science and Technology. She has received prestigious scientific awards such as the Outstanding Young Scientist Award from the Philippine National Academy of Science and Technology as well as the Science Academy for the Developing World (TWAS). She was named the first Filipino regional affiliate of NAST from 2007 to 2011. Her type of leadership was recognised by different sectors, which awarded her with the Outstanding Young Men award, the Ten Outstanding Women in the Nation Service award, and the Asia Society Young Leader Award. She also won the search for the Outstanding Woman Researcher in the Life Sciences organised by the Third World Organisation of Women Scientists in Malaysia and was named as one of the first two National Fellows of the L'Oreal – UNESCO Women in Science Program. After 20 years in government service, she continues to advocate for the use of excellent science in nation-building, recognising the power of science in broadening the base from which we can find creative and novel solutions for the problems that afflict society.

KESHAV KUMAR IPS (Retd.)

Retired Director General of Police
Director Anti Corruption Bureau,
Gujarat State, India

Profile

Keshav Kumar, a distinguished officer of the Indian Police Service, belongs to the 1986 batch of the Gujarat Cadre. His illustrious career includes serving as the Director General of Police and Director of the Anti-Corruption Bureau in the Gujarat State Police. Beyond his policing responsibilities, he has been a Consultant to the Government of Assam in the Home Department and Political Affairs. With a wealth of expertise in forensic sciences, he serves as a Resource Faculty at the National Forensic Sciences University in Gujarat. He holds the position of Emeritus Resource Faculty at Rashtriya Raksha University in Gujarat and is also an Adjunct Professor in Forensics at Gujarat University. Kumar is actively involved in shaping the future of forensic sciences as the Vice President of The IPF Indian Police Foundation's Centre for Forensic Sciences. His commitment to ensuring ethical practices extends to his role as an Independent External Monitor for the Central Vigilance Commission, Government of India. Additionally, he contributes to the script evaluation process as a Script Evaluation Officer for the Ministry of Information & Broadcasting, Government of India. Throughout his distinguished career, he has earned numerous accolades, including the Protector International Award for Excellence in Forensic Science and the Wildlife Service Award from Sanctuary Asia. His exemplary service has been recognized with the President's Police Medal for Distinguished Services and the President's Police Medal for Meritorious Service. Notably, he received the Manthan South Asian and Pacific Award for Innovation in Medical Facilities, showcasing his commitment to advancements in Custodial Health Care. Kumar's influence extends beyond borders as he has participated in various conferences and delivered lectures, contributing to the training of professionals both nationally and internationally. His dedication to the field of policing and forensic sciences remains unwavering, making him a respected figure in law enforcement and public service.

SANJAY SAHAY

Founder and Director, TechConPro Pvt Ltd
Bangalore

Profile

Sanjay Sahay is a post graduate from St. Stephen's College, Delhi.He belongs to the 1989 batch of the IPS, borne on Karnataka Cadre. He took VRS in March 2020. He has accomplished a high degree of professionalism in wide and varied professional assignments and finally got groomed and refined into an officer who has 360 degrees experience of all policing tasks, simultaneously maintaining keen interest in all staff functions and a passion for usage of appropriate technology in policing at all levels and in all fields. Important assignments have provided immense value to his professional persona. He has worked as Superintendent of Police in three districts, as IG of Eastern Range headquartered at Davangere, two UN missions in Kosovo, Yugoslavia and Southern Sudan and headed Karnataka Police Computerization, State Crime Records Bureau and Police Communications on four occasions. In his last posting he completed MPassport in Karnataka and finalised the DPR for Police IT V2. He is credited to have created an Enterprise Resource Planning (ERP) software, the Police IT. He has gained immense expertise in a broad band of technologies like TETRA, Geospatial Technology, ERP, Cyber Security, Cloud Computing and Big Data. He created the technical framework for Integrated Command & Control Center for the state.He started a DailyPost on 26th Sept 2016 and has been writing consistently everyday without a gap, crossing 1700 editions by now. These are the mostly topical short writing on every technology issue that people have to grapple with. Besides, technology he writes on Management, Governance and Self-improvement. He brings in a unique flavour of interdisciplinary and multidisciplinary approach. He is a pioneer and leading expert in Cyber Security, with end-to end expertise, from critical infrastructure cyber breaches to Cyber Forensics. He is a leading expert on Cyber Security in India. Post his voluntary retirement in March 2020, he has created a technology consultancy aggregator, TechConPro Private Limited, a pioneering platform worldwide. He is also the founder and mentor of Center for CCTV Research Center at RV College of Engineering, Bangalore. He also visualises to create a Center of Excellence for Cyber Security and Disruptive Technologies. He is one of the leading professional public speakers in India.

DR. G.K. GOSWAMI

Additional Director, General of Police
Founder Director, UPSIFS Lucknow

Profile

Dr. G.K. Goswami is a Founder Director of Uttar Pradesh State Institute of Forensic Sciences Lucknow and Additional Director, General of Police. He holds, an M.Sc., LL.M., Ph.D. (Medicinal Chemistry), Ph.D. (Law), and 1997 Batch IPS officer of U.P. Cadre, is on deputation to the Govt. of India. He is a flex awardee under the Fulbright fellowship. He served as the Joint Director of anti-corruption, at the Central Bureau of Investigation, New Delhi, and the Joint Director, of Central Bureau of Investigation, Lucknow Zone, Lucknow; Director of CBI Academy, Ghaziabad; and an expert on organized crime in United Nations Office on Drug and Crime (UNODC). He has been honoured with the 2nd Bar by the Hon'ble President of India, by decorating him three times with the Police Medal for Gallantry, the highest national award for Police. He has also been awarded the Police Medal for Meritorious Service and the Gold Medal for Gallantry has been conferred upon him by the Governor of Uttar Pradesh. While still serving in the police, he pursued Law and won several Gold Medals and Commendations during his legal studies. He has explored the interface of law and science and authored over two dozen articles published in academic journals and a book in 2016 titled "Assisted Reproduction and Conflicts in Rights".

CYNTHIA M. FLORENDO

Judge, Regional Trial Court
Philippines

Profile

Cynthia M. Florendo is a highly accomplished legal professional with a distinguished career in the Philippine judiciary. Serving as a Municipal Trial Court Judge from December 2003 to May 2007, she gained valuable experience in handling cases at the grassroots level before being elevated to the position of Regional Trial Court Judge on May 25, 2007, where she continues to contribute to the administration of justice at a higher level. She has demonstrated a strong commitment to judicial excellence and legal education. As a Small Group Discussion (SGD) Facilitator for Comprehensive Enhancement Training (CET), she has been actively involved since 2010, focusing on the welfare of children within the judicial system. Additionally, her role as a SGD Facilitator for CET Trafficking in Persons from 2022 underscores her dedication to addressing critical issues such as human trafficking through judicial education and training. In the realm of legal education and professional development, she has been a stalwart MCLE Lecturer since 2014, staying abreast of legal developments and contributing to the growth of her peers. Furthermore, she has served as a College of Law Lecturer in several law schools since 2002, nurturing the next generation of legal professionals. Her international engagements highlight her commitment to promoting gender-sensitive perspectives in Southeast Asia. Within the Philippines, She has actively contributed to the legal community as a Lecturer (Philja), participating in the Seminar Workshop on Strengthening Judicial Integrity and the Rule of Law from 2012 to 2013 and the Seminar for Executive Judges from 2013 to 2016. Her involvement in national and international conventions, including the 11th and 12th Biennial Conventions and Seminars of Court Legal Researchers, demonstrates her commitment to legal research and professional development. Her diverse and impactful career showcases her dedication to the legal profession, her commitment to continuous learning, and her active engagement in addressing pressing legal issues on both national and international fronts.

PROF. MUKESH YADAV

Additional Director, Medical Education
Government of Uttar Pradesh

Profile

Dr. Mukesh Yadav is currently working as an Additional Director of Medical Education, at Govt. of U.P and   Principal at Rani Durgavati Medical College (formerly known as Government Allopathic Medical College), Banda, Uttar Pradesh since 2018. He has more than 26 years of experience in medical education. Previously, he served as a Principal of NC Medical College, Panipat, Haryana. He worked as a Professor and head of the Department of Forensic Medicine & Toxicology in various colleges such as KD Medical College, Mathura, UP; FH Medical College, Tundla, Firozabad, UP; TMMC, Moradabad, UP etc. He has more than 20 years of teaching experience in various private and govt. medical colleges. He has been elected as Editor of the Journal of the Indian Academy of Forensic Medicine for the last 7 years worked hard for the timely publication of JIAFM and was instrumental in achieving an internal standard and inclusion in various national and international indexing and database agencies. He has contributed many chapters in many leading books published by Indian Authors of repute. He has delivered many guest lectures on medicolegal aspects at various national and international conferences and organised medicolegal workshops for doctors and hospitals. He has conducted examinations in various universities throughout India at UG and PG levels. He has more than 100 publications in various national and international journals to his credit.

DR. AJAY SHARMA

Director, Forensic Science Lab
Jaipur, Rajasthan

Profile

Dr. Ajay Sharma is an eminent personality in the field of Forensic Science in India. Currently, he is serving as the Director of State Forensic Science Laboratory, Jaipur, Rajasthan. He worked on different field of Forensic Science including the expertise in the field of questioned document examination. He is serving forensic science for more than three decades. He started his career back in year 1990 as Research Associate in CSIR, New Delhi. He joined CFSL-CBI, New Delhi in the year 1992 and served there for six years. In the year 1998, he was appointed as Senior Scientific Officer in the State Forensic Science Laboratory, Jaipur, Rajasthan. Further, he was promoted to the post of Assistant Director in 2009, Deputy Director (Crime Scene) in 2018, Additional Director in 2019 and as Director since 2020. In his illustrious career, he has worked on about 10,000 forensic sciences cases which itself is a milestone in this field. Among these huge number of investigations, Bofors case, hawala case, Telecom Scam, Murder of Beant Singh, the CM of Punjab, Priyadarshini Matoo murder case, Jaipur Serial Bomb Blast, Ajmer Dargah Bomb Blast case are some significant ones. He has also trained thousands of personnel from different law enforcement agencies including Police, Detectives, Law professionals, Forensic Science students and military intelligence. In the research front, he has published 40 articles in different reputed national and international journals. As the member of board of studies, Dr. Sharma has shared his valuable suggestions to different academic institute across India for the betterment and advancement of Forensic Science. He has won prestigious awards in several national and international level conferences and summits. He is receiving continuous and enormous amount of appreciation from the Government for his outstanding contribution in Criminal Justice System and betterment of the society through Forensic Science.

MOHINDER SINGH

Emeritus Resource Faculty
School of Forensics,
Risk Management & National Security (SFSRMNS)

Profile

Mr. Mohinder Singh is a former Government Examiner of Questioned Documents. He has been associated with the field of forensic examination for the last 44 years. He has worked as a Forensic Document Examiner in laboratories of the Government Examiner of Questioned Documents Shimla and Hyderabad under the administrative control of the Directorate of Forensic Sciences, Government of India. He has dealt with more than 4000 criminal and civil cases referred by various investigating agencies including CBI, Govt. Departments and various courts of law and tendered evidence in more than 1000 cases. He also worked as guest faculty in the field of forensic documents, associated with various training programs run by NPA, CDTI, NICFS, public sector banks, and Forensic Science departments of Osmania University, Punjabi University, and B.H.U. He has presented various papers in forensic science in All India conferences, seminars, and Workshops. He has also participated in the recent 19th Wroclaw Symposium on Questioned Document Examination, Poland in 2020. He is a Lifetime Membership of the Indian Academy of Forensic Sciences and Indian Science Congress Association.

PROF. MUKESH THAKKAR

HOD, Dept. of Forensic Science
Punjabi University, Patiala

Profile

Prof. Mukesh Kumar Thakkar, a PhD in Forensic Science, has extensive experience in forensic biology and serology, including DNA profiling, criminalistics, fingerprints, and crime scene investigation. He has worked as a Professor, Associate Professor, Reader, and Lecturer in the Department of Forensic Science at Punjabi University, Patiala, and has organized international symposiums and workshops. He has authored chapters in renowned publications and reviewed manuscripts for the Ministry of Information & Broadcasting. He has participated in national projects and initiatives, including the e-PG Pathshala Project and he has also been a member of the Academic Advisory Committee of the MHRD in the subject of Law and Legal Studies.

DR. HARSH SHARMA

OSD
NFSU, Bhopal

Profile

Dr. Harsh Sharma, currently serving as an Officer on Special Duty at the National Forensic Sciences University, Bhopal Campus, boasts a distinguished career in forensic science. Retired as the Director of the State Forensic Science Lab in Madhya Pradesh, he has also held the position of Head of the Forensic Department at the Central Academy for Police Training under the Ministry of Home Affairs, Government of India, in Bhopal. He has done his M.Sc. in Forensic Science from Sagar University and a Ph.D. from Barkatullah University in Bhopal, has pursued various certification courses, including Crime Scene Investigation and Forensic Chemistry and Toxicology from NICFS, MHA New Delhi, and Polygraph Techniques from CFSL, CBI, New Delhi. Over his extensive 38-year career, he has examined approximately 4500 cases spanning Homicide, Arson, Suicide, Sexual Assault, Theft, and more. His remarkable efficiency is evident in achieving a 100% success rate in solving rape cases within an unprecedented 48 hours, resulting in culprits receiving sentences ranging from life imprisonment to the death penalty. Notably, he headed the only laboratory in Asia to pass the International US DNA efficiency test. In 2018, Madhya Pradesh, under his leadership, achieved a record-breaking 18 convictions with death penalties in rape cases, earning the state a Limca Golden Book World Record recognized by the United States. His accomplishments have earned him accolades from the Chief Minister of Madhya Pradesh, Shri. Shivraj Singh Chauhan, the then DGP Shri Rishi Kumar Shukla, and recognition from Prime Minister Shri Narendra Modi. Among his major accolades are awards for the best papers in Crime Scene Management and Crime Scene Investigation at All India Forensic Science Conferences, a Meritorious Service Award in Scene of Crime Management from the Ministry of Home Affairs, and a Fellowship Award from the Indian Association of Medicolegal Experts. His international exposure includes presentations at conferences in Japan, the USA, the UK, and Saudi Arabia. His expertise extends to his role as the youngest member of the NABL team inspecting the Mobile Forensic Unit of DFS, Gandhinagar, Gujarat. A member of the International Society of Forensic Science and the Indian Society of Toxicology, he presently serves as the Vice President of the Indian Medicolegal Experts Association.

M.C. JOSHI

Retd. Director, CFSL Hyderabad
DFSS, MHA, GOI

Profile

In a career spanning 37 years and 29 days, Mr M C Joshi rendered services in the domain of preventive and detective forensics especially forensic document science- document examination in white collar crimes- of varied nature, dimension and intricacy with unquestionable expertise. Also, as a forensic document scientist, he has indulged in general forensic & domain-specific research work on the detection tech-driven modus operandi of criminals and has published various research papers based on actual case studies to enrich related literature on one hand and to highlight the emerging trends and changing notions of the crimes in the field on the other. In the span of more than 37 years of professional career, he has dealt with the various mega scams of national and international ramifications unearthed in the country e.g. commencing with the Harshad Mehta mega securities scam of 1993, Jain Hawala Diaries scam. Acknowledging his contribution in the Forensic Document field, the Govt. of India awarded him the prestigious Home Minister award. He has also been exposed to the prestigious FBI Laboratory, Quantico, Virginia, USA and had a good opportunity to learn and observe the pinnacle of modern Forensic facilities, tools and techniques available there. After elevation to the post of Director & scientist 'E' in February 2021, He has successfully discharged duties of Director & Scientist 'E' at CFSL Chandigarh unit at Shimla (Erstwhile GEQD Shimla- one of the oldest forensic Institute of the country established by British in 1904) and after 12th April 2021, he looked after entire affairs- technical, administrative, financial and operational issues- of CFSL, DFSS, MHA, Hyderabad as Director till 31 December 2021. Apart from the above, he has also worked at GEQD Shimla and Guwahati during the period 2014 to 2021. During the year 2018-2020, he was also associated with the Forensic working group of the Shanghai Cooperation Organization (SCO) countries as a MHA, Govt. of India nominated representative and participated at a meet in Kyrgyzstan, wherein the action plan for forensic activities and cooperation amongst the SCO countries was prepared and adopted.
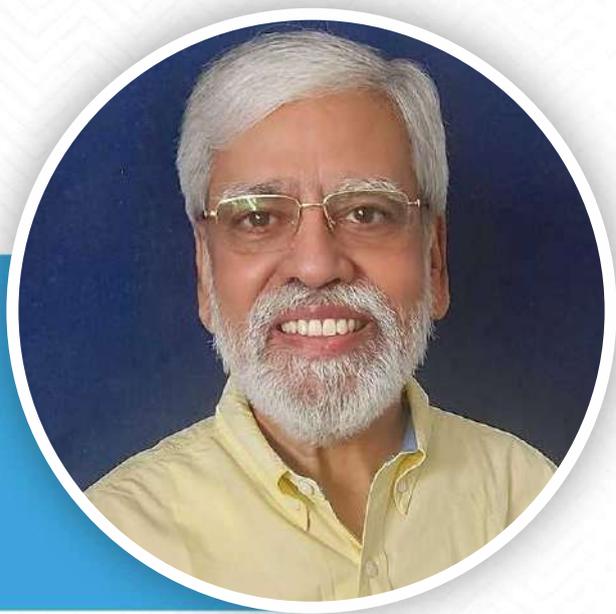
PROF. RAKESH KR. GOREA

Professor and Head
Gian Sagar Medical College & Hospital
Vill. Ram Nagar, Banur

Profile

Rakesh Kr. Gorea is a Professor and Head of Forensic Medicine, at Gian Sagar Medical College, Punjab, a Faculty member of National Forensic Science University, Gandhinagar, a Professor Emeritus at SJJT University, Rajasthan, Adjunct Professor, at Eternal University, HP and formerly Faculty Member at Forensic Medicine Department, College of Medicine, Prince Sattam bin Abdul Aziz University, Saudi Arabia and Former Principal and Professor at NC Medical College, Panipat and Rama Medical College, Hospital and Research Centre, Kanpur in India. He has been awarded two titles: "Father of Forensic Nursing" during an International Conference on "Transforming perspectives of Nursing Research Leading to Clinical Innovations" at Samarpan Institute, Lucknow & "Founder of Forensic Nursing in India" at 9th Conference of Indo Pacific Academy of Forensic Nursing Science at Durgapur in India. He is a fellow of the Indian Academy of Forensic Medicine, International Medical Science Academy and Indian Congress of Forensic Medicine and Toxicology. He is the Founder President of the Pacific Academy of Forensic Nursing Science, Indo-Pacific Academy of Forensic Odontology and Society and past president of the Indian Academy of Forensic Medicine and Founder President of Punjab Academy of Forensic Medicine & Toxicology, former Editor in chief of the journal of Indian Academy of Forensic Medicine and Journal of Punjab Academy of Forensic Medicine and Toxicology, besides being office-bearer of many other organizations. Currently, he is editor-in-chief of the International Journal of Ethics, Trauma and Victimology and editor of the Global Journal of Nursing and Forensic Sciences. He has 39 years of teaching experience. He was given a special award by the Indian Academy of Forensic Medicine for his efforts to develop Forensic Nursing in India, a Vision Award by the International Association of Forensic Nurses at Salt Lake City USA, an Excellence Award by SAFCON and a Lifetime Achievement Award by IJHRLMP, PAFMAT & Haq &Bose Lifetime Achievement Award by IAFM.

DR. JAY DALET

Associate Professor and Chair
Department of Biology, College of Arts and Sciences
University of the Philippines, Manila

Profile

Dr. Jay Dalet is an Associate Professor and Chair of the Department of Biology in the College of Arts and Sciences at the University of the Philippines Manila (UP Manila). He has a Bachelor of Science in Biology from UP Manila. He obtained his Doctor of Philosophy (PhD) in Biochemistry from the Department of Biochemistry and Molecular Biology of the College of Medicine in UP Manila. It is in the same institution where he finished his Master of Science (MSc) in Biochemistry. He currently teaches, Cell and Molecular Biology, Forensic Biology, Conservation Genetics and Living Systems: Concepts and Dynamics He was a visiting scholar/scientist at University Strathclyde in Glasgow, UK in 2007 and a recipient of The ONE UP Professorial Chair Award for Outstanding Teaching and Public Service in UP Manila for 2019 to 2021 and 2022 to 2024. His research work is focused on drug discovery, translational biology, molecular cytogenetics and cellular pathology. Among others, his previous research undertakings include advanced chromosomal studies using fluorescence in-situ hybridization (FISH) and gene expression techniques in Conus magus, a marine invertebrate well known for its omega-conotoxin (ΩMVIIA). Omega MVIIA is a painkiller protein that is non-addictive and better than morphine.

DEEPA VERMA

Director
Forensic Science Laboratory, Delhi

Profile

Ms Deepa Verma joined as an Assistant Central Intelligence Officer, Grade-I a Govt. Examiner of Questioned Documents, MHA, Govt. of India, at Shimla (Now part of CFSL, Chandigarh). She was there from 19.02.1990 to 31.07.1996. Later in 1996, she joined FSL, Govt. of NCT of Delhi as a Senior Scientific officer and then promoted to Assistant Director then Deputy Director and in 2017 She took over the charge of the laboratory and became Director. She had overall technical Supervision as TM (Doc.) as per NABL certification and Administrative work as HOD (Doc.) including the establishment of a Computer Forensic Unit. In addition to her routine assignments, she worked as APIO in RTI Act and other miscellaneous duties i.e. supervising the Computer Forensic and fingerprint unit, imparting training: a member of review/re-examination committee constituted by DFSS as well as FSL Haryana for review of already examined cases; chairperson of purchase committee; Nodal officer IT project; Chairperson to an internal committee supporting Director FSL and Discharge of various administrative and professional duties, etc. Apart from aforesaid responsibilities she was Link officer of HOO, FSL, In-Charge RFSL Bindapur, Dwarka, Delhi, Member as well as Chairperson to various preliminary Enquiry Committee/s. In her guidance laboratory, has been accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL) as per standards of ISO/IEC 17025:2005 and NABL 113:2008. One great achievement of the Delhi laboratory under her supervision was that FSL Delhi was Notified as Examiner of Electronic Evidence by the Ministry of Electronics & IT, Govt. of India under Section 79 A of the IT Act. In brief, she has more than 30 years of experience in the Forensic discipline.

PROF. (DR.) ASHA SRIVASTAVA

Professor of Practice
Dean, School of Behavioural Forensics
Centre Head, CoE, Investigative & Forensic Psychology
Centre Head, Centre of Happiness & Wellbeing

Profile

Prof. (Dr.) Asha Srivastava is currently working as a Professor of Practice and Dean of Behavioural Sciences at NFSU. She is the Centre Head, CoE in Investigative & Forensic Psychology, and the Centre Head, Centre of Happiness and Wellbeing. She served as a Principal Scientific Officer and Head of the Forensic Psychology Department at the Central Forensic Science Laboratory (CFSL), Central Bureau of Investigation (CBI), New Delhi. She has more than 28 years of experience in the field of forensic psychological techniques. Besides this, she has 05 years of experience in the fields of Applied Psychology and Clinical Psychology. She also worked as a lecturer, psychologist, and assistant director in different organizations. In addition to this, she has appeared in numerous courts as an expert witness. She has examined more than 5000 subjects in 1700 cases referred by the CBI, NIA, Delhi Police, Armed Forces, and other law enforcement agencies in the country. The high-profile cases were examined, analysed, interpreted, and reported with the help of different forensic psychological techniques. Some of these cases done by her are the Pathankot Air Base Attack, the Sheena Bora murder case, the Sunanda Pushkar death case, etc. She has taken membership in the International Associate of the British and European Polygraph Association and the International Associate of the American Psychological Association. She is a Life Member of the Indian Science Congress, Indian Forensic Science, the Indian Association of Clinical Psychologists, etc.

DR. LEONARDO ESTACIO

University of the Philippines
Manila

Profile

Dr. Leonardo Estacio, an accomplished anthropologist and public health expert at the University of the Philippines-Manila, holds a PhD in anthropology, a master's in community development from UP Diliman, and a master's in public health from Johns Hopkins University, USA. He trained at Johns Hopkins as an HHH-NIDA Fellow and conducted post-doctoral research at the University of Washington under the NIDA-INVEST-CTN Fellowship program. Prof. Estacio has provided technical advice and training services to various UN agencies such as the UNODC, ILO, UNICEF, and UNESCAP as an international research and training consultant in social development and community-based drug demand reduction. His broad research portfolio covers drug abuse, social health insurance, community-managed health programs, climate change resilience, and violence against children, online child exploitation, indigenous knowledge systems, forensic anthropology studies, and more. As a prolific University Scientist, he has published numerous scientific articles and presented his research at international and national conferences. Leading the Addictus Research and Intervention Center Inc., he focuses on drug research and community development, including an evidence-based aftercare program for Filipino drug users.

PROF. RAJINDER SINGH CHANDEL

Professor & Dean Academics
UPSIFS Lucknow, Uttar Pradesh

Profile

Prof. Rajinder Singh Chandel, did his Masters in Forensic Science with Gold medal from Department of Forensic Science, Punjabi University, Patiala in 2001. He carried out his Ph.D research work on "Hair Characterization of Schedule-1 Felids of Wildlife (Protection) Act-1972" in collaboration with Wildlife Institute of India (WII), Dehradun, which led him attain Ph.D. in 2008 from Punjabi University, Patiala. He has been actively involved in the research work related with forensic characterization of body fluids, trace cosmetics evidence, inks, paints, diatoms, grasses, poisonous plants, hair of various species protected under Wildlife (Protection) Act-1972 and other evidentiary materials of biological origin using morphological, chromatographic, spectroscopic and DNA based techniques. He has been involved in regular teaching and research in the area of Forensic Biology and Forensic Chemistry since 2003 at Punjabi University, Patiala and has recently shifted to the Uttar Pradesh State Institute of Forensic Science, Lucknow on deputation basis. He has published around 80 research papers in various national and international journals. He has also contributed reference mtDNA sequences for the identification of highly endangered and protected cats of India in NCBI (GenBank). He has supervised the research work of 11 Ph.D. research scholars and 82 M.Sc. students. He has been involved in many training courses on wildlife forensics and illegal wildlife trade to Judges/ Magistrates, Prosecution officers, Deputy SP/ ACP or above, Forest officers, SSO or above from CFSL's and FSL's across the country at LNJN National Institute of Criminology and Forensic Science, Ministry of Home Affairs, Govt. of India, New Delhi. He has also been a resource Person in around 60 conferences/symposia/workshops of national and international repute. He is also a reviewer in many leadings research journals in Forensic Science including the Journal of Forensic Science, Science & Justice etc.   In recognition to his contribution and vision in the field of Forensic Science, he has been appointed as Visiting Professor at Xi'an Jiaotong University, Shaanxi and Chair Professor at East China University of Political Science and Law, Shanghai in China (2017-2020).

DR. GAURAV GUPTA

Additional Director/Scientist'E'
Cyber Law & E-Security
MeitY, Govt. of India

Profile

Dr. Gaurav Gupta is currently working as an Additional Director/Scientist 'E' at the Ministry of Electronics & Information Technology (MeitY). He is the first in the country to be awarded a PhD in the area of Digital Forensics on the topic 'Study On Digital Forensics For Detection Of Computer Frauds And Cyber Crimes' in the Department of Computer Science and Engineering, Jadavpur University, Kolkata in 2009. He has been awarded the ISCA Young Scientist Award from Dr. A P J Abdul Kalam Sir in 2010 for his work in Digitized Document Fraud Detection. Currently, he has more than 18 years of research experience in the field of Digital Forensics to detect computer frauds and cyber-crimes. He has developed scalable and efficient solutions for "Detection of Computer Frauds and Cyber Crimes". His research interests include the development of efficient, low-cost portable digital forensic solutions. Worked on Self Authenticating Documents, Document fraud detection, privacy-preserving efficient digital forensic investigation, and next-generation Color QR codes with 3 to 4 times of storage capacity. He also developed methodologies and tools for extracting admissible digital evidence, Date and Time Stamp Authentication, Steganography, Digitized Document Fraud Detection, and Developing enhanced Digital Forensic Principles. He has experience in Digital/ Computer Forensic Investigation, Information security, Business Process Controls, SoX etc. Before joining KPMG, he worked with the Directorate of Forensic Science, Hyderabad. He was responsible for identifying and developing methodologies/solutions for key issues facing digital forensics to investigate computer frauds and cyber-crimes and developed conceptual/prototype solutions for investigations of technological crimes admissible in the Court of Law.

SAMIR KUMAR DATT

CEO
Foundation Futuristic Technologies Pvt. Ltd

Profile

Samir Kumar Datt is the CEO of Foundation Futuristic Technologies Pvt. Ltd. (AKA Forensics Guru). With over 30 years of experience in the USA, UK, and India, he is the President of the Digital Investigators Association and the author of "Learning Network Forensics," published by Packt Publishers UK. Additionally, he holds an impressive educational background as an alumnus of NIT Rourkela, IIT Kanpur, and IIFT Delhi. Moreover, he is a distinguished fellow of the Indian Police Foundation and serves as a visiting faculty member at prestigious institutions such as NPA Hyderabad, CBI Academy, NICFS Delhi, and many others. He is also an Angel Investor in product startups in the Cyber forensics and investigations field.

DR. RAKSHIT TANDON

Cyber Security Evangelist- Risk Advisory
Cyber Detect & Respond Leader

Profile

Dr. Rakshit Tandon is a renowned Cyber Security Evangelist with over a decade of experience. He holds key positions in various important Security Councils and Chapters and serves as a Cyber Security Consultant to the Internet and Mobile Association of India. As a Resource Person and Visiting Faculty for Cyber Crime Investigations at the Bureau of Police Research and Development, he trains law enforcement officers across India. Dr. Tandon chairs India Against Child Abuse and contributes to UNICEF's Child Online Protection in India Report. He has sensitized over 5.6 million students on Cyber Safety and delivered speeches at prestigious platforms such as "Talks at Google" and "TEDx Talks." Dr. Tandon has an Honorary Doctorate in Cyber Security and has received notable awards, including the Cyber Soldier 2021, Cyber Mentor Excellence Award 2021, and Golden Achievers Award 2021 etc. In addition, he was honoured as the Cyber Guru of the Year by the Government of Maharashtra in 2015 and received the Global Cyber Crime Helpline Award in 2018. Dr. Tandon serves as a Training Consultant to the United Nations Office on Drugs and Crime, providing expertise on cyber-enabled Trafficking to multiple countries.

PROF. TRIVENI SINGH (IPS)

Superintendent of Police of Cyber Crime
Uttar Pradesh Police, India

Profile

Prof. Triveni Singh, SP, Cyber Crime, Uttar Pradesh Police is India's first cyber cop and has investigated more than 200 types of cybercrimes followed by arrests of thousands of criminals and solved cases involving thousands of crores of fraudulent money. He is in charge of investigating cybercrime cases as well as providing administrative and technical supervision to 18 cybercrime police stations located at all commissioners in the state of Uttar Pradesh. He is also the resource person for various central investigation agencies and judicial bodies such as the Central Bureau of Investigation Academy (CBI), Ghaziabad, National Police Academy, Hyderabad and Institute of Chartered Accountants of India as well as different State Judicial training centres, Police Training Academies and Universities. He is popular as a cybercrime investigation specialist with an intensive technical investigation process, He is known for his expertise in handling financial and banking frauds and during his distinguished career. He has had wide exposure in dealing with cases related to anti-corruption, vigilance, economic offences, money laundering and cybercrimes. Ha has shared his experiences of nabbing criminals and busting gangs in two of his books co-authored with Amit Dubey, a cyber-security expert and crime investigator – Hidden Files: Tales of Cyber Crime Investigation and Hidden Files – Unlock and also has been honoured with several distinctions, including President Medal for Gallantry by The President of India and Certificate of Honour by Director, CBI. He was also conferred with the India Cyber Cop of the Year award, in 2012 by DSCI-NASSCOM. He has been awarded at various national and international platforms for his contribution to controlling cybercrimes. Besides a PhD, he has earned certifications in the areas of ethical hacking, forensic accounting and fraud examination, computer hacking forensic investigation, cybercrime investigation, etc. He also conducts regular training and workshops to share his extensive knowledge and insights and is a much sought-after speaker at InfoSec forums.

LT COL (DR) SANTOSH KHADSARE (RETD)

VP- Digital Forensics & Incident Response
eSec Forte Technologies

Profile

Lt Col (Dr) Santosh Khadsare, is an army veteran and is the Vice President of Digital Forensics & Incident Response (DFIR) at eSec Forte Technologies. He is a Cyber Security & DFIR professional with 25 years of rich experience in the fields of Digital Forensics, Cyber Laws, Information Security, Cyber Audit, and Incident Response. He holds a degree in B.E (Electronics and Telecommunications) and possesses additional qualifications such as CHFI, MCFE, CCO, CCPA, CEH, RHCSA, IVTA (CMU, Pittsburgh, USA), Advance Cyber Forensic Course (CDAC), Cyber Crime Investigator (CCI), Cyber Crime Intervention Officer (CCIO) and Access Data Certified Professional. He was the head of a Digital Forensic Lab at CERT-In, Ministry of Electronics and IT, New Delhi from Feb 2019 to Feb 2021. He is the Digital Forensic Analyst Excellence Award winner for the year 2021 and was the Member, in CII Task Force on Cyber Security for the Year 2019-20, 2020-21. He is also an Adjunct Faculty Member at Rashtriya Raksha University (RRU), Gandhinagar and CHFI Scheme Committee member at EC- Council.

PROF. ADARSH KUMAR

AIIMS, Dept. of Forensic Medicine
New Delhi

Profile

Prof. Dr. Adarsh Kumar, holding degrees of BSc MBBS, MD, PGCHM, FIAMLE, FISCA, FIST, and FIAFM, is a distinguished figure in the field of Forensic Medicine and Toxicology. He is President of the Indian Academy of Medicolegal Experts (IAMLE) and a Council Member of the International Academy of Legal Medicine. Currently serving as the Professor in the Department of Forensic Medicine & Toxicology at AIIMS, New Delhi, he is also the Chairman of the Disability Evaluation Board at AIMS Trauma Centre. His expertise extends to Forensic Anthropology and Forensic Radiology. As Gold medallist, he is the sole representative from India in esteemed international bodies such as the International Academy of Legal Medicine, the British Association of Forensic Medicine, The International Association of Forensic Toxicology, and the Canadian Society of Forensic Sciences. His accolades include an Honorary Diploma in Legal Medicine from the International Academy of Legal Medicine in Portugal (2009) and the distinction of being the first person globally to receive the Commonwealth Fellowship in the UK twice, in 2011 and 2015. He is a Visiting Faculty at various international institutions, including Anglia Ruskin University, Cambridge, UK, and National Piragov University, Vinnitsya Ukraine. He has served as an honorary medicolegal expert to the National Human Rights Commission and the Central Bureau of Investigation in India. His international representation includes being a Governing Council Member of three prestigious scientific organizations: International Academy of Legal Medicine, Indo-Pacific Association of Law, Medicine & Sciences (Secretary General-2022-25), and Asia Pacific Association of Medicolegal Agencies. Currently holding the position of Honorary President of IAMLE, he has been recognized for his exemplary work with a Commendation Certificate from the National Human Rights Commission in 2014, an Education Award for Excellence from the Indo-US Global Foundation in 2016, an International Cooperation Medal from the Government of Ukraine in 2020, and a Forensic Excellence Award in 2023.

DR. RITESH KUMAR SHUKLA

Associate Professor
Ahmedabad University
Ahmedabad, Gujarat

Profile

Dr. Ritesh Kr. Shukla is an accomplished academician, working as an Associate professor in the Biological and Life Sciences division of the School of Arts and Sciences at Ahmedabad University, Ahmedabad Gujarat. His research career began in 2006 when he joined "The CSIR-Indian Institute of Toxicology Research", Lucknow, India as UGC-JRF where he completed his tenure as UGC-SRF in 2011. He received his doctorate degree in Toxicology in 2013 from Jamia Hamdard, New Delhi for the work he did at CSIR-IITR, Lucknow. He has published more than 50 research articles, and 18 book chapters in international peer-reviewed Journals and publishers. In Addition, he edited 3 books, including Forensic Nanotechnology published by NOVA Science Publishers, New York, US in 2019, Nanotoxicity published by Elsevier in 2020 and Forensic Microscopy- Truth under the Lenses published by CRC Press in 2022. He received the Early Career Research Award from the Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India in 2016 for the Forensic Biology Research Project. He was recognized among the world's top 2% of researchers by Stanford University for the year 2022 for Legal and Forensic Medicine, Pharmacology and Pharmacy, and Clinical Medicine. He was also the recipient of the Young Scientist Medal by the International Association of Advanced Materials (IAAM), Sweden for his contribution to the field of Forensic Nanotechnology. Along with the research award, his teaching skills have also been recognized and awarded by Ahmedabad University. He received the Chairman's Award for Excellence in Teaching in 2017 and the Chairman's Award for Experiment to Advance Active Learning (Innovation in Teaching) in 2021. Besides teaching and research, he is also active in disseminating his knowledge as a subject matter expert for DNA Forensics and Fingerprinting for Tata Consultancy Services (TCS), Mumbai, India. He is a member of many prestigious scientific societies in the field of forensics like the Silk Road Forensic Consortium, China (Founded by Professor Henry C. Lee) and "The International Society for Forensic Genetics" (ISFG).

DR. ANKIT SRIVASTAVA

Associate Professor (Forensic Science)
NUJS, Kolkata

Profile

He conferred the Ph.D. degree in Forensic Science. Previously he has rendered services to Dr. A.P.J. Abdul Kalam Institute of Forensic Science & Criminology, Bundelkhand University, Jhansi (Ranked as No. 1 State University of Uttar Pradesh) as an Assistant Professor as well as Head/Coordinator. He has also been attached to different administrative positions like Assistant Proctor and Assistant Dean of Student Welfare at Bundelkhand University, Jhansi. He has 14 years of research experience. During his 14 years of journey, he has authored several research papers published in different journals of national and international depute. He has been visited and invited by various countries namely, the U.S., U.K., Netherlands, Singapore, Thailand, China, New Zealand and Czech Republic for lectures and presentations. More than 70 students have qualified UGC-NET/JRF exam under his guidance. In addition to this, he is also an Editorial Board Member in different journals of national and international fame. He is also providing his services as a reviewer in various journals. He has organized more than 07 National/International level conferences and seminars in Dr. A.P.J. Abdul Kalam Institute of Forensic Science & Criminology, Bundelkhand University, Jhansi. He is associated with various reputed universities/institutions as a member of Board of Studies or external subject expert.

MICHAEL W. STREED

Forensic Facial Imaging Expert
President, CEO SketchCop®Solutions, Inc.
United States

Profile

Police Sergeant Michael W. Streed is an internationally recognized forensic facial imaging expert based in Southern California. For 36 years, Michael has blended his rich law enforcement experience and artistic skills to provide forensic facial imaging services to some of the largest, most diverse, police agencies in the United States, including the Los Angeles and Baltimore City Police Departments. Michael's long and distinguished career as an award-winning forensic artist began concurrently with his law enforcement career. The experience he gained as a violent crimes investigator helped him develop specialized interview skills which he adapted for his role as a police sketch artist. His skills as an artist, coupled with his strong communication skills made him one of the country's most sought-after police sketch artists. His successful police sketches in several high-profile cases - The Samantha Runnion murder, the Anthony Martinez murder, the Baton Rouge serial killer, and Orange County's Fortune Teller murder, not to mention countless others, have led to the arrest of violent criminals nationwide. Today, he continues to serve as the Baltimore Police Department's Forensic Artist, providing them and other police agencies throughout the country, with remote forensic facial imaging services which he conducts from his offices in California.

DR. ASHISH BADIYE

Head of Department, Forensic Science
GIFS, Nagpur

Profile

Dr. Ashish Badiye is the Head of the Department and Assistant Professor (Senior Grade) at the Dept. of Forensic Science, Government Institute of Forensic Science in Nagpur. He holds B.Sc. (Hons), M.Sc., and Ph.D. in Forensic Science, alongside a UGC-NET-JRF (Forensic Science) qualification. He has published over 50 Papers in International Journals of repute. He has presented several Papers and Posters at various National and International conferences, seminars, etc., and won 15 Best Paper and Poster Presentation awards. His expertise has been shared through numerous invited talks, guest lectures, workshops, and training at various events, institutes, and universities. Additionally, he has imparted his knowledge to police officers, showcasing his extensive experience and skills in the field. He has played a key role in organizing Nagpur City Police Duty Meet 2017, 2018, 2019, and 2023. He also assists the Maharashtra Police in various aspects of Crime Scene Investigations. He has recently taken up the role of IQAC Coordinator of the Institute.

PHANEENDER BN

Director,
Clue4 Evidence Forensic Lab
Bengaluru

Profile

Phaneendar B N has done M.Sc in Cyber Security, LLB, LLM (Torts & Crimes), PG – Diploma in Forensic Documents and Fingerprint Examination and PGDCLCF, (PGDHRL) from National Law School of India University – Bengaluru. He is Chairman and Managing Trustee of Clue4 Evidence Foundation – An NGO for Investigation and Legal Support. He is a Certified PDD Expert - TVC, South Africa and is also certified by the American Institute of Applied Sciences – USA. He is trained in Personal Data Protection. He has over 13 years of Professional Experience. He has examined over 5500 cases including Handwriting, Signatures, Ink, Papers, Rubber stamps, Security Documents, Fingerprints, Accidents Fire Examination Polygraph Tests & Digital examination of Evidence. He has deposed in over 500+ cases as a Forensic Expert and has cross-examined various cases as an Advocate. He has been appointed as Court Commissioner in various cases by the Law courts resulting in several convictions in Criminal cases and reports Appreciated / Upheld by various Civil, Criminal, Consumer, MACT and also by High Courts. He has presented various research papers at National and International Conferences and won best paper awards. He has been invited as a Lecturer by several institutions and has been a speaker at many conferences and seminars. He has a membership in the International Association of Document Examiners, USA, International Association for Identification (5th Indian to get this membership), International Association for Identification – USA, etc. He is an Advisor at the International Association of Scientists and Researchers and a Resource Person for Academic Institutions for designing various Training and Certification Programs. He has been awarded as 'Dedicated Teacher' by his Excellency Shri. Hansraj Bharadwaj – Governor, State of Karnataka.

PROF. EMILIO NUZZOLESE

Founder President, AFOHR
Professor, University of Turin
Italy

Profile

Prof. Emilio Nuzzolese is a forensic odontologist, currently serving as an Associate Professor in Legal Medicine at the University of Turin (Italy) and Head of the Human Identification Laboratory at, the Medico-legal Institute of Turin. He also serves as an Honorary Judge at Juvenile Courts. He graduated in dentistry from the University of Bari (Italy) in 1994. He holds post-graduate degrees in Legal Medicine, Forensic Sciences, and Forensic Odontology and a Research Doctorate (PhD) in Analytic Morphometry. He served as an Expert witness in the Civil and Penal Court for dental disputes & professional liability and as an Expert before the International Penal Court. He has associative involvements, which include participating as an odontologist in the INTERPOL DVI Forensic Odontology Sub-Working Group since 2010. He is also President and Founder of the Civil Protection Association Dental Team, DVI Europe. He is a co-founder of Forensic Odontology for Human Rights. He is a Fellow of the Odontology Section of the American Academy of Forensic Sciences, since 2011. He has presented over 100 papers in national and international forensic science meetings and journals and has been invited as a speaker at several congresses in Italy and abroad (Canada, Indonesia, India, Hungary, Nepal, Romania, USA, UK), among which the forensic dentistry session of the 2006 FDI World Dental Congress in Shenzen (Republic of China).

PROF. HEMLATA PANDEY

Lecturer and Program Leader
Forensic Odontology
University of Dundee

Profile

Dr. Hemlata Pandey is a lecturer and program lead in Forensic Odontology at the University of Dundee, Scotland, UK. She provides expertise to The Crown Office and Procurator Fiscal Service (COPFS), which is Scotland's public prosecution service and death investigation authority. She also serves as an Academic advisor to the Indian Board of Forensic Odontology. While in India, she established the first Forensic Odontology and Human Identification Lab at a government hospital in India and provided expertise to state police departments and CBI. She has also been involved in disaster response and victim identification in India. She is the President of the Association Forensic Odontology for Human Rights and is a TEDx Speaker
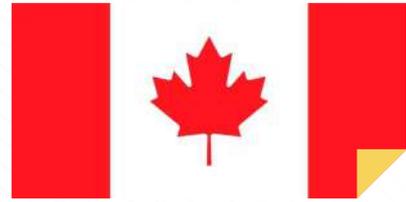
WILL DODDS

Sergeant in Charge, Forensics Unit,
Saanich Police Department in Victoria
British Columbia, Canada

Profile

Will Dodds is the Sergeant in charge of the forensics unit at his police department in Victoria, British Columbia, Canada. He has been working in the field of forensics and collision investigation for 17 years. He worked as Head Coach and Coordinator of the Canadian National Junior Rowing Team in Rowing Canada Aviron. He has an experience of almost 7 years in the field of teaching. He is a certified Municipal Constable in the Police Academy and graduated from the Justice Institute of British Columbia. He has obtained Level IV Professional Coaches Certification for Rowing Canada Aviron. He served as the President of the Saanich Lacrosse Association (from 2010 to 2016). He has numerous publications under his name in several National and International journals.

DR. MYKEDOX CUCHAPIN

Tarlac State University
Integrated Bar of the Philippines
Pangasinan Chapter

Profile

Dr. Mykedox Knoel T. Cuchapin is a distinguished litigation lawyer, professor of law, and visionary founding counsel of the Cuchapin Law Office in Moncada, Tarlac, Philippines. He has an impressive and multifaceted career. He has done his Bachelor's and Juris Doctor Degree from Saint Louis University, Master of Law from the Pamantasan Ng Lungsod ng Maynila, gained coveted Doctor of Law Degree from the Pontifical and Royal University of Santo Tomas in 2020 and is now currently pursuing a Post-Doctorate Degree. He actively practices law, specializing in Family Law, Property Law, Civil Law, and Criminal Litigation. As an incumbent Director of the Integrated Bar of the Philippines – Tarlac Chapter, he contributes to Gender and Development Programs. He serves as a Professor of Law at various universities in the Philippines, imparting legal knowledge to law students and graduate students. His research interests include Cryptocurrency (published in 2018) and protecting children using forensic evidence (published in 2020). His commitment to social justice is evident through his role as the Director of the Marc Andrei Marcos Legal Aid Center. His dedication to the legal profession and education significantly impacts the legal landscape in the Philippines. His work exemplifies the pursuit of justice and the empowerment of future legal professionals.

ATTY. ALOI RENZ SANTOS

Commission
Human Rights of the Philippines
Central Luzon

Profile

Atty. Aloi Renz Santos is currently the Acting Chief of the Legal Division of the Commission of Human Rights, Region III Office. He graduated Valedictorian in elementary, high school, and received magna cum laude distinction in his Bachelor's degree. He took his juris doctor at the University of Sto. Tomas and passed the Bar Exams 2019. Aside from his full-time work in the commission [and his commitment as a legal consultant to his family-owned land services office], he manages to work as a part-time professor and shares his content expertise with undergraduate and graduate students of La Consolacion University of the Philippines, Bulacan State University, Pamantasan ng Lungsod ng Maynila and Tarlac State University-School of Law. He is a proud alumnus of the Global Undergraduate Exchange Program at University of Tennessee, Knoxville Tennessee, USA— a scholarship program administered by the Philippine-American Educational Foundation — also known as Fulbright Philippines. a speaker for various contents, causes, and advocacies, a co-founder of Polaris Philippines and BulSU-OSO Sail Program, an editor-in-chief, a student-leader, and a member of different community-led organizations in local, national and international levels.

DR. MARIEMEIR M. RIVERA

Tarlac State University
Integrated Bar of the Philippines
Pangasinan Chapter

Profile

Dr. Mariemeir M. Rivera hails from the Province of Tarlac, Philippines. Her passion for law and education has been a driving force throughout her career. She completed her Bachelor of Arts in English degree at the prestigious University of the Philippines, Diliman. She then pursued her Juris Doctor at the esteemed Ateneo de Manila School of Law. To deepen her legal expertise, she embarked on a journey of continuous learning by finishing her Master of Laws at the Pamantasang Lunsod ng Maynila and Doctor of Civil Law at the University of Santo Tomas. Currently, she is pursuing a Post Graduate Course at the Philippine Christian University. As a seasoned litigation lawyer, She established the Marcos-Rivera Law Office. Her practice spans diverse legal domains, including Family Law, Criminal Law, Civil Law, Property Law, Labor Law and Banking Law. Since 2008, she has been a dedicated lecturer at the Tarlac State University, sharing her insights on various Civil Law subjects. Her commitment extends beyond the courtroom as she is also an accredited Supreme Court Mediator at the Tarlac PMC Office. Her unwavering dedication to justice, education, and legal excellence continues to inspire those around her.

DR. JOSE I. DELA RAMA JR.

Dean, School of Law,
Tarlac State University, Philippines

Profile

Dr. Jose I. Dela Rama Jr. is a Professor and Dean at the Tarlac State University School of Law. He is also a member of the law faculty of the University of St.Thomas, San Sebastian College – Recoletos, Pamantasan ng Lungsod ng Maynila Graduate School of Law, Bulacan State University, and St. Dominic Savio College of Law. He previously served as president of the Integrated Bar of the Philippines (IBP) Gat. Marcelo H. del Pilar Bulacan Chapter and IBP Governor representing Central Luzon. He founded the Justice Jose C. dels Rama Sr. Law Foundation, Inc., in honour of his late father. Through the Foundation, he has opened doors for many law students to have access to legal education through scholarships and other initiatives.

AMIR LIBERMAN

CEO, Inventer,
Owner, Nemesysco Ltd.
Israel

Profile

Amir Liberman is a worldwide leading researcher in the field of human voice analysis, and the first to identify the 3 basic sensations in the human voice: Excitement (positive sensation), Stress (negative sensation) and uncertainty (cognitive stress). He began his voice analysis research in 1997, in response to a terror attack that took the lives of 3 young mothers in Israel. His original intention was to build the "ultimate lie detector" based on speech analysis and other more common techniques of veracity assessment, but quickly changed the scope of his research to explore unique properties of the voice he identified in his preliminary test cases. His first voice related patent was published at 1998, summarizing a research of 2 years, leading the way to the development of the first ever commercial computerized emotion detector. His more recent discoveries and additional novel vocal parameters were published in his second voice analysis patent from 1999, identifying "Concentration", "Anticipation" and "Arousal" (Also known as the "Love Detector" patent). Being a self-educated researcher, his methods of research are unique and unfamiliar to the world of traditional phonetics, as most of his research is done in real-life settings and not in a mocked laboratory atmosphere. He formed Nemesysco, Ltd. in April of 2000, to manage all of his IP patents and development projects. Since then, he has invested all of his efforts and resources in perfecting and fine-tuning LVA technology and its applications for homeland security needs, fraud prevention solutions, call center utilities and CRM appliances.

DR. KIMBERLY ANNE PLOMP

Associate Professor, Head of the Human Osteoarchaeology,
Palaeopathology and Evolution (HOPE) Laboratory
School of Archaeology, University of the Philippines, Diliman

Profile

Dr. Kimberly Plomp is Associate Professor and Head of the Human Osteoarchaeology, Palaeopathology, and Evolution (HOPE) Laboratory in the School of Archaeology, University of the Philippines, Diliman, Quezon City, Manila, Philippines. Her research interests are broad and encompass many topics related to biological anthropology, such as bioarchaeology, forensic anthropology, palaeopathology, evolutionary medicine, functional anatomy, and human evolution. Currently, her projects focus on identifying evolutionary explanations for common health problems such as back pain, osteoarthritis, and developmental conditions as well as using human shape variation to trace past dispersals and migrations. She received her PhD from Durham University in 2013, her MSc (Dist) from the University of Bradford in 2009, and her BA from the University of Alberta in 2007. She has so far authored 19 papers in academic journals, 7 book chapters, and has edited two volumes, one titled Palaeopathology and Evolutionary Medicine: An integrated approach, and the other, Behaviour in our Bones. She teaches a variety of courses in archaeology and biological anthropology and currently mentors 9 graduate students in the HOPE lab. She also co-hosts a podcast called Screens of the Stone Age that aims to educate the public on science and archaeology. One major aim she has for her tenure at the School of Archaeology is to solidify forensic anthropology and archaeology in the Philippines through education and practice, both in the lab and field.

DR. ELLI NUR HAYATI

Associate Professor
Dean, Faculty of Psychology
University of Ahmad Dahlan (UAD)

Profile

Dr. Elli Nur Hayati is an accomplished academic and researcher, holding a Bachelor's degree from Gadjah Mada University in Yogyakarta, Indonesia, she pursued her Master's and Doctoral degrees in Epidemiology and Public Health at Umea University, Sweden. Currently serving as an Associate Professor and Dean of the Faculty of Psychology at the University Of Ahmad Dahlan (UAD), she has made significant contributions to the fields of Psychology, Epidemiology, and Public Health. Her research interests span across Public Health, Gender-Based Violence, Gender Studies (with a focus on Women and Masculinity), and Community Psychology. Throughout her career, she has been actively involved in research and has published extensively in national and international peer-reviewed journals. Her commitment to addressing societal issues is evident in her involvement in various research projects, including mapping psychosocial service providers for women and children victims of violence in East Java and East Kalimantan. Her dedication to improving the quality of life for vulnerable groups is reflected in her successful grant applications, such as psychosocial interventions funded by the Ministry of Higher Education of Indonesia (RISTEK DIKTI). Additionally, she has engaged in collaborative international research, particularly with UNISA in South Africa, focusing on voicing and empowering vulnerable groups through Indigenous Community Psychology. As an invited speaker and visiting scholar, She has shared her expertise at prestigious international events, covering topics ranging from men's distress experiences and risky health behaviour to domestic violence in Indonesia. Her contributions extend beyond academia, as evidenced by her involvement in the Conference on Forensic Sciences in November 2022, where she addressed the intersection of Forensic Psychology and Gender-based Violence investigation. Her rich academic and research background, coupled with her commitment to addressing societal challenges, establishes her as a distinguished figure in the fields of Psychology and Public Health.

DR. DINDO P. CAFÉ

University of the Philippines
Manila

Profile

Dr. Dindo P. Café is currently the chair and faculty of the Department of Behavioral Sciences, College of Arts and Sciences at the University of the Philippines Manila, Philippines. He obtained his Doctor of Philosophy in Sociology and Master of Arts in Sociology and Community Development from the University of Philippines Diliman and University of the Philippines Los Banos respectively. He completed his Bachelor of Arts in Social Sciences majoring in Political Science from the University of the Philippines in the Visayas-Tacloban College. His international engagements include teaching in an international educational program as a visiting professor at Chonbuk National University, South Korea. He was a recipient of a research grant from Sumitomo Foundation for an ethnography on transcultural identities of Japanese-Filipino Children (JFC) in Tokyo, Japan. He has been involved in different consultancy research with different institutions like UNICEF, AUSAID, Plan International, DSWD, CHED, NCCA, along with others. He presented papers in various international conferences including those in Cambridge University, United Kingdom, Thammasat University in Thailand, etcetera. Also, he has actively published in international and local journals on topics that include representations of calamity in social media, local concepts of calamity among indigenous peoples, sustainable development among indigenous peoples in mining milieu, cross-cultural identities of migrant Filipinos, social and cultural identities of indigenous peoples, indigenous religion among others.

ABSTRACTS
of Speakers

MOHINDER SINGH

Emeritus Resource Faculty, School of Forensics, Risk Management & National Security (SFSRMNS), Former Government Examiner of Questioned Documents, Govt. Of India, CFSL, Hyderabad

Abstract:

FORENSIC SCIENCE- BEYOND MULTIDISCIPLINARY APPLICATIONS

This presentation examines as to how forensic science is gradually evolving while overcoming traditional barrier following a multidisciplinary approach. Utilizing both generalized and specific scientific principles in conjunction with varied knowledge from the associated fields, including criminology, psychology, crime scene investigation, and the questioned documents, it explores the paradigm change from concentrating solely on its own methods to comprehend the discipline's larger goals in relation to other related subjects. The goal of the discussion is to offer insightful information about the latest advancements in forensic science while highlighting the challenges faced and collaborative nature of this ever-evolving field. As no two cases are exactly alike, hence, in handling complex cases, the session emphasizes that there is a need to expand the generalized concept of multidisciplinarity (i.e., the additive approach) to that of interdisciplinarity (interactive) and transdisciplinarity (i.e., the holistic approach). It also highlights the necessity of a shift in focus from the present reactive approach to the futuristic proactive approach, as well as the advantages of teamwork combining the specialized expertise of each discipline within the policy framework. A practical approach to interdisciplinary casework by combining evidence in complex cases has been suggested by some experts. Additionally, the importance of implementing the recent advancements in forensic sciences as well as the recommendations of NAS (2009) and NIST (2020) is emphasized in order to improve the quality of results delivered presently, rather than rushing to the suggested holistic and futuristic approach in haphazard manner.

PROF. (DR.) MUKESH KUMAR THAKAR

Professor and Head
Department of Forensic Science, Punjabi University, Patiala, Punjab, India

Abstract:

NOVELTY OF SALIVA EVIDENCE IN THE DEVELOPING PARADIGMS

Saliva is one of the most frequently collected forensic evidence at the crime scene. In past, almost everyone is aware that it is found deposited on variety of evidences like the smoked cigarette butts, on the cups, glasses etc. and also found deposited on postal stamps and envelops etc. Moreover, saliva plays the most important role in determining secretor status of the person and then only scientists can determine blood groups from the body fluids including semen. Besides these, it has created great applications in other fields of forensic science, one of them is the document examination etc. In the present talk an attempt has been made to explore in detail the hidden potential/Novelty of the saliva evidence. The possible uses of saliva, its persistence on human skin and its transferal to the object in contact allow the investigator to utilize this salivary evidence and expected to go long way in helping the act of justice in the court of law.

M.C. JOSHI

Retd. Director
CFSL Hyderabad, DFSS, MHA, GOI

Abstract:

FORENSIC DOCUMENT INTRICACIES: A TREATISE OF EMERGING TRENDS IN DOCUMENT FORGERIES AND SOME OTHER INTERESTING PROBLEMS

With the advancement in digital image acquisition, processing and reproduction technologies, fabrication of documents has become easier and closer to perfection, which has added new dimensions to the nature and intricacy of white-collar crimes on one hand and challenges of their detection on the other. The ease with which digital technology is being applied in manipulation of documents is simply stunning. Generally, a spurious signature is produced through simple copying, tracing and free hand simulation of genuine signatures, using ink, paper and other writing implements; however, with the easy access to high quality plain paper copiers and other image acquisition, processing and reproduction tools based on digital technology, new dimensions have been added both in the nature and quality of the perpetration of white collar crimes and their forensic detection. Alternatively, we should also be well aware that technology is revolutionary in execution but evolutionary in nature hence the tools and techniques available to both forensic scientists and fraudsters today shall be ineffective tomorrow, therefore continuous updating of knowledge and sharpening of skill set is imperative for Forensic Document scientists. The professional competence includes both 'Declarative Expertise' (Knowing what) and 'procedural expertise' (Knowing how). Inconsonance with theme, this presentation elucidates and showcases some of the actual case of cheating and forgery wherein digital technology as well as conventional methods have been used to fabricate the original one to have spurious documents with a motive of deceit. In one case, image acquisition and transposition of a genuine signature onto a stolen Cheque, coupled with inking of the electronically produced graphic line of the transposed "genuine" signature to generate a spurious signature in order to have illegal access to others funds. In some examples, machine/computer generated questioned documents have been discussed consisting of fabricated and manipulated handwritten body text and signatures using digital image processing etc. thereby completely altering the nature and motive of the genuine document. Examination of such digitally fabricated document in a forensically sound manner in light of the principle of comparison and individuality together with consistency analysis reveals that the questioned document is spurious in nature and origin Few unusual cases requiring unexplored ideas and innovative scientific approach during the examination have also been discussed stressing upon the point that continuous contemplation on the problem and feeding mind with the correct data streaming through the thought process for plausible and logical solution definitely provide solution. In this regard A S Osborn has Osborn rightly stated that 'The real proof of the truth is not the finding of it in a book- even in this book- but in the conditions, facts and essence of things as interpreted and demonstrated by research, actual experimentation and correct reasoning (Page 373)'.

Keywords: Forgery, Digital fabrication, Superimposition, Image Acquisition and Transposition.

PROF. RAKESH KR. GOREA

Professor and Head
Gian Sagar Medical College & Hospital, Vill. Ram Nagar, Banur

Abstract:

SCOPE & FUTURE OF FORENSIC NURSING IN THE INDO-PACIFIC REGION

India has become the first country in the world due to the efforts of members of the Indo- Pacific Academy of Forensic Nursing Science [INAFNUS], to have a forensic nursing teaching module at the undergraduate level for all the BSC nursing students in India. The advantage of this will be that all the future nurses of India will have the exposure to the necessary knowledge required for nurses about forensic and legal aspects of nursing practice and better collection and preservation of biological pieces of evidence for the successful prosecution of the cases. They will be able to document all their medicolegal work in a better manner and their testimony will be accepted in the courts as expert witnesses in the medicolegal cases for the work performed by them. Students will become interested in studying the higher courses in Forensic Nursing in India and abroad to provide and improve the medicolegal services in India. There is a big scope of Forensic Nursing in the Indo-Pacific Region in various arenas e.g., in Emergency wings of hospitals while dealing with medicolegal cases, during postmortem examinations, in crime scene investigations, at the One Stop Centres, in schools and colleges to detect child abuse, in the old age homes to detect and deal with the cases of geriatric abuse, detect human rights violations at the places of detention and humanitarian forensics work, with the attorneys and insurance companies to help in their work to improve their services when the questions arise of dealing with the humans, alive or dead. A bright future awaits the forensic nurses in the Indo-Pacific Region. With more people becoming aware of the utility of forensic nurses, there will be a big generation of employment for forensic nurses in all the above-mentioned fields along with teaching and training avenues in the nursing colleges. Even corporate hospitals will provide a lot of job avenues as they need people who can deal confidently with medicolegal work as there is a huge shortage of forensic medicine specialists in the Indo-Pacific Region.

PROF. RAJINDER SINGH

Dean Academics, Uttar Pradesh State Institute of Forensic Science, Lucknow
Former Head of Department of Forensic Science, Punjabi University, Patiala

Abstract:

WILDLIFE FORENSICS: CURRENT ISSUES, TRENDS, AND CHALLENGES

Wildlife crime is a major cause of concern across the globe as it poses serious threat to the conservation of biodiversity and environment. In addition, huge amount of money involved in illegal wildlife trade is being used to fuel other form of organized crime such as human trafficking, terrorist activities, drugs and firearms smuggling further deepens the concerns to take immediate steps to arrest this form of crime. The Convention on International Trade in Endangered Species of wild flora and fauna (CITES) and the Wildlife (Protection) Act, 1972 in India provide protection to the wildlife and strictly prohibits any form of trade in protected wild flora and fauna. Wildlife forensics plays a vital role in the successful implementation of these laws by providing aid in investigation and correct identification the species from different evidentiary materials and body parts/ products encountered in such cases. In recent times, poachers are targeting lesser-known species by using new technology to evade law enforcement agencies. Diverse range of wild species, products derived from them and scientific methods employed for the species identification are posing new challenges for forensic practitioners. In this talk, current trends and issues in wildlife crime, and challenges related to the use of forensics in its investigation will be discussed.

Keywords: Wildlife forensics, wildlife crime, species identification.

SAMIR KUMAR DATT

CEO
Foundation Futuristic Technologies Pvt. Ltd

Abstract:

CRIME INVESTIGATION PLATFORM OF THE FUTURE

Crime increasingly has a digital element to it and criminals are being seen to be embracing technology to enable their crimes. New age crimes using new age technologies requires Government and law enforcement agencies to tackle such crimes and incidents using the latest cutting edge technology and leveraging tools of the future such as machine learning and artificial intelligence. This talk will cover such technology which will create a meaningful impact on crime while emphasizing a simple usable human interface.

PROF. EMILIO NUZZOLESE

Founder President, AFOHR
Professor, University of Turin, Italy

Abstract:

HUMANITARIAN RESPONSE THROUGH FORENSIC ODONTOLOGY

Humanitarian response through forensic odontology plays a crucial role in disaster and conflict situations, providing vital assistance in the identification and documentation of human remains. Forensic odontology, a specialized field of dentistry, utilizes dental records, radiographs, and other dental evidence to establish the identity of individuals who may have perished in mass disasters or human rights violations. In humanitarian settings, forensic odontologists work alongside multidisciplinary teams to collect ante-mortem from missing persons associations. This includes obtaining dental records, X-rays, and photographs to establish a comprehensive database for potential identification purposes. In the aftermath of a disaster or conflict, forensic odontologists employ their expertise to collect and compare post-mortem dental remains with the collected ante-mortem data, aiming to determine the biological generic profile and the identities of victims. The application of forensic odontology in humanitarian response offers several benefits. First and foremost, it assists in providing closure to grieving families by identifying their loved ones. It also supports the process of repatriation and proper burial, honouring cultural and religious practices. Moreover, forensic odontology can contribute to the investigation and documentation of human rights abuses, aiding in the pursuit of justice and accountability. Finally, forensic odontology can serve to raise awareness on the missing and unidentified phenomena, promoting the collection of identifying data, like the identification kit for children and adolescences. The implementation of forensic odontology in humanitarian settings has received a recent inspiring document by the Association Forensic Odontology for Human Rights (AFOHR), with the so called 'Turin Declaration on Humanitarian Forensic Odontology (October, 2023) which aims to establish an effective coordination mechanisms among various stakeholders with local authorities, international organizations, and forensic experts to achieve a successful humanitarian response.

DR. KIMBERLY ANNE PLOMP

Associate Professor
Head of the Human Osteoarchaeology, Palaeopathology and Evolution (HOPE) Laboratory, School of Archaeology, University of the Philippines, Diliman

Abstract:

Forensic anthropology and archaeology are invaluable fields under the umbrella of forensic sciences. The application of anthropological and archaeological theory and methods in forensic cases provides key information in a forensic investigation, including time since death, identification of deceased people, manner and mode of death, and can aid in the recovery and interpretation of evidence at the scene. Despite their importance, however, both anthropology and archaeology are underutilized in the Philippines. Due to this, numerous cases that may be solved often remain open and even not investigated. With a new surge of students interested in forensic anthropology and archaeology in the Philippines, now is the ideal time to remedy this and develop a strong, reliable forensic anthropology and archaeology framework and standardized protocols for the Philippines. I will present the work currently being undertaken at the School of Archaeology at UP Diliman related to forensics and some ideas on how we can start to develop and use forensic anthropology and archaeology in Filipino forensic investigations.

4th INTERNATIONAL FORENSIC SCIENCE CONFERENCE

Forensic Science beyond Interdisciplinary Applications

DECEMBER 01

CONFERENCE SCHEDULE

Time	Event
08:00 AM TO 09:00 AM	Early Meal
09:00 AM TO 09:30 AM	Registration
09:30 AM TO 11:00 AM	Inauguration and Felicitation

Chief Guest

Shri B. Shankar Jaiswal IPS

Joint Commissioner of Police, Delhi Police
Technology, CyPAD, NCFL(I4C) & Licensing
New Delhi, India

Guest of Honor

Shri Keshav Kumar IPS

Consultant, Govt. of Assam
Retired Director General of Police
Director Anti Corruption Bureau, Gujarat

Time	Event
11:00 AM TO 11:30 AM	HIGH TEA

SCIENTIFIC SESSION–1 — Auditorium

11:30 AM TO 12:15 PM — **Shri Keshav Kumar IPS**

TOPIC: Experiences with innovative Forensic Interface in Crime Investigation

12:15 PM TO 01:00 PM — **Prof. Robert Green OBE**

TOPIC: Forensic Science at its Best–Showing the benefits of Forensic Science

Time	Event
01:00 PM TO 02:00 PM	NUTRITIONAL BREAK

SCIENTIFIC SESSION-2 — Auditorium

02:00 PM TO 02:45 PM — **Prof (Dr) Ma. Teresa G. De Guzman**

TOPIC: Culture and Context: Ethical and Practical Considerations in Forensic Investigation in the Philippines

02:45 PM TO 03:15 PM — **Prof. Rakesh Kumar Gorea**

TOPIC: Scope & Future of Forensic Nursing in the Indo-Pacific Region

03:15 PM TO 03:45 PM — **Dr. G K Goswami IPS**

TOPIC:

03:45 PM TO 04:00 PM — **TEA BREAK**

SCIENTIFIC SESSION-3 — Auditorium

04:00 PM TO 04:30 PM — **Dr. Ritesh Kumar Shukla**

TOPIC: Forensic Biotechnology: An Emerging Paradigm of Research & Development in Forensic Science

04:30 PM TO 05:00 PM — **Smt. Deepa Verma**

TOPIC: Chain of custody of Forensic samples in the laboratory

SCIENTIFIC SESSION-4 — Conference Hall

11:30 AM TO 12:00 PM | **Shri Sanjay Sahay Ex-IPS**

TOPIC: Diving into the Metaverse: Building Bridges to Virtual Realities and Exploring the Future of Digital Interaction

12:00 PM TO 12:30 PM | **Prof. Triveni Singh IPS**

TOPIC:

12:30 TO 01:00 PM IST | **Prof. Emilio Nuzzolese**

TOPIC: Humanitarian Response through Forensic Odontology

SCIENTIFIC PRESENTATIONS PAPER — Conference Hall

Student Category   02:00 PM to 05:00 PM

PAS-01   Arun Kumar Shukla   02:00 PM
OFFLINE
Artificial Intelligence And Satellite Imagery: Paving The Way for Forensic Investigations

PAS-02   Shambhawi Sandilya   02:10 PM
OFFLINE
Unmasking Audio Deepfake using SIS for Forensic analysis

PAS-03   Palak Aneja   02:20 PM
OFFLINE
To Study the Range of Variation in the Acoustic Parameters of Standard and Morphed Audios

PAS-04   Vanshika Sarva   02:30 PM
OFFLINE
Diatom-A Great Forensic Tool in Investigation of Drowning Cases

PAS-05   Devansh Tripathi   02:40 PM
OFFLINE
Importance of Ocular Lenses in Forensic Investigations

PAS-06   Bhawna Bangwal   02:50 PM
OFFLINE
Stature Estimation from Various Anthropometric Measurements in Mazhabi Sikh Population of Punjab State in North India

PAS-07   Sreeram K Y
03:00 PM

Human Personality Assesment Using Gait Pattern Analysis

PAS-08   Kiranbhai R Dodiya
03:10 PM

Cracking the Code: Unmasking ATM Malware with PE

PAS-09   Prashant Kumar
03:20 PM

Highlighting the Significance of Autopsies in Hanging Cases: A Case Study

PAS-10   Dr. Attam Prakash
03:30 PM

Findings of Manual strangulation at autopsy: A Case Report

PAS-11   Vani Gupta
03:40 PM

Forensic Sex Determination: A Comprehensive Review Utilizing Skull and Pelvic Bone Analysis

PAS-12   Satria Perwira
03:50 PM

Decomposing a Drowned Body With Signs of Violence

PAS-13   Alex Idicula Mathews
04:00 PM

Usage of Average Ridge Density Calculation on Palmprints for Individualisation and Possible Sex Determination

PAS-14   Nikhila V. S.
04:10 PM

Identification of Tropane Alkaloids from Different Parts of Datura Metel

PAS-15   Somanjana Chattakhandi
04:20 PM

Role of DNA in Murder Cases

PAS-16   Rohith S
04:30 PM

Email Analysis for Cyber Forensic Intervention

PAS-17   Riya Ghosh
04:40 PM

Genomic Detectives: Forensic Science's Expanding Role in Clinical Genetics and Molecular Biology

PAS-18   Maitri Naik
04:50 PM

Importance of Autopsy – An Illustrative Case

DECEMBER 02

| 08:00 AM TO 09:00 AM | Early Meal |

SCIENTIFIC SESSION–5   Auditorium

09:00 AM TO 09:40AM

Dr. Maria Corazon A. De Ungria

TOPIC — Forensic DNA Testing in the Philippines: A Recap of the Last Ten Years

09:40 AM TO 10:20 AM

Shri M. C. Joshi

TOPIC — Forensic Document Intricacies: A Treatise of Emerging Trends in Document Forgeries and Some Other Interesting Problems

10:20 AM TO 10:50 AM

Prof. Mukesh Thakkar

TOPIC — Novelty of Saliva Evidence in the Developing Paradigms

10:50 AM TO 11:00 AM   **TEA BREAK**

SCIENTIFIC SESSION–6   Auditorium

11:00 AM TO 11:30AM

Prof. Rajinder Singh Chandel

TOPIC — Wildlife Forensics: Current issues, Trends and Challenges

11:30 AM TO 12:00 PM

Prof. Asha Srivastava

TOPIC — Forensic Psychology an interdisciplinary approach for crime investigation

12:00 PM TO 01:00 PM

Dr. Harsh Sharma

TOPIC — Silent witnesses speak at Crime scene: Clue from scene of crime

01:00 PM TO 02:00 PM   **NUTRITIONAL BREAK**

SCIENTIFIC SESSION–7   Auditorium

02:00 PM TO 02:30 PM

Dr. Jay Dalet

TOPIC Use of Fluorescence in Situ Hybridization Technique Adjunct with RNA and DNA based Technologies in the Study of Biological Evidences for Forensic Casework

02:30 PM TO 03:00 PM

Shri Mohinder Singh

TOPIC Forensic Science –Multidisciplinary & Beyond

03:00 PM TO 03:30 PM

Lt Col (Dr) Santosh Khadsare (Retd)

TOPIC Future of Digital Forensics : Indian Perspective

03:30 PM TO 03:45 PM   **TEA BREAK**

SCIENTIFIC SESSION–8   Auditorium

03:45 PM TO 04:15 PM

Dr. Mykedox Cuchapin

TOPIC Protecting the Child's Filiation: A Comprehensive Study on the Philippine Legal Landscape on the Right to Disestablish Filiation under the Lens of International Law

04:15 PM TO 04:45 PM

Atty. Aloi Renz Santos

TOPIC Role of Forensics in Human Rights Investigations: Ensuring Accountability and Upholding Justice

SCIENTIFIC SESSION–9 — Conference Hall

09:30 AM TO 10:00 AM

Dr. Jose I. dela Rama, Jr.

TOPIC: The Inclusion of Forensic Evidence in the Philippine Rules of Court: A Foresight

10:00 AM TO 10:30 AM

Dr. Elli Nur Hayati

TOPIC: The Role of Forensic Psychology within the Legal and Justice System.

10:30 AM TO 11:00 AM

Mr. Amir Liberman

TOPIC: LVA.ai – when forensic voice analysis meets chatGPT

11:00 AM TO 11:30 AM

Prof. Hemlata Pandey

TOPIC: Role of Secondary Identifiers in DVI

11:30 AM TO 12:00 PM

Dr. Kimberly Anne Plomp

TOPIC: Forensic Anthropology in The Philippines: Research And Applications

12:00 PM TO 12:30 PM

Mr. Michael W Streed

TOPIC: Modern Techniques in Forensic Art

SCIENTIFIC PRESENTATION PAPER — Conference Hall

Professional Category — 02:00 PM to 05:00 PM

PAP–01   Dr. Perumal P — 02:00 PM

Revolutionizing Post–Mortem Examination: Introducing The Lateral Percutaneous Incision For Traditional Autopsy

PAP–02   Dr. Aaeen Alchi — 02:10 PM

Auto–Adaptive Systems In Forensic Toxicological Analysis

PAP–03   Salmalee Basu — 02:20 PM

Olfactory Memory: Traditional And Modern Research Approaches And Its Potential As A Forensic Psychology Tool

PAP-04 Dr. Twisha Shah 🕐 02:30 PM

Traditional Tattoos-The Marker For Personal Identification In Gujarat

PAP-05 Dr. Tanurup Das 🕐 02:40 PM

Estimation of Time since Deposition of Body Fluids: An Exploration Towards the Limitations of Locard's Principle of Exchange

PAP-06 Vidushi Tripathi 🕐 02:50 PM

Role of Handwriting in Genotypic Offspring

PAP-07 Lord Frismarc S. Macalintal 🕐 03:00 PM

Level Of Digital Literacy Proficiency Among Criminal Justice Students

PAP-08 Dr. Vineeta Saini 🕐 03:10 PM

Exploring Temporal Shifts in Sexual Dimorphism within Mastoid Regions of North Indian Skull Samples

PAP-09 Dr. Anjali Sehrawat 🕐 03:20 PM

Correlation Between Stature and Thumb Print Based on Indian Criminal Data

PAP-10 Dr. Anjali Sehrawat 🕐 03:30 PM

Comparative Analysis of Human and Non-Human Dentition on The Basis of Elemental Analysis

SCIENTIFIC PRESENTATIONS PAPER   ONLINE
Professional Category

PAPO-01 Dr. Minha Majeed Kak 🕐 10:00 AM

Artificial Intellegence In Forensic Odontology

PAPO-02 Dr. Anupama C 🕐 10:10 AM

The Decisive Role of Prosthodontics and its Invaluable Contribution to Forensic Odontology: A Review

PAPO-03 Dr. Anand Choudhary 🕐 10:20 AM

Correlation of Lip Print With Blood Group in Forensic Science

PAPO-04 Dr. Babul Bandyopadhyay 🕐 10:30 AM

Challenges to Resolve Intraoperative Mortality Cases on Medical Forensic Strategy in Criminal Justice System

PAPO–O5   Mr. Harsha N R   10:40 AM

Investigating the Interrelationship of Personality Traits and Social Media Behaviour: A Synergistic Utilization of a Google Form Survey and Graphological Analysis

PAPO–O6   Ms. Shruti Mishra   10:50 AM

Real–Time Case Studies in Document Investigation: Forensic Science Approach

PAPO–O7   Dr. Kuldeep Kumar   11:00 AM

Reliability of Postmortem ABO Blood Grouping: A Study of 100 Cases

PAPO–O8   Nansy Sara Thomas   11:10 AM

A Study Investigating the Presence of Diatoms on Tooth Samples Using the Acid Digestion Method for the Estimation of Time Since Death in Drowning Cases

PAPO–O9   Dr. Twinkal Patel   11:20 AM

For a Men or Women? Gender Determination from Various Foramina and Canals of Mandible on Cone Beam Computed Tomography (CBCT): A Forensic Study.

PAPO–10   Ms. Jyotirmayee Barik   11:30 AM

Challenges in QD Examination & Unconventional Approach for Examination–Case Studies

PAPO–11   Shubhra Shree Gajbhiye   11:40 AM

Identification of Pollen: A Forensic Application

SCIENTIFIC PRESENTATIONS POSTER   Conference Hall
Student Category

POS–01   Ashwin Edakkara   12:10 PM

OFFLINE

DNA Barcoding : An Effective Yet Underrated Method ForIdentification Of Poisonous Plants

POS–02   Divya Jain   12:20 PM

OFFLINE

Role of Forensic Odontology in Mass Fatalities: A Critical Review on Disaster Victim Identification with Help of Dental Evidence in Tsunami Disaster

POS–03   Animesh Kumar Tiwari   12:30 PM

OFFLINE

Effect of Glutathione S – Transferase Gene Polymorphism and Its Impact Among Heavy Alcohol Drinkers From Central India

POS–04   Shudhanshu Mani Tripathi   12:40 PM

OFFLINE

Elevating Environmental Forensics: Biosensor and chemical sensors through Interdisciplinary Synergy

SCIENTIFIC PRESENTATIONS POSTER   ONLINE

Student Category

POS-05   Anitta Joseph   12:50 PM

Empirical Testing in Fingerprint Identification: Addressing Concerns and Advancing Forensic Practices

POS-06   Bhumit Chavda   12:57 PM

Postmortem Interval Estimation through β-Actin Marker Degradation in Liver Tissues

POS-07   I Ketut Heru Suryanegara   01:04 PM

The Role Of Diatom Tests : Proving Death Due To Drowning

POS-08   Dr. Attam Prakash   01:11 PM

Cheiloscopy – A Tool for Identification

POS-09   Ephrin Shaji   01:18 PM

Forensic Investigation of Damaged Electrical Wire Samples by the Insects Using UPLC Analysis

POS-10   Arunima Dutta   01:25 PM

Machine Learning in Forensic Anthropology: A Novel Approach

POS-11   Dr.Sivagurudev. S   01:32 PM

Correlation of Tongue Patterns to Gender and their Relationship With Dental Caries–Pilot Study

POS-12   Dr. G.Nithyasri   01:39 PM

Virtual Comparison Microscope in Forensic Odontology

POS-13   Nithya S Gadag   01:46 PM

Stature Estimation from Foot and Palm Print of Transgenders

POS-14   Vishnumaya TU   01:53 PM

Study on Different Method Employed in Generating Fake Fingerprint to Bypass Biometric Fingerprint Scanners

POS-15   Skanda.S   02:00 PM

A Case Study on Accident Forensics

DECEMBER 03

08:00 AM TO 09:00 AM	**Early Meal**

SCIENTIFIC SESSION-10 — Auditorium

09:00 AM TO 09:30AM

Cynthia Martinez Florendo

TOPIC Upholding the Policy of the State to Safeguard the Well-being of the Filipino Youth From the Harmful Effects of Dangerous Drugs1 By Accelerating Trial Process with the Use of Forensic Science

09:30 AM TO 10:00 AM

Dr. Mariemeir M. Rivera

TOPIC Forensic Science in the Determination of Civil Rights and Obligations in the Philippines

10:00 AM TO 10:30 AM

Dr. Leonardo Estacio

TOPIC Interdisciplinary Insights: Unveiling Human Behavior through the Synergy of Forensic and Behavioral Sciences

10:30 AM TO 11:00 AM

Dr. Dindo Café

TOPIC Sociological Demystification of Forensic Science: A Transect of Sociological Perspective in Forensic Investigation

11:00 AM TO 11:15 AM — **TEA BREAK**

SCIENTIFIC SESSION-11 — Auditorium

11:15 AM TO 11:45AM

Dr. Gaurav Gupta

TOPIC Future Challenges of Digital Forensics

11:45 AM TO 12:15 PM

Shri Samir Kumar Datt

TOPIC Crime Investigation platform for the Future

DECEMBER 03

12:15 PM TO 12:45 PM — **Dr. Rakshit Tandon**

TOPIC: Current threats in Cyber Space and New Challenges of LEA's in Digital Forensics Domain

12:45 PM TO 01:30 PM — **LUNCH**

SCIENTIFIC SESSION–12 — Auditorium

01:30 PM TO 02:00 PM — **Dr. Ashish Badiye**

TOPIC: eWaste Forensics

02:00 PM TO 02:30 PM — **Dr. Ankit Srivastava**

TOPIC: Forensics and Trafficking: Challenges and Solutions in 21st Century

02:30 PM TO 03:00 PM — **Shri Phaneendar BN**

TOPIC: Legal Challenges in admisibility of Forensic Opinion

03:00 PM TO 03:30 PM — **Prof. Adarsh Kumar**

TOPIC: Forensic Science–Beyond Interdisciplinary Applications

03:30 PM TO 03:45 PM — **TEA BREAK**

CLOSING CEREMONY — Auditorium

04:00 PM TO 05:00 PM — **VALEDICTORY FUNCTION**

Chief Guest
Shri HGS Dhaliwal IPS
Special Commissioner of Police, Delhi Police
Chief of Delhi's Anti-Terror Unit, Special Cell

Guest of Honor
Dr. Nitin Malik
Registrar, Ambedkar University
New Delhi, India

Research
PRESENTATIONS

POSTER PRESENTATION (STUDENT CATEGORY)

❖ **POS-01 | Ashwin Edakkara**
DNA Barcoding: An Effective Yet Underrated Method for Identification of Poisonous Plants

❖ **POS-02 | Divya Jain**
Role of Forensic Odontology in Mass Fatalities: A Critical Review on Disaster Victim Identification with help of Dental evidence in Tsunami Disaster

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PAPER PRESENTATION (PROFESSIONAL CATEGORY)

❖ **PAP-01 | Dr. Perumal P**
Revolutionizing Post-Mortem Examination: Introducing the Lateral Percutaneous Incision for Traditional Autopsy

❖ **PAP-02 | Dr. Aaeen Alchi**
Auto-Adaptive Systems in Forensic Toxicological Analysis

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Estimation of time since deposition of Body fluids: An exploration towards the limitations of Locard's principle of exchange

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❖ **PAP-10 | Dr. Anjali Sehrawat**
Comparative Analysis of Human and Non-Human Dentition on The Basis Of Elemental Analysis

PAPER PRESENTATION (PROFESSIONAL CATEGORY) Online

❖ **PAPO-1 | Dr. Minha Majeed Kak**
Artificial Intelligence in Forensic Odontology

❖ **PAPO-2 | Dr. Anupama C**
The decisive role of prosthodontics and its invaluable contribution to forensic odontology: A review

❖ **PAPO-3 | Dr. Anand Choudhary**
Correlation of lip print with blood group in forensic science

❖ **PAPO-4 | Dr. Babul Bandyopadhyay**
Challenges to Resolve Intraoperative Mortality Cases on Medical Forensic Strategy in Criminal Justice System

❖ **PAPO-5 | Mr. Harsha N R**
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For A Men or Women? Gender Determination from Various Foramina and Canals of Mandible on Cone Beam Computed Tomography (CBCT): A Forensic Study.

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Challenges in QD Examination & Unconventional Approach For Examination-Case Studies

❖ **PAPO-11 | Shubhra Shree Gajbhiye**
Identification of Pollen: A Forensic Application

PAPER PRESENTATION (STUDENT CATEGORY)

❖ **PAS-01 | Arun Kumar Shukla**
Artificial Intelligence and Satellite Imagery: Paving the Way for Forensic Investigations

❖ **PAS-02 | Shambhawi Sandilya**
Unmasking Audio Deepfake using SIS for Forensic analysis

❖ **PAS-03 | Palak Aneja**
To Study the Range of Variation in the Acoustic Parameters of Standard and Morphed Audios

❖ **PAS-04 | Vanshika Sarva**
Diatom- A Great Forensic Tool in Investigation Of Drowning Cases

❖ **PAS-05 | Devansh Tripathi**
Importance of ocular lenses in forensic investigations

❖ **PAS-06 | Bhawna Bangwal**
Stature Estimation from Various Anthropometric Measurements In Mazhabi Sikh Population of Punjab State In North India

❖ **PAS-07 | Sreeram K Y**
Human Personality Assessment Using Gait Pattern Analysis.

❖ **PAS-08 | Kiranbhai R Dodiya**
Cracking the Code: Unmasking ATM Malware with PE

❖ **PAS-09 | Prashant Kumar**
Highlighting the Significance of Autopsies in Hanging Cases: A Case Study

❖ **PAS-10 | Dr. Attam Prakash**
Findings of Manual Strangulation at Autopsy: A Case Report

❖ **PAS-11 | Vani Gupta**
Forensic Sex Determination: A Comprehensive Review Utilizing Skull and Pelvic Bone Analysis

❖ **PAS-12 | Satria Perwira**
Decomposing a Drowned Body with Signs of Violence

❖ **PAS-13 | Alex Idicula Mathews**
Usage of Average Ridge Density Calculation on Palmprints for Individualisation and Possible Sex Determination

❖ **PAS-14 | Nikhila V. S**
Identification of tropane Alkaloids from Different Parts of Datura Metel

❖ **PAS-15 | Somanjana Chattakhandi**
Role of DNA in murder cases

❖ **PAS-16 | Rohith S**
Email Analysis for Cyber Forensic Intervention

❖ **PAS-17 | Riya Ghosh**
Genomic Detectives: Forensic Science's Expanding Role in Clinical Genetics And Molecular Biology

❖ **PAS-18 | Maitri Naik**
Importance of Autopsy – An Illustrative Case

POS-01

DNA BARCODING: AN EFFECTIVE YET UNDERRATED METHOD FOR IDENTIFICATION OF POISONOUS PLANTS

Ashwin Edakkara[1]

[1]BSc. – MSc. Forensic Sciences (5-year Integrated), National Forensic Sciences University, Goa Campus, Curti, Ponda, Goa

Abstract

This review investigates the potential of DNA barcoding for the rapid and accurate identification of unknown poisonous plants. The use of DNA Barcoding is promising in plant identification because it is independent of plant morphology and other physiological features observed in a victim/patient (which is the conventional method) and can be used with small amounts of material. The use of similar techniques can aid the field of Toxicology as well as medical sciences. Currently, experts analyze toxic plants and their metabolites from the biological materials (stomach content and viscera) of victims. The metabolites in the forensic sample are identified by chemical methods. This condition is not trivial because plant issues can be partially digested and therefore morphologically unrecognizable. In the present review, I found that DNA barcoding is effective in identifying poisonous plants at the species level with an efficiency of 92% - 95% and at the genus level, the efficiency is in the range of 98% - 100%. Researchers studied multiple gene markers like ITS, rbcL, matK, trnH-psbA etc. from which the rbcL barcode had the highest sequencing success rate and the highest resolution at the genus level (100%). The findings of this review suggest that DNA barcoding has the potential to be a valuable tool for the rapid and accurate identification of unidentifiable poisonous plants. This could be useful in a variety of settings, such as poison centres, forensic laboratories, and research institutions.

Keywords: DNA Barcoding, Poisonous Plants, Plant Morphology, Forensics, Gene Markers

POS-02

ROLE OF FORENSIC ODONTOLOGY IN MASS FATALITIES: A CRITICAL REVIEW ON DISASTER VICTIM IDENTIFICATION WITH HELP OF DENTAL EVIDENCE IN TSUNAMI DISASTER

Divya Jain[1], Himani Vashistha[1], Ms. Ruchika Dwivedi[2]

[1]Student (B.Sc. honours Forensic Science), JECRC University, Jaipur

[2]Assistant Professor II, JECRC University, Jaipur

Abstract

Disaster Victim Identification (DVI) is a complex process involving the recognition, recovery, examination, and identification of victims following mass fatalities resulting from natural disasters, terrorist attacks, accidents, or other catastrophic events. The multifaceted nature of DVI demands a comprehensive approach integrating various forensic disciplines, among which Forensic Odontology plays a crucial role. Forensic Odontology, a specialized branch of forensic science, utilizes dental evidence to aid in the identification of human remains when traditional methods prove challenging or impossible. The uniqueness of dental structures, such as teeth and dental records, provides a reliable means of identification, even in cases of severe trauma or degradation of other bodily tissues. The significance of Forensic Odontology in DVI becomes particularly evident in large-scale disasters like tsunamis. In such calamities, where conventional identification methods may be limited due to high mortality rates and extensive body damage, dental features remain remarkably resilient. Dental records, fillings, prosthetics, and unique dental traits serve as invaluable identifiers for victims, facilitating their accurate and timely identification. The utilization of Forensic Odontology in past tsunami disasters, such as the Indian Ocean Tsunami of 2004, exemplifies its critical role. The application of dental evidence aided in the successful identification of numerous victims, bringing closure to grieving families and streamlining the identification process amidst overwhelming challenges. In conclusion, the discussion surrounding the application of Forensic Odontology in Disaster Victim Identification, particularly in tsunami disasters, remains crucial. Highlighting its significance not only sheds light on the effectiveness of dental evidence in complex identification scenarios but also emphasizes the need for ongoing research, standardized protocols, and enhanced collaboration between forensic experts and disaster response teams. This abstract underscore the imperative nature of exploring and understanding the role of Forensic Odontology in DVI, contributing to improved strategies for expeditious and accurate victim identification in disastrous events.

Keywords: Forensic Odontology, DVI, Identification, Dental Evidence, Victim identification, Tsunami, Dental Records, Mass fatalities

POS-03

EFFECT OF GLUTATHIONE S - TRANSFERASE GENE POLYMORPHISM AND ITS IMPACT AMONG HEAVY ALCOHOL DRINKERS FROM CENTRAL INDIA

Animesh Kumar Tiwari[1], Shubhra Shree Gajbhiye, Shivangi Rao, Chanchal Kumar

[1]Department of Forensic Science, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh

Abstract

The enzymes known as cytosolic glutathione S-transferase (GST) play a crucial role in biological detoxification processes and play a crucial role in defense against oxidative stress. Two of the most important human isoenzymes, GSTT1-1 and GSTM1-1, are genetically deleted in a significant portion of the population, with significant ethnic variations. These alleles are non-functional and represent a high percentage of the human population. A significant player in the phase-II biotransformation of several pharmaceuticals and industrial chemicals, including cytostatic medicines, hydrocarbons, and halogenated hydrocarbons, GSTT1-1 has been substantially conserved throughout evolution. When it comes to deactivating polycyclic aromatic hydrocarbons' carcinogenic intermediates, GSTM1-1 is very important. Several lines of evidence imply that hGSTT1-1 and/or hGSTM1-1 have a role in the deactivation of reactive oxygen species that are thought to be involved in cellular processes of inflammation, ageing and degenerative illnesses. It has been shown that oxidative stress has a significant pathogenic role in alcohol- related liver injury. In this study we have examined the frequency of GSTM1 and T1 polymorphisms by polymerase chain reaction (PCR) on leucocyte DNA in the population from North India, comprising heavy alcohol users and normal local controls, given the evidence for genetic predisposition to alcohol-related liver disease.

Keywords: glutathione S-transferase, oxidative stress, reactive oxygen species, alcohol users

POS-04

ELEVATING ENVIRONMENTAL FORENSICS: BIOSENSORS AND CHEMICAL SENSORS THROUGH INTERDISCIPLINARY SYNERGY

Shudhanshu Mani Tripathi[1], Dr. Tanurup Das[2], Dr. Ankit Srivastava[3]

[1]P.G. student, School of Forensic Sciences, WBNUJS, Kolkata

[2]Assistant Professor, School of Forensic Sciences, WBNUJS, Kolkata

[3]Associate Professor, School of Forensic Sciences, WBNUJS, Kolkata

Abstract

The environment represents the encompassing surroundings within which organisms or communities of organisms exist, characterized by a complex reciprocity of biological, chemical, and physical constituents that significantly influence their survival. In the 21st century, a rampant discourse centers around sustainable development, as the ecological menace stemming from human activities has emerged as a daunting threat capable of inflicting immutable damage upon human health, wildlife, and the ecosystem at large. Discernible issues such as hazardous waste spillage into water ecosystems and illicit timber harvesting personify the gravity of this situation. Amid these challenges, Environmental forensics has emerged as a decisive investigative discipline that synergies forensics with environmental sciences methodologies. It plays a pivotal role in unravelling environmental infringement and catastrophic events; for example, a notable case study in Karabash, Russia, demonstrated how lichens have been employed in environmental forensics to evaluate atmospheric deposition resulting from a copper smelter and mining-contaminated areas. This process typically involved ICP-MS, which, though effective, can be time-consuming and necessitate a large volume of samples. In such situations, a potent arsenal for this purpose includes biosensors and chemical sensors, highly regarded for their proficiency. Environmental forensic scientists can use it in the detection and precise quantification of such pollutants. These state-of-the-art sensors are prominent for their zeal, sensitivity, specificity, and cost-efficiency, underscoring their superiority over traditional techniques in environmental pollutant detection and also highly practical for Environmental forensic scientists to apprehend the perpetrator.

Keywords: Environmental forensics, Pollution, Biosensor, Chemical sensor, VOCs

POS-05

EMPIRICAL TESTING IN FINGERPRINT IDENTIFICATION: ADDRESSING CONCERNS AND ADVANCING FORENSIC PRACTICES

Anitta Joseph[1]

[1]Research Scholar, Department of Forensic Science, School of Sciences, Jain University, Bangalore

Abstract

Fingerprint has been considered as a cornerstone for forensic investigations for a very long period, in providing crucial evidence in criminal cases. But, concerns regarding the reliability and scientific validity of the techniques used in fingerprint identification has raised certain questions within the scientific and legal communities. This article emphasizes the necessity for empirical testing so as to analyze the accuracy and credibility of latent fingerprint identification methods. It also calls attention to the criticisms pointed by few individuals and court cases regarding the lack of rigorous testing and potential biases in current practices. The article also focuses on the need for subjecting the fingerprint examiners to blind, rigorous proficiency testing in order to ensure unbiased and consistent judgments. Furthermore, it advocates for improved documentation by examiners to enhance transparency and independent verification of results. The scientific and legal communities can acquire greater confidence in the accuracy of fingerprinting techniques and bolster its approval and acceptance as a confirmatory evidence in the court through empirical testing. This article urges the fingerprint community to embrace empirical research, address concerns, and foster advancements in forensic practices to strengthen the foundation of fingerprint analysis in criminal investigation.

POS-06

POSTMORTEM INTERVAL ESTIMATION THROUGH β-ACTIN MARKER DEGRADATION IN LIVER TISSUES

Bhumit Chavda[1], Dr. Kapil Kumar[1], Dr. Saumil Merchant[1]

[1]Department of Biochemistry and Forensic Science, Gujarat University, Ahmedabad, India

Abstract

Estimation of the postmortem interval (PMI) is a critical aspect of forensic medicine and plays a vital role in many cases. Accurate PMI estimation is crucial for legal, investigative,and medical purposes. Algor Mortis, Rigor Mortis, Lividity (Livor Mortis), chemical & metabolic changes, RNA, DNA & protein degradation, radiological imaging systems, etc. can be used to estimate PMI. "Thanatobiology" and "Thanatomicrobiome" are the emerging field based on which the estimation of PMI from RNA/DNA degradation, and protein degradation analysis can be done. Protein biomarkers, genetic biomarkers, biochemical biomarkers, and cellular biomarkers can be used as a profound tool to estimate the postmortem interval. This study aimed to quantify the markers found in the liver tissues at various time intervals. The amount of proteins like β-actin can be used as a profound marker to estimate the time interval. At various time intervals, the samples were taken from the tissues which were stored at different temperatures. The analysis can be done through extraction and isolation of proteins from each sample and then quantification of β-actin markers is done through western blot techniques. Here we can correlate the expression of β-actin marker with the post-mortem interval which can be calculated by using various techniques. Several factors affect PMI estimation, including environmental conditions, temperature, humidity, and clothing, as well as the location and circumstances where the dead body is found. PMI estimation often involves collaboration between forensic pathologists, entomologists, anthropologists, and other experts. This interdisciplinary approach enhances the accuracy of PMI estimates. More research in these new disciplines is required to show their application in forensic cases.

Keywords: Post-mortem interval, β-Actin, Biomarkers, Western blot techniques

POS-07

THE ROLE OF DIATOM TESTS: PROVING DEATH DUE TO DROWNING

I Ketut Heru Suryanegara[1], Satria Perwira[1,2], Prasillia Ramadhani[1], SNI Purnamaningsih[1], Ahmad Yudianto[1,2]

[1]Department of Forensic and Legal Medicine, RS Dr. Soetomo Teaching Hospital, Surabaya

[2]Forensic Science Study Program, Graduate School of Airlangga University, Surabaya

Abstract

Background: Drowning is classified as a form of asphyxia resulting from the introduction of fluid into the respiratory tract. The diagnosis of death by drowning poses significant challenges in the field of forensic medicine, particularly when the victim's body is discovered in an advanced condition of decomposition. The analysis of degraded remains frequently does not exhibit characteristic indications. Laboratory analyses conducted on bone marrow specimens are often regarded as the most reliable means of substantiating the concept of antemortem drowning, as they are little susceptible to contamination arising from post-mortem submersion. Case Presentation: At approximately 08:00 WIB on May 6, 2023, a fisherman, while in the process of setting a crab trap, discovered a body that was initially mistaken for a doll. The deceased individual was discovered in a supine position, devoid of clothing, and ensnared within the entangled roots of a mangrove tree. Subsequently, the fisherman departed from the mangrove area and duly notified the security officer stationed at Ria Kenjeran Beach of the discovered corpse. The deceased individual was subsequently identified at Dr. Soetomo Hospital by forensic specialists, use a Visum et Repertum (VeR) application letter as the basis for their determination. External, internal, and laboratory investigations were conducted. A positive diatom result was obtained in the acid destruction test of bone marrow using the left femur. Conclusion: The diatom test is a widely used forensic technique to identify drowning as the primary cause of death and determine the specific location of the accident.

Keywords: Accident; Asphyxia; Bone Marrow; Diatom test; Drowning

POS-08

CHEILOSCOPY - A TOOL FOR IDENTIFICATION

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Abstract

Identification is a crucial and important role in forensic medicine from the ancient times till date as there are many tools for personal identification which includes Anthropometry, Dactylography, sex determination, differentiation by blood groups, DNA profiling, Odontology etc. Among the various tools the most commonly used is the fingerprints because of its uniqueness in each individual. Yet another tool which can be used based on its uniqueness is the Lip prints, but its contribution in identification is still in trials and not yet confirmed about its feasibility and reliability because of its never-ending debate. Moreover, it is used as an adjuvant technique. The patterns of wrinkles on the lips have discrete characteristics as that of finger prints. The wrinkles and the grooves on the labial mucosa form a characteristic pattern called lip prints. In this poster, we are discussing the importance of lip prints in forensic medicine.

Keyword: Identification, lip, DNA

POS-09

FORENSIC INVESTIGATION OF DAMAGED ELECTRICAL WIRE SAMPLES BY THE INSECTS USING UPLC ANALYSIS

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Abstract

Generally, Damage to electrical wires causes fire accidents in the buildings and the investigator examines it. On the other hand, a few of the identified insects like termites, and ants attacked wires and caused much damage, which led to many accidents. The household wires were protected with three layers of polymeric composite materials coated with anti-rodents and anti-termite chemicals with an outer layer of color dye. Herein, we report the quantification of anti-termite chemicals present in the wire for the purpose of protection from insects. Surprisingly, ants were biting the electrical wire to sharpen their mandibles in the live wire. During the electrical current, the wire often releases volatile attractants, which attract ants and sharpen their mandibles. Ultra-performance liquid chromatography (UPLC) is used to quantify the depletion of the anti-termite in the wire samples of different time periods and it is estimated from the crude wire samples by a gradient method in the UPLC instrument. From the chromatogram, the peak area of anti-termite is directly proportional to the concentration of anti-termite compared with the concentration of that standard compound in the wired samples. Through this, the percentage of anti-termite present in the different wired samples is examined. The results show the presence of anti-rodents decreased with respect to the zero, three, five, and one-year-old wire samples and after the exploitation, it is calculated that within three years from the manufacture the wire lost their anti-rodent content. This paved the way to prevent domestic accidents due to damaged wires by insects.

Keywords: Polymeric Composite, Electric fire, Anti-termite, Anti-Rodent, Ultra-performance Liquid Chromatography

POS-10

MACHINE LEARNING IN FORENSIC ANTHROPOLOGY: A NOVEL APPROACH

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Abstract

Forensic anthropology is a subfield of anthropology that assists with personal identification. In criminal investigations, establishing identity is critical. Skeletal remains are used in anthropology to determine an individual's age, race, size, and ethnicity. These skeletal remains are examined visually and their measurements are taken. However, technology has assisted in confirming these procedures over time, allowing for more precise identification. Machine learning is a subset of artificial intelligence that has made important contributions to forensic investigations. Techniques like as artificial neural networks, convolutional neural networks, and decision trees are frequently employed to study sexual dimorphism. Ancestry estimate is best accomplished using decision trees and random forests. Support vector machines, multivariate adaptive regression splines, and Naïve Bayes classification are effective methods for estimating age. Even while artificial intelligence and machine learning can speed up analysis, they still require human intervention to function. Therefore, a balanced approach combining human intervention and technological improvements should be used to assess the factors accurately and efficiently.

POS-11

CORRELATION OF TONGUE PATTERNS TO GENDER AND THEIR RELATIONSHIP WITH DENTAL CARIES – PILOT STUDY

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Abstract

Each and every individual has a unique tongue pattern and this tongue pattern differs even for identical twins. Tongue print patterns create a separate room in identification of an individual. Growing technologies in the modern world can easily duplicate the individual characteristics, henceforth to minimise forgery and criminal activities newer methods are implemented (identity fraud). Tongue prints create a new mode in the forensics (growing interest) and it has a higher level of assurance. This tongue print pattern identification is difficult to forge unlike other systems(lip prints , finger prints). In this pilot study of 80 sample size , we have evaluated the tongue pattern and correlated it with gender and dental caries. We have also evaluated which type of tongue pattern is more susceptible to dental caries. The proposed outcome of this study is , tongue patterns can be utilized effectively to study the genetic basis of dental caries. In a developing country like India, this study might prove to be a noninvasive, inexpensive and effective tools for predicting dental caries. Such a prediction can be helpful to provide preventive and interceptive treatment when necessary.

POS-12

VIRTUAL COMPARISON MICROSCOPE IN FORENSIC ODONTOLOGY

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Abstract

Forensic odontology is an evolving science and has a greater scope of development. It has been established as an indispensable science in medico-legal matters and in the identification of the dead person. The dental tissues are often preserved even if the deceased person is skeletonized, decomposed, burnt, or dismembered. Various methods have been developed to determine age, sex, and ethnicity of the person. Data collection methods and supplementary technologies used in forensic dental identification have undergone significant transformation. Virtual comparison microscopy is one such evolution and upgradation in microscopical part .The forensic technology has developed a prototype Virtual Comparison Microscope (VCM), which is a device that helps in analyzing the specimens simultaneously. It enables examiner to view and interpret the 3D representation of an object using a computer without physical access to the specimen. It consists of two microscopes connected by an optical bridge, which has a split view window enabling two separate objects to be viewed at the same time. In this poster we are about to discuss the principle, advantages, disadvantages, various types of VCM and their role in forensic odontology.

Keywords: Evolution, forensic odontology, virtual comparison microscope, prototype, optical bridge.

POS-13

STATURE ESTIMATION FROM FOOT AND PALM PRINT OF TRANSGENDERS

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Abstract

Forensic anthropology is a branch of physical anthropology that involves the application of anthropological principles and techniques to the analysis of human remains, often in the context of legal investigations. Stature estimation involves examining specific skeletal elements and applying statistical methods to predict the individual's height. Forensic anthropologists when encountered with skeletal remains often will estimate the biological sex of the remains, this offers a complication while dealing with the transgender individuals. The aim of this research is to determine the stature of the transgender from foot and hand anthropometric measurements. Stature estimation is obtained from the measurements of long bone which is helpful in identification process. The present study comprises of 25 transgender individual whose foot print and hand prints were taken with the use of the printers ink (as used in fingerprint analysis). The stature estimation is done using the length and breadth of foot and palm prints respectively. Simple linear regression equations and multiple linear regression equation were formulated for stature estimation using the hand dimension.

Keywords: stature, estimation, measurement, identification, transgenders

POS-14

STUDY ON DIFFERENT METHOD EMPLOYED IN GENERATING FAKE FINGERPRINT TO BYPASS BIOMETRIC FINGERPRINT SCANNERS.

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Abstract

The skin of the fingers and thumbs forms distinctive ridges and troughs that are recognized as fingerprints. Fingerprints are relatively unchanged throughout a person's lifetime, making them a valuable tool for forensic investigations and personal identification. Biometric fingerprint scanners are widely used to secure access control system in various domains the rise of sophisticated methods to generate fake fingerprints challenges the reliability of these systems. This study aims to analyse and evaluate different techniques employed to generate fake fingerprints for bypassing biometric fingerprint scanners. Techniques like clay and gelatine method are used to generate fake prints in order to bypass the biometric fingerprint scanners. The quantitative evaluation includes accessing the fingerprint quality of the sample captured from the fake representation as well as comparison experiments were achieved matching scores of the fake representation against the corresponding real fingerprint indicates the effectiveness of the fake representation.

Keywords: Fingerprint, Biometrics, personal identification.

POS-15

A CASE STUDY ON ACCIDENT FORENSICS

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Abstract

This case study delves into the intricate realm of forensic physics to investigate a significant vehicle accident. The objective is to employ advanced scientific methodologies to unravel the dynamics of the collision, contributing valuable insights into the root causes and potential preventive measures. The study encompasses a meticulous examination of the accident scene, the vehicles involved, and the surrounding environmental factors. Furthermore, the study investigates the effectiveness of safety features and regulations governing the vehicle industry. By critically evaluating the performance of vehicle components, such as brakes, tires, and structural integrity, the research aims to identify areas for improvement and propose recommendations to enhance overall road safety. The outcomes of this case study are anticipated to provide law enforcement agencies, regulatory bodies, and industry stakeholders with valuable insights into the complexities of heavy vehicle accidents. The integration of forensic physics not only aids in ascertaining liability but also lays the groundwork for developing evidence-based strategies to mitigate the occurrence of similar incidents in the future. Through a judicious blend of scientific rigor and practical applicability, this case study stands as a beacon for advancing forensic investigations in the realm of vehicular accidents.

Keywords: Forensic physics**,** Accidents**,** Impacts**,** Heavy automobiles**,** Safety regulations

PAP-01

REVOLUTIONIZING POST-MORTEM EXAMINATION: INTRODUCING THE LATERAL PERCUTANEOUS INCISION FOR TRADITIONAL AUTOPSY

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Abstract

Introduction: Traditional autopsy practises can involve invasive, aesthetic defects and deformities, procedures and have remained mostly unaltered for decades. We present the novel Lateral Percutaneous Incision (LPI) technique to modernise and improve post-mortem examinations. Aim and Objective: Our presentation's objectives are to introduce, assess, and show how the LPI approach compares favourably to conventional autopsies in terms of its cosmetically enhanced incision. We wanted to determine if it might make operations less intrusive, more efficient, and more sensitive when determining the cause of death. Method and Materials: This paper describes the creation and use of the LPI technique, describing the specialised tools and procedures used. Comparing the LPI approach with traditional autopsy procedures required a thorough analysis utilising a sample of cases. Results: According to the results of our study, the LPI approach greatly decreases post-mortem trauma, and improves the accuracy of cause-of-death diagnosis. We demonstrate the advantages of the LPI technique using strong data and case stories. Discussion: We investigate the effects of implementing the LPI approach in forensic medicine and forensic sciences. We talk about its possible drawbacks, moral questions, and useful benefits. It is emphasised that this has a favourable effect on both families and doctors. Conclusion: The difficulties posed by conventional autopsy can be effectively overcome by the Lateral Percutaneous Incision technique. The LPI approach is a considerable improvement over traditional post-mortem examinations since it reduces cosmetically enhanced, increases effectiveness, and upholds the highest forensic standards.

Keywords: Lateral Percutaneous Incision; traditional autopsy; autopsy efficiency; cause of death; sensitivity.

PAP-02

AUTO-ADAPTIVE SYSTEMS IN FORENSIC TOXICOLOGICAL ANALYSIS

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Abstract:

In crime investigations and legal proceedings, forensic toxicological analysis is vital to identify and quantify toxic substances to know the cause and manner of death induced by toxicity caused by drugs, poisons, and other substances in antemortem and post-mortem samples. However, the current techniques and protocols are designed and developed are generalised according to samples and toxins. Forensic is on the verge of technological advancements in auto-adaptive systems and their fundamentals, which can revolutionise forensic toxicological analysis by offering novel tools and approaches to enhance accuracy, sensitivity, selectivity and efficiency in individual case analysis based on the type of sample, toxins and metabolites. This paper explores the possibilities of auto-adaptive systems in forensic toxicological analysis, focusing on the case, types of samples and types of toxins based on available methods, pre-existing data and available techniques, and statistics in this evolving field. It discusses the potential benefits of adaptive designs in enhancing the accuracy and efficiency of toxicological investigations while addressing challenges and ethical considerations.

Keywords: Forensic toxicology, Adaptive systems, Data Analysis, sample analysis

PAP-03

OLFACTORY MEMORY: TRADITIONAL AND MODERN RESEARCH APPROACHES AND ITS POTENTIAL AS A FORENSIC PSYCHOLOGY TOOL

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Abstract

Olfactory memory is a powerful sensory experience, often causing vivid flashbacks of past events from one's lifetime. The absence of the thalamus as the relay station for the brain in the olfactory memory system has the potential to make the olfactory sense stronger and more effective in terms of memory retention, which makes it a powerful tool for forensic interrogations, if used correctly while following appropriate ethical guidelines.The first step to that is understanding how the olfactory memory works and how it can be studied, as the lack of a physical criteria to measure memory retention makes quantification quite a challenge. The various methods adapted to perform studies on olfactory memory have taken into consideration various criteria to quantify the retention of the odour memory, all of which lays out a framework to safely assume that olfactory memory could be a separate memory system. To scientifically validate this conclusion with a solid foundation would require more extensive research on the same. This paper provides a comprehensive discussion on the studies conducted on odour memory and its relationship to visual-verbal memory, the methods used to study the same through the years and the criteria they are based on. The paper also aims at identifying the areas in forensic interrogation where this knowledge can be applied along with the ethical guidelines to be followed for the same.

Keywords: olfactory memory, odour stimulus, memory retention, visual-verbal memory, forensic interrogation

PAP-04

"TRADITIONAL TATTOOS"- THE MARKER FOR PERSONAL IDENTIFICATION IN GUJARAT

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Abstract

Tattoo anthropology and mass catastrophe personal identity must respect the rich and complicated history of tattooing among ethnic groupings. Tattoos have shaped their identities, civilizations, and history. This research examines tattoo anthropology in Gujarat, where tattoos are utilised by the judiciary to identify and condemn criminals. In cases of unknown deceased persons, tattoos on their bodies help forensic investigators identify them. Witnesses who describe criminal's tattoos help identify culprits. Tattooing is a tradition among several Gujarati castes and tribes. These tattoos have cultural, social, and spiritual meaning beyond aesthetics. Each caste and tribe has its own tattoo patterns and motifs, each with a meaning that might indicate genealogy, social status, or particular abilities and accomplishments. Tattoos commonly represent life milestones including puberty, marriage, and maturity. They symbolise identity and cultural heritage. Tattoos may also indicate a person's caste or tribe's lineage or clan. Anthropologists and forensic professionals catalogue and identify tattoos using photos and data. This document provides useful advice on improving tattoos for forensic analysis and court procedures. Traditional tattoos of Gujarati tribes and castes, their position on the body, their relationship to marital status, cultural importance, and personal identity are given special consideration. This form of personal identification is effective and trustworthy, eliminating the need for tattoo examination.

Keywords: Tattoos, Forensic importance, Criminal identification, Body modification, Cultural preservation

PAP-05

ESTIMATION OF TIME SINCE DEPOSITION OF BODY FLUIDS: AN EXPLORATION TOWARDS THE LIMITATIONS OF LOCARD'S PRINCIPLE OF EXCHANGE

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Abstract

The question of time is one of the most essential but least explored phenomena in forensic investigation. Since the implementation of Locard's principle of exchange, forensic science is majorly dependent upon collecting physical evidence from crime scenes and connecting its link to their origin, which may be a human being, an animal, a place or a manufacturer. Objects like hair, fingerprints, body fluids, botanical evidence, GSR, cloth, etc., are commonly encountered as evidence that can be introduced at the crime scene during or before or after that act. The pre-existence and post-existence scenario have not been addressed widely by any other principle, including the pioneering Locard's Exchange Principle, which explains the phenomenon of mutual exchange of entities at the crime scene. Hence, pre-existent or post-existent objects can mislead the investigation, and on behalf of that, an investigator may falsely consider them as physical evidence and draw the wrong conclusion. In this study, forensically significant body fluids, i.e., Blood, Semen and Saliva found at a crime scene, had been explored to estimate their existence in the ex-vivo environment. Although the pursuit of time estimation started in 1907, real-life factors affecting the estimation, i.e., the effect of different sets of external environments and surfaces in contact, were not explored for the statistical calculations during estimation model preparation. The present study explored three significant sets of environmental conditions as well as three different kinds of surfaces to estimate the time since deposition (TSD), and results were evident that for a specific set of conditions, the applied estimation model should be different to reach higher accuracy while exploring short time intervals. ATR-FTIR Spectroscopy, supported by chemometric methods, has been used to prepare and validate regression models to estimate the TSD of body fluids.

Keywords: Locard's Principle of exchange, Body fluids, time since deposition, Factors affecting the estimation, ATR-FTIR Spectroscopy, Chemometrics

PAP-06

ROLE OF HANDWRITING IN GENOTYPIC OFFSPRING

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Abstract

Handwriting is a neuromuscular task which relies on the cognitive skill and a coordinated hand-eye movement of the individual. It is a coalescences of nature and nurture. Parents play crucial role in pre-schooling skills of their progency. Learning begins prenatally, and children are not only "ready to learn" but already actively learning from the time they are born. Genetics also plays significant role in shaping the writing habits of the writer (such as handedness and handwriting positions). Genetics play an important role in determining individual characteristic such as in form of pattern formation of letter, holding position of pen, handedness, and ability to think and learn. In case of family disputes which includes wills, property, documents etc. Here, the probability that family member is culprit increases. So, to check handwriting resemblance of family members is very vital area of research. This article is an overview of handwriting slant inheritance of parents with their offspring. It has been found that numerous studies have been done on the title handwriting identification and recognition. But a very less research have been done on the role of heredity on handwriting pattern of individuals. It was learned that the "Slant" of handwriting show high level of similarity in two generations whereas the "Movement" was the only handwriting characteristics that show high level of similarity in all the three generations. Therefore, it can be deduce that there is significant role of heredity in handwriting that the father-son relationship (grandfather & father or father & son) depicts majority of similarities in the handwriting characteristics which might be due to the dominance of male gene.

Keywords: Handwriting, slant, inheritance, genotypic, offspring etc.

PAP-07

LEVEL OF DIGITAL LITERACY PROFICIENCY AMONG CRIMINAL JUSTICE STUDENTS

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Abstract

This research determined the level of Digital Literacy Proficiency of Criminal Justice Students it assessed the digital literacy of the respondents as to their access to digital devices, competency, critical thinking, creativity, collaboration and ethics. It also determined the problems encountered affecting their use of digital technologies. Likewise, it also tested the relationship between the digital literacy of the students and the problems encountered affecting the use of digital technologies and provided action plan in enhancing the Digital Literacy Proficiency of Criminal Justice Students. A total of 124 respondents from various colleges and universities that offered BS Criminology in the Province of Batangas participated in the conduct of the study through a survey questionnaire. The study proves that BS Criminology program are dominated by male students. The findings also unveiled that the digital literacy of Criminal Justice Students was assessed good however there is a high significant relationship to the problems that they encountered as to critical thinking, ethics, competency and creativity. It was revealed that majority of the respondents shares information online that they find emotionally appealing without verifying if it is accurate or reliable and they often experience ethical issues for lacking of knowledge in responsible data privacy in using the cyberspace. Nevertheless, an action plan was given for implementation and discussion towards the continuous enhancement of the digital literacy proficiency of Criminal Justice Students.

Keywords: Digital Literacy, Critical Thinking, Competency, Ethics, Creativity, Enhancement

PAP-08

EXPLORING TEMPORAL SHIFTS IN SEXUAL DIMORPHISM WITHIN MASTOID REGIONS OF NORTH INDIAN SKULL SAMPLES

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Abstract

In recent years, numerous investigations have systematically documented noticeable temporal shifts in the morphological characteristics of the human skull. Anthropologists have consistently advocated for the periodic revision of discriminant function formulae to account for the evolving patterns of sexual dimorphism resulting from temporal and secular changes. The primary objective of the present study is to meticulously trace temporal alterations in mastoid region measurements within distinct North Indian populations and to provide updated formulae for sex discrimination. A comprehensive sample of 483 adult crania, spanning ages 20 to 65 years, was collected from two medical colleges in North India, representing both contemporary (158 crania) and sub-recent (384 crania) populations. Eight variables were meticulously measured to observe changes in mastoid dimensions over time. The data analysis revealed statistically significant variations in both sexual dimorphism and population characteristics, distinguishing between the contemporary and sub-recent samples. The average accuracy for the contemporary sample ranges from 58% to 77%, while for sub- recent samples, it is between 67% and 77.5%. Notably, the most effective sexually dimorphic variables differ between the two population groups. In the contemporary population, Ast-Ms (77.2%) emerged as the most discriminative, while for sub-recent samples, PEIM-Po (77.5%) stood out as the single best variable. Remarkably, MBr was identified as the least significant parameter for sex determination in both samples. Through Direct Discriminant analysis, the optimal combination of variables for sexing the mastoid region was identified. For the contemporary sample, this included Ast-Ms, MHt, MLt, and MBr, achieving an accuracy of 79.7%. In contrast, for the sub-recent sample, the combination of PEIM-Po, Po-Ast, and Ast-Ms proved most effective, yielding an accuracy of 80.9%. These results affirm the idea that sexual dimorphism exhibits variability over a short span of decades, underscoring the necessity for regular updates to osteometric standards used in sex discrimination.

Keywords: Temporal changes; Mastoid measurements; Discriminant function analysis; Forensic Anthropology Population Data; Sexual dimorphism

PAP-09

CORRELATION BETWEEN STATURE AND THUMB PRINT BASED ON INDIAN CRIMINAL DATA

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Abstract

Introduction: A forensic or medicolegal investigation cannot be complete without identification. This process could be impeded if there is insufficient evidence at the crime scene. Fingerprints are a crucial piece of tangible evidence in crime scenes. If the law enforcement agency could use the limited data to construct an approximate biological profile of the suspects, that would be of great assistance. An estimate of stature is one biological characteristic that might be useful in identifying a person. A defining characteristic such as size might provide information that helps law enforcement focus their investigation and solve crimes. Aim: Determine whether there is a correlation between fingerprints and stature and develop a rapid technique for determining a person's physical attributes from a fingerprint. Method: It is a cross-sectional study; the data was collected from the fingerprint record of the CFPB department. A total of 200 samples were taken from the records and Statistical analysis was done. Results: To be presented at the conference.

Keywords: Fingerprints, forensic investigation, identification, stature, crime scenes.

PAP-10

COMPARATIVE ANALYSIS OF HUMAN AND NON-HUMAN DENTITION ON THE BASIS OF ELEMENTAL ANALYSIS

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Abstract

The goal of forensic odontology is to distinguish between human and non-human species using dental evidence. Humans have a dentition that is quite different in both form and function from that of other mammals. In order to identify the teeth, this study compared human and non-human teeth based on elemental data. 30 tooth samples in total, comprising five human, five canine, five feline, five sheep, five goat, and five buffalo teeth samples, were analyzed for elements. The findings of the elemental analysis showed that there are substantial differences between various species. The highest calcium level was found in sheep teeth, followed by those of people, goats, cats, dogs, and buffaloes. Humans lacked some elements including Si, Ti, Al, Mn, Ba, and Br, but goats lacked Al, Zn, Mn, Ag, and Br. While buffaloes lacked Si, Al, Ti, and Mn, cats were deficient in Cu, Ag, and Br. A thorough method for distinguishing between human and non- human creatures based on teeth was proposed by examining the percentages of various components present in various species. The significance of elemental analysis as a useful technique in forensic odontology for species identification is emphasized by this work. To help with accurate forensic investigations, forensic specialists can improve their capacity to differentiate between human remains and non-human specimens by analyzing the elemental makeup of teeth.

Keywords: Forensic odontology, Non-human dentition, Human dentition, Identification, Elemental analysis

PAPO-1

ARTIFICIAL INTELLIGENCE IN FORENSIC ODONTOLOGY

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Abstract

Forensic odontology is emerging naturally along with the advances in technological and medical sciences. Robotic preferment which replicates the human brain has revolutionised the dentistry. As now the medical and dental records / documentations are being computerised and kept in cloud servers as backups, these records have been sucessfully used to identify the victims of various mass disasters and accidental remains. Teeth, jawbones, radiographs, lip prints and palatal rugae are considerd the reliable methods of identification of an individual in forensic odontology. Technological advancements have gained revolution in modern dentistry as well and have been termed as artificial intelligence models. Such models can be trained and then applied for decision making, problem solving purposes as well as in diagnostics with the major advantage that they provide reasoning for clinical decision making and have proven to be a breakthrough in providing reliable information in decision making. Application of artificial intellegence in forensic odontology can be used in personal identification, gender determination, age estimation, 3D printing, Cheiloscopy and also in bite mark analysis. As digitalisation is on verge, artificial intellegence has been pivotal in changing the mode of forensic analysis from manual to computerized methods thereby reducing the human error, labor and time while providing the convenience of cloud accessibilty.

Keywords: Forensic odontology, artificial intelligence, mass disaster, personal identification, 3D printing.

PAPO-2

THE DECISIVE ROLE OF PROSTHODONTICS AND ITS INVALUABLE CONTRIBUTION TO FORENSIC ODONTOLOGY: A REVIEW

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Abstract

Forensic odontology is the forensic science that is concerned with dental evidence. It is a relatively new science that utilizes the dentist's knowledge to serve the judicial system. The most common role of the forensic dentist is the identification of deceased individuals. Dental structures are the hardest and most resilient tissues of the human body. Teeth on exposure to post-mortem influences will survive longer than other body tissues as the materials used to restore damaged teeth are extremely resistant to physical, chemical, and biological destruction. Forensic identification based on assessment of prosthodontic appliances is assuming greater significance, as labelling of dentures and other prosthetic appliance could provide vital clues for patient identification. The most common role of the forensic dentist is the identification of deceased individuals. Forensic identification based on assessment of prosthodontic appliances is assuming greater significance, as labelling of dentures and other prosthetic appliance could provide vital clues for patient identification.Various recommendations have been made concerning the importance of denture identification. This paper presents a review of available literature highlighting the fact that how a prosthodontist can play a key role in identification of a deceased individual if trained to do so.

Keywords: Prosthodontics, forensic odontology, denture labelling, Palatal rugoscopy, custom restorations.

PAPO-3

CORRELATION OF LIP PRINT WITH BLOOD GROUP IN FORENSIC SCIENCE

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Abstract

Background: Cheiloscopy is the study of furrows and grooves present on the red part, or the vermilion border of the human lips. The type of groves is unique for an individual and can be used for person identification. Aim: The aim of this study is to ascertain whether the uniqueness of lip print (LP) can help in identifying a person. In addition to evaluate the comparison of LP types and blood groups was taken up to see if there is any correlation between the two. Materials and Methods: A cross-sectional study was conducted on 200 participants (77 males and 123 females), aged between 25 to 45 years, to determine any correlation between LP types and blood groups. These lip patterns were analyzed and interpreted using Tsuchihashi's classification and later associated blood group matching was performed to determine the predominant LP type with the ABO and Rh blood grouping system. Results: The present study showed a positive correlation between LP pattern and blood group among males and females. Thus, distribution of LP patterns, and ABO blood groups might help in the identification of an individual. Conclusion: Since LP and blood group are unique for a person. Hence, cheiloscopy along with blood group can play a vital role in person identification.

Keywords: Blood group, cheiloscopy, identification, lip prints

PAPO-4

CHALLENGES TO RESOLVE INTRAOPERATIVE MORTALITY CASES ON MEDICAL FORENSIC STRATEGY IN CRIMINAL JUSTICE SYSTEM

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Abstract

Introduction- Intraoperative mortalities at the operation theater are not rare and catastrophic. The sudden death during and after surgery of the patient is a shocking and perturbing experience for the system. The present communication dealt with some cases of operation table deaths (n=6), which were registered as unnatural death case, as observed on autopsy findings and required postmortem examination on legal complaints framed by the victim's family to find out the actual cause of death. Methods- The viscera samples were analysed at the forensic science laboratory, as collected, preserved and certified by the Medical authorities. The results were followed by interpretation of the inferences corroborating with the primary autopsy findings and eliminating all possible interfering matrices. Results- The Toxicological and chemical examinations of exhibits revealed the presence and/or absence of drugs/chemicals concerned, as used and treated on schedule. In some cases the points of medical negligence and following unwelcome event of investigative interventions appeared crucial. Though the cause of death may be multi-factorial and related or unrelated to the actual surgical procedures, the administrative and technical complexities in the components of criminal justice system could not depict the complete cycle of adjudication for the ends of justice. Conclusion- This study furnished the plausible clues and mechanism of medical forensic accomplishment to label the cases as natural events or negligence's, victimogenesis and criminogenesis, if any, as accounted. Moreover, the disruptions in the chain of custody of exhibits could not rule out the chances of gross medical negligence and system failure with regards to evidence management in both preventive and resolving aspects and which suggested the modification of the extant inter-operable criminal justice system and maintaining the appropriate status of medical forensics on legal medicine jurisprudence.

Keywords: intraoperative death, medical negligence, evidence management, autopsy, viscera analysis, forensic jurisprudence

PAPO-5

INVESTIGATING THE INTERRELATIONSHIP OF PERSONALITY TRAITS AND SOCIAL MEDIA BEHAVIOUR: A SYNERGISTIC UTILIZATION OF A GOOGLE FORM SURVEY AND GRAPHOLOGICAL ANALYSIS

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Abstract

This study explores the complex interplay between personality traits and social media behaviour through a comprehensive methodology that integrates a Google Form survey with graphological analysis. The research investigates the alignment of self-reported personality traits with engagement on social media platforms. Utilizing Google Forms for survey data collection and employing graphological analysis on participants' handwriting samples, the study aims to reveal correlations and discrepancies between self-perception of social media behaviour and underlying personality characteristics. The innovative fusion of modern survey methods and traditional graphological analysis provides a nuanced understanding of the multifaceted relationship between personality traits and social media behaviour. Anticipated outcomes include valuable implications and insights for the fields of psychology, digital communication, and personality studies.

Keywords: Personality traits, social media behaviour, google form survey, graphological analysis, handwriting analysis.

PAPO-6

"REAL-TIME CASE STUDIES IN DOCUMENT INVESTIGATION: FORENSIC SCIENCE APPROACH"

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Abstract

The field of forensic document examination plays a critical role in various legal and investigative scenarios, involving the analysis and authentication of documents. This abstract presents two real-time case studies in document investigation, employing forensic science methodologies to unravel complex real life scenarios. These cases involve the analysis of such documents which give the false representation of genuinity at the very first glance. Forensic document examiners were tasked with verifying the authenticity of those documents, which were suspected to have been tampered with or forged. Through a meticulous examination process, a combination of techniques such as handwriting analysis, ink examination, and paper analysis was utilized. The examination commenced with a thorough inspection of the document's physical attributes, including ink quality, paper type, and aging characteristics. Handwriting analysis was conducted to compare signatures, writing styles, and strokes with known exemplars. Moreover, microscopic analysis and various light sources were even used to detect any alterations, erasures, or additions that might have been made to the original document. These case studies highlight the pivotal role of forensic document examination in legal proceedings. By employing various forensic methodologies, the analysis uncovered discrepancies and provided substantial evidence for alleged tampering, aiding in the resolution of the legal dispute. In conclusion, these cases underscore the significance of forensic science methodologies in validating document authenticity and serves as a testament to the meticulousness and precision required in forensic document examination within the realm of legal investigations.

Keywords: Document Investigation, Handwriting Analysis, Ink Examination, Alterations, Legal Investigations, Tampering.

PAPO-7

RELIABILITY OF POSTMORTEM ABO BLOOD GROUPING: A STUDY OF 100 CASES

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Abstract

Introduction: Blood grouping has been one of the cornerstones for identification of biological materials in forensic investigations. Antigens of the ABO system can be detected even prior to birth. ABO blood groups can also be detected after death for a long period in many body tissues (teeth, bones, etc.). Blood has its own forensic value in many medico-legal issues. Objective: The primary objective of the study is to estimate the maximum duration of post mortem interval during which blood group can be identifiable in blood of a dead body. Method: The present study looked at a total number of 100 autopsy cases brought for medico-legal investigations in the mortuary of the Department of Forensic Medicine in collaboration with the Department of Pathology at the Postgraduate Institute of Medical Sciences (PGIMS), Rohtak (Haryana, India). The blood samples were collected from right ventricle without any anticoagulant. ABO blood grouping was performed by direct haemagglutination technique using monoclonal antisera. Reverse blood grouping was also attempted. Result: Post-mortem ABO blood group antigens were detected in 84/100 bodies (84%), of which 69 (82.1%) were fresh, 10 (11.9%) were in the stage of early decomposition (ED) and 5 (6.0%) were in the stage of advanced decomposition (AD). In all the cases of early decomposition, ABO blood group antigens were detected when bodies were stored in cold storage for 48 hours. Even those bodies which were in an advanced stage of putrefaction showed positive results if stored in a cold storage room for a considerable period of time. Conclusion: This study showed that CSI has an important role in the preservation of blood group antigens, while seasonal variations are of little value. There is no role of age and sex in the detection of blood group antigens; post-mortem blood group detection depends upon Estimated Post mortem Interval and Cold Storage Interval. This is exemplified by the fact that the EPMI of < 85 hours showed all results as positive. In all cases of EPMI > hours, no positive results were obtained, even after a significant CSI. Therefore, it can be concluded that ABO blood group antigens can be detected from liquid blood even in decomposed bodies of EPMI of less than 85 hours provided bodies are stored at a cold storage room temperature of 4 degree Celsius.

Keywords: Blood, ABO blood groups, decomposed bodies, postmortem interval, forensic investigations.

PAPO-8

A STUDY INVESTIGATING THE PRESENCE OF DIATOMS ON TOOTH SAMPLES USING THE ACID DIGESTION METHOD FOR THE ESTIMATION OF TIME SINCE DEATH IN DROWNING CASES

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Abstract

Teeth are a further source of diatoms in establishing the cause of death and time since death by analysis of the stage qualitative and quantitative evaluation of diatoms diversity. Trials also confirmed that diatoms have also been a useful tool in differentiating antemortem and postmortem drowning (Jian Zhao April 2014). Diatoms are a type of algae that belong to the phylum Bacillariophyta. They are unicellular organisms with a unique feature – their cell walls are made of silica, which gives them a glass-like appearance. Diatoms are a diverse group of microorganisms found in various aquatic environments, including oceans, lakes, rivers, and even damp soil. This study mainly focuses on a tooth immersed in a water sample from a known water body for a day and the 7th day to observe the variation and the stages of the life cycle. The method of extraction used is the acid digestion method using concentrated Sulphuric Acid. We could find the centric and pennate types of diatoms. Diatoms are also important as they indicate natural water quality (European Committee of Standardization 2004). According to the results, we cannot deny that teeth are a source for the extraction of diatoms and also an indicator of time since death when other methods fail.

Keywords: Diatoms, Teeth, Drowning, Silica, Postmortem

PAPO-9

FOR A MEN OR WOMEN? GENDER DETERMINATION FROM VARIOUS FORAMINA AND CANALS OF MANDIBLE ON CONE BEAM COMPUTED TOMOGRAPHY (CBCT): A FORENSIC STUDY.

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Abstract

Forensic odontology, a burgeoning field within forensic medicine, plays a crucial role in the identification of deceased individuals, particularly in mass disasters or cases involving mutilated and decomposed remains. This study focuses on the gender-related distinctions I mandibular anatomy; utilizing cone-beam computed tomography (CBCT) to assess various mandibular features in 200 individuals aged 20-60.The inferior alveolar canal, a key structure in the mandible, exhibits sexual dimorphism, with studies indicating variations in its course between males and females. Lingual mandibular foramina, associated with the sublingual artery, are crucial for surgical procedures, highlighting the significance of understanding their anatomy. The study employs CBCT to provide detailed three-dimensional assessments, overcoming limitations of traditional radiography. In the materials and methods section, 200 CBCT images are analyzed for mandibular foramina, mandibular canal, mental foramina, lingual foramina, and anterior loops of the mandibular canal. Various measurements are taken to determine the horizontal and vertical localization of these structures. Statistical analysis using SPSS software reveals significant gender differences in measurements such as the inferior alveolar canal, mental foramen, and lingual canal. Results highlight the importance of specific measurements, such as the left posterior mandibular foramina, in gender determination. However, some aspects, including the mandibular anterior loop, show no statistically significant gender differences. The discussion section contextualizes the findings in comparison to existing literature, emphasizing the varying degrees of sexual dimorphism across different mandibular features. The conclusion underscores the non-uniform nature of gender-related distinctions in mandibular anatomy. These insights have implications for both dentistry and forensic anthropology, guiding professionals in making more accurate gender determinations and surgical decisions based on specific anatomical features that exhibit significant gender differences. This research contributes valuable knowledge to the evolving field of forensic odontology and its applications in human identification.

Keywords: Gender determination, Mandibular canal, Mental foramen, Lingual canal, Mandibular foramen.

PAPO-10

CHALLENGES IN QD EXAMINATION & UNCONVENTIONAL APPROACH FOR EXAMINATION - CASE STUDIES

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Abstract

This research addresses the intricate challenges within the field of Questioned Document Investigation (QDI) by introducing an unconventional methodological framework designed to navigate these complexities. Through a comprehensive exploration, utilizing a detailed case study, this paper showcases the investigation of document alteration, incorporating a meticulous examination of embedded images, fingerprints, and signatures. However, in the investigation on the image, we employed the method of Face recognition, where it utilized to corroborate and refute the authenticity of the presented documents. The facial recognition system was trained and calibrated to detect facial features, dimensions, and unique identifiers, enabling a comparison between the photographs on the questioned documents and authenticated images from official sources. Through a meticulous analysis, discrepancies and similarities in facial structures and features were identified, aiding in the determination of potential identity misrepresentation. The primary focus is on authenticating the document and detecting potential instances of fraud or alteration. The investigative process is facilitated by the application of a diverse array of digital tools for precise sample analysis. Key aspects of this approach include advanced scrutiny of embedded images to identify any tampering, meticulous analysis of fingerprints and signatures to establish authenticity, and the utilization of digital forensic tools for comprehensive sample examination. The research contributes significantly to the advancement of QDI by offering practitioners and researchers alternative perspectives to enhance problem-solving efficacy and proficiency in this technologically advanced domain. This case study emphasizes the emerging role of facial recognition technology as an adjunct to conventional forensic document examination. The successful integration of facial recognition into document analysis highlights its potential in augmenting forensic investigations, particularly in cases involving identity theft(s).

Keywords: Document Investigation, Facial reorganization, Alterations, Legal Investigations.

PAPO-11

IDENTIFICATION OF POLLEN: A FORENSIC APPLICATION

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Abstract

Pollen is a crucial component of plant reproduction, serving as the male gametophyte in seed plants. This microscopic powder, produced by the anthers of flowering plants, plays a pivotal role in the fertilization process by facilitating the transfer of genetic material. The forensic application of pollen, known as palynology, involves utilizing pollen grains as trace evidence to aid in criminal investigations. Pollen can be transferred between individuals and environments, providing valuable information about geographical locations, seasons, and potential associations between individuals and crime scenes. By analyzing pollen found on clothing, objects, or in the airways of individuals, forensic palynologists can contribute to establishing timelines, linking suspects to specific locations, and providing context to criminal investigations. This application showcases the intricate role pollen plays in forensic science, enhancing the breadth and precision of evidence analysis. Aim of this study is to identify the pollen according to their shape and size. In conclusion, this study has shown that pollen can be identify according to their shape and size.

Keywords: Pollen, spores, Forensic Significance, Identification and criminal investigation.

PAS-01

ARTIFICIAL INTELLIGENCE AND SATELLITE IMAGERY: PAVING THE WAY FOR FORENSIC INVESTIGATIONS

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Abstract

Artificial Intelligence (AI) is an indispensable and vital area of modern computer science that can often provide a means of tackling computationally significant problems in a realistic time frame. This area is becoming part and parcel of computing, and it requires the training of machines for the intelligent analysis of large amounts of complex data. Therefore, it is evident that AI is an ideal approach in dealing with many of the problems of forensic science domain. On the other hand, Satellite Imagery is becoming crucial as a source of data in many cases. It can even provide real-time information of any location in the world. Hence, this data, otherwise junk, can be converted into a vital source of information that can be accessed on a need-to-know basis. This paper explores applications of Artificial Intelligence and Satellite Imagery for Forensic Investigations through digital image processing. An attempt has been made to extract information from satellite images using artificial intelligence in different domains of Forensic Science. Desired processes have been carried out in the required part of an image, mentioned as the region of interest (ROI), which is specified by defining a cover that limits the portion of the image. Additionally, this kind of application paves the way for solving various unsolved mysteries of the world in diversified domains. Undoubtedly, Artificial Intelligence and Satellite Imagery have a great scope in the future of Forensic Science.

Keywords: Artificial Intelligence, Satellite Imagery, Forensic Investigations, Digital Image Processing, Region of Interest.

PAS-02

UNMASKING AUDIO DEEPFAKE USING SIS FOR FORENSIC ANALYSIS

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Abstract

In today's digital era, artificial intelligence (AI) has emerged as a transformative force however it has also become a double – edged sword. Recent advancements in AI have given rise to sophisticated technologies that raise an alarming concern. Among which are the deepfake voice cloning softwares that can seamlessly mimic human voices by replicating characteristics that make each individual's voice unique. While this technological leap presents numerous opportunities, it also raises significant ethical and security concerns like voice spoofing, defamation, blackmailing, hate speech etc. To address these concerns this study aims for a comparative analysis to check the accuracy of similarity in speaker characteristics of a cloned synthetic voice and actual human voice. 10 male and female voice samples were collected and their corresponding AI voice was generated, resulting in a total of 40 samples, constituting the sample size. The study employed generation of cloned voice through an AI voice generator platform followed by critical listening, spectral analysis and graphical comparison chart through an open source speaker recognition software. By observing the similarities and differences between AI-generated voices and genuine human voices, this study sheds light on the effectiveness of these technologies in voice synthesis and recognition. Rapid development of such technology brings both promise and peril hence this research endeavors to uncover the extent of its accuracy through Forensics.

Keyword: Artificial Intelligence, Audio Deepfake, Voice Cloning, Speaker Identification System, Forensic Acoustics

PAS-03

TO STUDY THE RANGE OF VARIATION IN THE ACOUSTIC PARAMETERS OF STANDARD AND MORPHED AUDIOS

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Abstract

Identification is the one of the key roles of forensic expert. Voice is often used as one of the identification parameters to identify the person. Voice is unique to every individual due to the human anatomy and physiology. Voice Morphing is the type of the conversion of one's voice to the unknown. This is done to hide the identity. In this method software's are used to create the disguise audios. The morphing lets the individual's voice been converted in a manner that on hearing they perceived to be that of cartoon, alien, monster etc. In this study, the 100 individual's audios were converted to old Male and Old Female by the android-based application. This study included the analysis of the audios using aural- acoustic method. Aural parameters studied are quality of speech, delivery of the speech, nature of pauses, background variation, and speech rate. Linguistic parameters included are Articulation, Talking Style, Accent, Degree of Phonation. Acoustic parameters studied for examination of the voice samples includes the fundamental frequency (F0) and formant frequencies (F1, F2, F3, F4) for 5 vowels (/ʌ/, /ɔ/, /iː/, /ɪ/, /uː/). For analysis firstly the percentage change was calculated and noted for the auditory and Linguistic parameters. Secondly for the Spectrographic parameters Spearman's rho Correlation and Wilcoxon Signed Rank Test were used. The results indicated aural and linguistics parameters were not changed. Disparity in the formant frequencies and pitch were noted for different vowels.

Keywords: Multimedia Forensics, Speaker Identification, Speech, Disguise Voice, Formant Frequencies, Pitch

PAS-04

DIATOM- A GREAT FORENSIC TOOL IN INVESTIGATION OF DROWNING CASES

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Abstract

Diatoms the most common type of phytoplankton, are a major group of eukaryotic algae which are ubiquitous to a wide variety of aquatic habitats. These are useful in linking suspects and victims. When a person drowns water is inhaled into lungs and can ultimately find their way into internal organs such as Bone marrow, Spleen and Brain of a drowning victim. This provides an indication of ante mortem and post-mortem drowning. For this purpose, various water bodies of Jaipur have been studied and presence of Diatoms is analysed. For extraction of Diatoms of different water bodies Acid digestion (nitric acid and sulphuric acid) then Centrifugation was done, and acid resistant material dropped onto a slide. For quantification analysis microscopic examination of slide that allows detailed imagination was done. Based on Research, there is a diversity of Diatoms that are found in different water bodies. This study asserts that in cases of drowning, various species of diatoms are exclusively present in water bodies in Jaipur. It emphasizes the potential to identify and differentiate the crime scene location and the presence of a deceased body through diatom analysis.

Keywords: Diatoms, phytoplankton, algae, victims, Bone marrow, post-mortem, drowning, ante mortem and post-mortem drowning

IMPORTANCE OF OCULAR LENSES IN FORENSIC INVESTIGATIONS

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Abstract

Ophthalmic lenses designed to be worn on the front surface of the eyes are called contact lenses. Materials scientists take into account a variety of elements, including mechanical, processing, and optical qualities, while creating contact lenses in order to provide minimal pain during extended usage. The anatomical location, type of material, use style, and water content of contact lenses are all taken into consideration when classifying them. This article provides a thorough analysis of the significance of prescription eyeglasses in forensic investigations and its usefulness as evidence. Wearing eyeglasses can aid in confining one's identity, and its characteristics can serve as a pre-mortem record for identification and comparison. The unique characteristics of the evidence about eyeglasses will rise in unison with the development in refractive error and prescription complexity. Establishing and developing methods for the analysis of eyeglasses is necessary since this is a new and developing field in forensic investigation. The importance of ocular lenses for drug delivery, their correlation with age and sex assessment, and their use as sensors for non-invasive illness monitoring are all highlighted in this article.

Keywords: Eyewear prescription, contact lenses, forensic significance, personal identification.

PAS-06

STATURE ESTIMATION FROM VARIOUS ANTHROPOMETRIC MEASUREMENTS IN MAZHABI SIKH POPULATION OF PUNJAB STATE IN NORTH INDIA

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Abstract

Determining the personal identity of a deceased individual in medico-legal investigations can be challenging. Sex, age, and stature are key parameters of personal identification. The correlation between bone length and stature is well-established, however, it is population dependent. Regression equations are developed for each population to study this correlation. It is imperative to conduct comprehensive investigations on a particular population before formulating regression equations specific to that group. Present work studies the Mazhabi Sikh population, an indigenous group in Punjab State, North India to find out these regression equations. Stature and length of 28 bones including limb, head, finger, foot, nasal, and ear measurements from 100 individuals, 56 females and 44 males were collected. Data was analysed to derive regression equations for each measurement and for male and female separately.

Keywords: Stature estimation, Mazhabi Sikh, Regression Equation, Forensic Anthropology, Punjab state, North India

PAS-07

HUMAN PERSONALITY ASSESSMENT USING GAIT PATTERN ANALYSIS

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Abstract

Gait pattern analysis is a forensic technique that measures and analyses a person's walking stride to identify individuals, exclude suspects, and reconstruct crime scenes. This technique is based on the principle that everyone has a unique gait pattern, just like they have a unique fingerprint [Law of Individuality]. Gait patterns are influenced by a variety of factors, including a person's height, weight, age, sex, injuries, etc. Research states that the personality of a person can influence the gait pattern, and there is also a possibility that gait pattern analysis can be used as a tool for determining the personality characteristics of an individual. Further research states that there is a relationship between personality and gait type. This study is done to ascertain the relationship of the gait pattern with the personality of a human, along with considering all other factors mentioned above. The personality of the subject is assessed by administering psychological assessment tests [Eysenck personality inventory and DASS-21], which are used as a tool in terms of analysing the personality and the present emotional state of the subject. The interpretations of the psychological assessments are compared with the measurements of gait pattern. The objective of this study is to verify whether there is any relevance in terms of personality and gait pattern. On interpreting, analysing, and comparing the outcomes of this research [based on deriving the mean values of the gait pattern measurements and categorising them based on the parameters of the respective psychological assessments], it was inferred that there is no relevance in terms of gait pattern to the personality of a person.

Keywords: - Gait pattern analysis, Criminal profiling, Personality Assessments, DASS-21, Eysenck's Personality Inventory (EPI), Human gait pattern, Behaviour analysis.

PAS-08

CRACKING THE CODE: UNMASKING ATM MALWARE WITH PE STUDIO

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Abstract

Hackers have developed new techniques to directly breach a system or device, responding to the surge in numerous cybercrimes. Criminals frequently attack automated teller machines (ATMs) because of the vulnerabilities they present. ATM security must monitor and investigate these attacks because ATMs may contain and manage enormous sums of cash, making them good targets for hackers. Because of this, ATM security needs to monitor and investigate these assaults. Because automated teller machines may hold and handle significant quantities of money, the security at ATMs needs to monitor and analyse assaults of this kind. In the present study, using Studio to analyse ATM malware is essential to identifying malware signatures and behaviours that can improve ATM security. Banks and ATM manufacturers must implement specific measures to prevent ATM malware attacks. Based on present research on ATM malware analysis, researchers have uncovered critical insights that are highly beneficial for those seeking to investigate Malware aimed at breaching automated teller machines (ATMs). It is an invaluable tool for conducting such investigations. This paper will serve as a means of sharing insightful findings and aiding others in deepening their understanding of this crucial topic.

Keywords: ATM Malware, Investigation, Cyber-Attack, Analysis

PAS-09

HIGHLIGHTING THE SIGNIFICANCE OF AUTOPSIES IN HANGING CASES: A CASE STUDY

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Abstract

An autopsy is a comprehensive analysis of a deceased individual's body, involving surgical procedures, with the primary objective of investigating medical aspects like the cause, time, manner, and method of death. This process is especially crucial in cases that exhibit suspicious, unexpected, obscure, or unexplained circumstances, as highlighted by Kotabagi et al. in 2005. The post-mortem examination serves various essential purposes, one of which is establishing a connection between pre-existing health conditions and the cause of death, thereby illuminating the intricate interplay between these factors. Autopsies serve multiple functions, including the determination of the cause of death in cases that deviate from the norm and contributing to the advancement of medical knowledge in relation to various diseases. In this particular case report, we delve into a specific incident involving a fatality resulting from hanging. The information gleaned from the autopsy proved to be instrumental in achieving a comprehensive and precise understanding of the circumstances surrounding this tragic death. This exemplifies the critical role autopsies play in unraveling mysteries, providing closure to families, and advancing our knowledge of the medical aspects of various conditions and causes of death.

Keywords: Hanging, Post-mortem Examination, Autopsy, Medico-legal cases, Forensic Medicine, etc.

PAS-10

FINDINGS OF MANUAL STRANGULATION AT AUTOPSY: A CASE REPORT

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Abstract:

Manual strangulation involves compression of the neck by using either one or both hands or by exercising pressure with another part of the body such as the forearm or knee. This can trigger different pathomechanisms: Prolonged compression of the larynx impairs the exchange of gases and causes asphyxia. Compression of the lateral parts of the neck may occlude the great cervical vessels. Strangulation, both manual and ligature, probably represents the most common cause of homicidal asphyxiation. Discussing a case report, we will study the manual strangulation injury where a multidisciplinary approach is important to know the truth. Forensic pathology need confrontation because none sign is really pathognomonic in itself.

Keywords: Strangulation, Ecchymosis, Asphyxia, Petechial haemorrhages, Subpleural Haemmorhage.

PAS-11

"FORENSIC SEX DETERMINATION: A COMPREHENSIVE REVIEW UTILIZING SKULL AND PELVIC BONE ANALYSIS"

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Abstract

Sex determination from skeletal remains is an important aspect of forensic anthropology. Accurate sex determination can aid in the identification of unknown individuals, the investigation of crimes and the study of human populations. The skull and pelvic bone are particularly useful for sex determination as they exhibit a number of sex-specific differences. Sex determination from skeletal remains is a valuable tool for forensic anthropologists. It is important to use multiple morphological features. This paper reviews the various morphological features of the skull and pelvic bones that can be used to determine sex. The identification of human remains often relies on the analysis of skeletal remains, particularly the skull and pelvic bones, due to their robust sexual dimorphism. This review paper aims to comprehensively explore the methodologies, advancements, and limitations in sex estimation through the examination of these skeletal elements in forensic science. The cranial morphology, including features such as the supraorbital ridge, mastoid process, and overall size and shape of the skull, provides critical indicators for sex determination. Similarly, the pelvic bone exhibits sexually dimorphic traits, notably the greater sciatic notch, subpubic angle, and overall structure, aiding in the differentiation between male and female skeletons. Additionally, advancements in statistical models and machine learning algorithms have further refined sex determination methodologies, contributing to more precise and objective analyses. However, challenges persist, including population-specific variations and limitations in cases of incomplete or fragmented skeletal remains. Ethical considerations regarding the utilization of skeletal features for sex determination are also discussed. In conclusion, the analysis of the skull and pelvic bone remains integral to forensic investigations for sex determination. By evaluating the methodologies, advancements, and challenges in this domain, this review paper aims to provide a comprehensive resource for forensic anthropologists, aiding in the accurate and ethical identification of human remains in medico-legal contexts.

Keywords: Sex determination, Skull, Pelvic Bone, Forensic Anthropology, skeletal remains, Sex estimation, Investigation, Crime scene

PAS-12

DECOMPOSING A DROWNED BODY WITH SIGNS OF VIOLENCE

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Abstract

Introduction. Drowning is one type of asphyxia caused by the entry of fluid into the airway. Death due to drowning is one of the hardest things that are difficult to diagnose in the field of forensic medicine, primarily if the victim found to be in a decomposed state. The state of decomposed examination often does not show typical signs. The diagnosis of drowning can be reached after considering all the results of the forensic examination including external, internal, and laboratory examinations. Methods. We performed an external, internal, and histopathological examination, as well as a longsaap proof and acid destruction test. Results. A body was found floating in the Madura Strait by a patrol of the Tanjung Perak Police Water Police Unit on Saturday 19 August 2023 at 07.15 WIB. The body was then identified at Dr. Soetomo General Hospital by a forensic expert. External, internal, and laboratory investigations were conducted. On external examination, the corpse was not intact, with signs of decay, and violation. In an internal examination, sand in the airways and other signs of drowning were identified. In the acid destruction test using the right femur, a positive diatom result was obtained as well as longsaap proof. Conclusions. A complete autopsy is vital to determine the cause and mechanism of death, reconstruct the events before death, and identify the victim. It is also essential to determine whether the deceased died by drowning was alive before entering the water. All injuries suffered by the victims should be described.

Keywords: autopsy; diatom; drowning; decomposed.

PAS-13

USAGE OF AVERAGE RIDGE DENSITY CALCULATION ON PALMPRINTS FOR INDIVIDUALISATION AND POSSIBLE SEX DETERMINATION

Alex Idicula Mathews[1]

[1]Intern, Clue4 Evidence Forensic Lab, Manipal Centre, Bengaluru, Karnataka

Abstract

Palm Prints, like fingerprints, are unique to a person and can be used for the purpose of individualisation and other biometric purposes and are just as reliable as fingerprints. This is because palm prints also have numerous ridges and its associated ridge characteristics that varies person to person. Also just like the fingerprints the palm prints also have patterns that aid in its characterisation. Adding to this unlike fingerprints, which have three main type of patterns, palm prints have five major patterns. The four tri-radii is an important landmark while analysing pam prints. These characteristics can be put into use for the purpose of personal identification. It is not always the case that investigators in a crime scene might be able to retrieve a fingerprint. The unique and rather permanent features of palm prints like creases, ridges and minutiae points further cements the usage of palm prints as viable trace evidence material. Another reason why palm prints are an important piece of evidence is because palm prints when compared to fingerprints cover a larger surface area. Through this study we will revisit the concepts of anatomy of palm prints, ridge characteristics, ridge density calculations, etc. The aim of the study is to use ridge density calculations as a means of individualisation and to analyse the possibilities of sex determination based on the ridge density calculations using specific locations on the palm prints.

Keywords: Palm prints, Fingerprints, Ridge characteristics, Minutiae, Tri-radii

PAS-14

IDENTIFICATION OF TROPANE ALKALOIDS FROM DIFFERENT PARTS OF DATURA METEL

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Abstract

"A deadly beauty with a deadly bite, Datura's poison brings a wicked fright". Datura is a poisonous plant belonging to the Solanaceae family, which includes nine species, such as Datura stramonium (jimsonweed or devil's weed), Datura inoxia, and Datura ferox. Poisoning may occur after consuming any part of the plant, as all parts of the plant are toxic. Accidental intoxications of humans and animals from food sources contaminated with datura plants have also been reported. Seeds of this plant are given to children to kidnap them when they become unconscious or delirious. Seeds are employed mainly as stupefying poison prior to robbery, kidnapping, and rape. Datura poisoning can be fatal, especially in cases of overdose or prolonged exposure. This study explains the analytical examination for the determination of tropane alkaloids in Datura Metel. All plant parts were dried, crushed, and extracted, including sample preparation by solid-phase extraction and chromatographic (GC-MS) determination of the analytes. The solvents used in these methods were normal methanol. The results of this study indicate that different concentrations of tropane alkaloids were observed in different parts of Datura Metel, like the leaf, flower, and seed. Thus, this study will help in cases related to datura poisoning that are referred to forensic laboratories for identification, along with viscera and gastric lavage for toxicological analysis.

Keywords: Tropane alkaloid, Datura Metel, GC-MS, Solanaceae, Soxhelt

PAS-15

ROLE OF DNA IN MURDER CASES

Somanjana Chattakhandi[1]

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Abstract

Crimes nowadays are mostly committed technically and the crimes where science is involved can only be solved through forensic technology. Forensic evidence helps to establish a missing link between crime and the accused rather it also strengthen the weak chain of investigation. DNA better known as deoxyribonucleic acid which is the genetic code and one of the unique feature present in the human body which helps to distinguish human beings one from the other. DNA profiling plays an important role to identify identification of blood available in the crime scene, exclusion of his own blood found on his body or cloth or weapons, etc. Presently there is no such specific legislation about the acceptability of the DNA test only it has been incorporated under Section 45 of the Indian Evidence Act 1872 through the provision of expert evidence. The amendment of Cr. P. C. by the Cr. P. C. (amendment) Act, 2005 has brought two new sections which authorize the investigating officer to collect DNA sample from the body of the accused and the victim with the help of medical practitioner. DNA test got validity in 1989 in the paternity case. Tandoor murder case was the first test where DNA finger printing was used. In Nirbhaya case, Sheena Bora murder case DNA test was used as evidence. DNA Technology Regulation Bill, 2019 has been introduced in the Lok Sabha with the aim of codifying the laws related to DNA Technology and DNA profiling. The Arushi Talwar-Hemraj murder case wouldn't have been a mystery today, had the DNA evidence been collected by the investigating officer on time and in proper manner. Now, the science of Forensic evidence is changing and evolving and this necessitates amendments in current laws of the country specially in context of the Forensic evidence. This has been the focus of 185thReport of the Law Commission as well. Therefore, the focus of the Legislature should be to bring changes in law keeping in mind the admissibility of forensic evidence, the kinds of forensic evidence, procedure of collection of forensic evidence and the powers of courts regarding admissibility of DNA.

PAS-16

EMAIL ANALYSIS FOR CYBER FORENSIC INTERVENTION

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Abstract

Introducing a distinctive approach to combating cybercrime through thorough email analysis. In a digital age where communication relies heavily on electronic exchanges, gaining a profound understanding of email data emerges as a critical necessity. The research delves into innovative methodologies employed in cyber forensic investigations, emphasizing the importance of scrutinizing email content, headers, and metadata. By addressing the complexities of email forensics, the paper aims to equip cybersecurity professionals with valuable insights to navigate the evolving landscape of digital threats. As the backbone of contemporary information exchange, email analysis becomes an essential tool in fortifying defences against cybercriminal activities. These measures serve as powerful tools in fortifying digital defences against malicious actors seeking to exploit email channels. The goal is to unravel patterns and anomalies indicative of fraudulent activities, offering insights into potential vulnerabilities within email systems.

Keywords: Cyber Forensics, Email Analysis, Digital Crime Prevention, Investigative Techniques, Information Security type.

PAS-17

GENOMIC DETECTIVES: FORENSIC SCIENCE'S EXPANDING ROLE IN CLINICAL GENETICS AND MOLECULAR BIOLOGY

Riya Ghosh[1]

[1]Student, Dept. of Forensic Science, Kristu Jayanti College

Abstract

Forensic science, once synonymous with crime scene investigations, has undergone a remarkable evolution, expanding its reach into diverse disciplines. This abstract explores the burgeoning impact of forensic science in the fields of clinical genetics and molecular biology, shedding light on how it has become an indispensable tool for advancing healthcare and genetic research. In recent years, forensic science has found an unexpected but transformative role in clinical genetics. Its applications now extend far beyond the crime lab. One of the most significant contributions is the utilization of DNA profiling techniques for clinical purposes. DNA, once solely associated with identifying suspects, is now at the forefront of clinical diagnostics. Genetic testing, powered by forensic methodologies, has revolutionized healthcare. It enables the identification of genetic disorders, facilitates disease risk assessment, and guides personalized treatment plans. Forensic scientists, with their meticulous attention to detail and commitment to accuracy, have become vital in ensuring the reliability of these genetic tests. Molecular biology, too, has been revolutionized by forensic science. Techniques initially developed for forensic DNA analysis have found widespread application in molecular research. Polymerase chain reaction (PCR), DNA sequencing, and DNA fingerprinting, once confined to criminal investigations, now fuel cutting-edge research in genomics and proteomics. Forensic science's precision and rigor have accelerated discoveries in the realms of drug development and disease mechanisms. Forensic pathology, a specialized branch of forensic science, intersects with clinical practice in a profound way. Forensic pathologists, through autopsies, uncover the causes of death, aiding healthcare professionals in identifying emerging health threats and advancing epidemiological studies. Furthermore, they play a pivotal role in the investigation of medical malpractice cases, thus ensuring accountability within the healthcare system. Ethical considerations and patient privacy are paramount in the realm of clinical genetics and molecular biology. Forensic principles, with their emphasis on the responsible handling of genetic data, have become essential in safeguarding patient confidentiality. Ensuring the security of personal genetic information and upholding the highest ethical standards are crucial for maintaining public trust in genetic medicine. In conclusion, forensic science has emerged as a linchpin in the fields of clinical genetics and molecular biology. As technology continues to advance, forensic science is poised to play an even more prominent role in advancing healthcare, genetics, and our understanding of the molecular underpinnings of health and disease.

Keywords: Forensic Science, Clinical Genetics, Molecular Biology, DNA Profiling, Genetic Testing, Polymerase Chain Reaction (PCR), DNA Sequencing, DNA Fingerprinting, Genomics, Proteomics

PAS-18

IMPORTANCE OF AUTOPSY – AN ILLUSTRATIVE CASE

Maitri Naik[1], Prashant Kumar[2], Dr. Sangeeta Raman Jogi[3], Dr. Dipika Singh[4], Reetika Shukla[5], Dr. Sudhir Yadav[6]

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Abstract

An autopsy is a detailed investigation of a deceased person's body, involving surgical procedures, with the main goal of examining medical aspects like the cause, timing, manner, and method of death, particularly in cases that are suspicious, unexpected, unclear, or unexplained. This post-mortem examination serves various purposes, including establishing a connection between existing health conditions and the cause of death, thereby helping us understand how these factors interact. Autopsies are performed for various reasons, including determining the cause of death in unnatural situations and advancing medical knowledge about different diseases. In this case report we present a specific example where the information obtained from the autopsy played a crucial role in gaining a comprehensive and precise understanding of the circumstances surrounding the death.

Keywords: Autopsy, Post-mortem examination, Forensic Medicine, Medical investigation, Non-medicolegal case.

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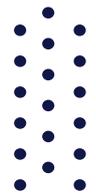
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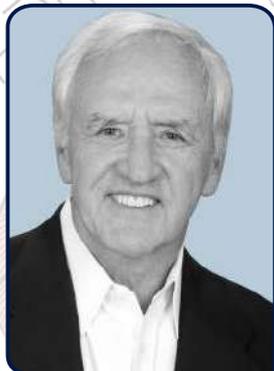
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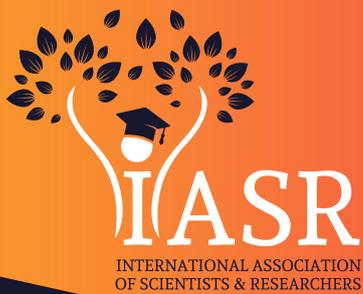
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Mode of Homicide in the Form of Suicide by Strangulation & Hanging
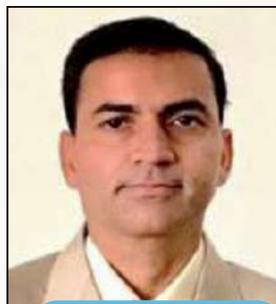
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Anna Barbaro

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Problems of Investigation Across Cyberspace

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Cybersecurity Ignorance can be Disastrous

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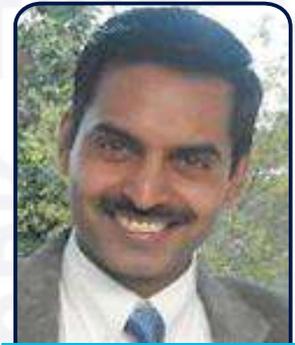
Aashish Sutar

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Legal & Ethical Issues

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Principal, Govt. Allopathic Medical College, Banda

Prof. (Dr.) Vijay Pal Khanagwal
Prof. & HOD, Dept. of Forensic Medicine, Kalpana Chawla Govt. Medical College Karnal

Prof. (Dr.) Akhilesh Pathak
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Prediction of the Attainment of Age Thresholds of Medicolegal Importance

Dr. Sudheer B. Balla
Asst. Prof. & HOD, Dept. of Forensic Odontology Panineeya Institute of Dental Sciences & Research Centre, Hyderabad

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Social Acceptability

Resource Person

Laxmi Agarwal
Acid Attack Survivor
Founder, The Laxmi Foundation

Prof. (Dr.) Abha Singh
Director
IILM Center for Emotional
Intelligence, IILMU, Gurugram

Dr. Navpreet Kaur

Co-Founder, The Laxmi Foundation
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Rashi Juneja
Director & Clinical Psychologist
MindEase Pvt. Ltd.

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Clue from Scene of Crime

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Dr. Harsh Sharma
Retd. Director
Forensic Science Laboratory, MP

Dr. Vinod Dhingra
Forensic Scientist
RFSL, Gwalior, M.P.

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Deepa Verma
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Tracy Alexander FKC
DVI Co-ordinator, UK Home Office
Dir. of Forensic Services, City of London Police
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Scientific Sessions

25th August 2023

John A.J.M. Riemen
Lead Specialist,
Dutch Police and Manager and Custodian
National Criminal ABIS

Asha Srivastava
Professor of Practice
Dean, School of Behavioural Forensics
Centre Head, CoE, Investigative & Forensic Psychology
Centre Head, Centre of Happiness & Wellbeing

Dr. Jose I. Dela Rama Jr.
Professor and Dean
Tarlac State University, Philippines

Dr. G. S. Sodhi
Associate Professor & Coordinator
SGTB Khalsa College
University of Delhi

Prof. Mukesh Kumar Thakkar
HOD, Dept. of Forensic Science
Punjabi University, Patiala

Dr. John Coxhead
Professor
Policing Praxis

Dr. Michael Harrison
Senior Lecturer, Economics & Finance
Royal Docks School of Business & Law
University of East London

Scientific Sessions

26th August 2023

Barry A. J. Fisher
Forensic Science Consultant

Dr. G. K. Goswami
Additional Director, General of Police
Founder Director, UPSIFS Lucknow

Dr. Eddy de Valck
Forensic Odontologist
DVI Federal Police, Belgium

Prof. (Dr.) Mukesh Yadav
Additional Director, Medical Education, Govt. of U.P
Principal, Rani Durgavati Medical College
(formerly, Govt. Allopathic Medical College)
Banda, Uttar Pradesh

Prof. (Dr.) Ma. Teresa G. De Guzman
Professor, University of the Philippines, Manila
Executive Director
Interdisciplinary Research and Development

Dr. Hemlata Pandey
Lecturer and Program Leader
in Forensic Odontology
University of Dundee

Scientific Sessions

27th August 2023

Dr. Rakshit Tandon
Cyber Security Evangelist– Risk Advisory
Cyber Detect & Respond Leader

Maria Corazon A De Ungria
Head, DNA Analysis Laboratory
NSRI, UP Diliman
Academician, NAST

Samir Datt
Founder and CEO
ForensicsGuru.com

Adv. Bharat Chugh
Former Judge/Advocate

Kenan Idrizaj
Security Sciences
Homeland Security expert
Crime Analyst

Dr. Rakhi Khanna
Additional Director,
RFSL, Kota, Rajasthan

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FOUNDATION CERTIFICATE COURSES-2024

Forensic Psychology
Last Date to Register-25th Dec. 2023
Starting on-3rd Jan. 2024

Document & Fingerprint Examination
Last Date to Register-25th Jan. 2024
Starting on-5th Feb. 2024

Cyber Forensics
Last Date to Register-25th Feb. 2024
Starting on-4th Mar. 2024

Forensic Odontology
Last Date to Register-25th Mar. 2024
Starting on-1st Apr. 2024

Cyber Security & OSINT
Last Date to Register-25th Apr. 2024
Starting on-6th May 2024

Forensic Chemistry & Toxicology
Last Date to Register-25th May 2024
Starting on-3rd June 2024

Crime Scene Investigation
Last Date to Register-25th June 2024
Starting on-1st July 2024

Graphology
Last Date to Register-25th July 2024
Starting on-5th Aug. 2024

Forensic Accounting
Last Date to Register-25th Aug. 2024
Starting on-2nd Sept. 2024

Forensic Medicine & Human Identification
Last Date to Register-25th Sept. 2024
Starting on-7th Oct. 2024

Forensic Nursing
Last Date to Register-25th Oct. 2024
Starting on-4th Nov. 2024

Victimology & Criminology
Last Date to Register-25th Nov. 2024
Starting on-2nd Dec. 2024

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Forensic Science & Criminal Investigation

Document & handwriting Examination

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Forensic Photography

Crime Scene to Court Room

Forensic Accounting

Forensic Psychology

Human Identification

Art of Cross Examination

Cyber Security

FORENSIC SCIENCE PROGRAMS

- FSP 101 Forensic Science & Criminal Investigation
- FSP 102 Fingerprint Examination & Analysis
- FSP 103 Document & Handwriting Examination
- FSP 104 Crime Scene Investigation
- FSP 105 Forensic Graphology

- FSP 201 Ethical Hacking & IT Security
- FSP 202 Cyber Forensic Investigation
- FSP 203 Cyber Law & Digital Forensics
- FSP 204 Forensic Engineering
- FSP 205 Private Investigation & Detective

- FSP 301 Forensic Medicine & Toxicology
- FSP 302 Forensic Accounting
- FSP 303 Insurance Fraud Investigation
- FSP 304 Forensic Photography
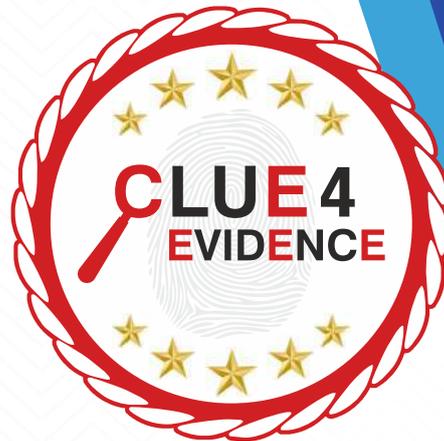- FSP 305 Forensic Biometric Analysis

- FSP 401 DNA Fingerprinting
- FSP 402 Forensic Drug Analysis
- FSP 403 Forensic Biology & Serology
- FSP 404 Ballistics & Firearm Study
- FSP 405 Criminology & Victimology

- FSP 501 Forensic Odontology
- FSP 502 Forensic Entomology
- FSP 503 Wildlife Forensics
- FSP 504 Forensic Psychology
- FSP 505 Forensic Anthropology

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