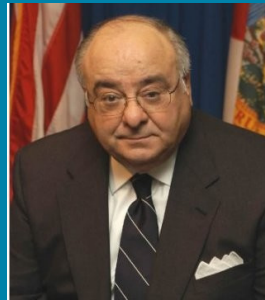


# Global Scientific Guild Conference

## Abstract book

### 8<sup>th</sup> Global Webinar on Forensic Science July 19-20, 2023

#### Conference Chairman



Prof. Anthony Schembri

Former Police Commissioner in New York, United States

#### Conference Co-Chairperson



Prof. Marian Swindell

Mississippi State University,  
United States

#### Conference Co-Chairperson



Dr. Anna Barbaro

President, Worldwide Association of Women  
Forensic Experts (WAWFE), Italy

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<https://www.globalscientificguild.com/8th-forensic-science/>

[www.globalscientificguild.com](http://www.globalscientificguild.com)

# Upcoming Events-2023

<b>7<sup>th</sup> Global Webinar on Materials Science and Engineering</b>	<b>July</b> 24-25, 2023
<b>3<sup>rd</sup> Global Webinar on Laser, Optics and Photonics</b>	<b>August</b> 01-02, 2023
<b>7<sup>th</sup> Global Webinar on Public Health</b>	<b>August</b> 10-11, 2023
<b>5<sup>th</sup> Global Webinar on 3D Printing and Additive Manufacturing</b>	<b>August</b> 17-18, 2023
<b>Global Webinar on Neuroscience and Brain Disorders</b>	<b>September</b> 19-20, 2023
<b>2<sup>nd</sup> Edition of Global Webinar on Nanotechnology and Nanoscience</b>	<b>October</b> 19-20, 2023
<b>8<sup>th</sup> Global Webinar on Applied Science, Engineering and Technology</b>	<b>November</b> 01-02, 2023
<b>10<sup>th</sup> Global Webinar on Traditional and Integrative Medicine</b>	<b>November</b> 09-10, 2023
<b>9<sup>th</sup> Global Webinar on Forensic Science</b>	<b>November</b> 15-16, 2023
<b>Global Webinar on Civil and Infrastructure Engineering</b>	<b>November</b> 27-28, 2023

July 19-20, 2023



## **Prof. Anthony Schembri**

*Former police commissioner New York, United States*

### **Crime Scene Investigation & Management**

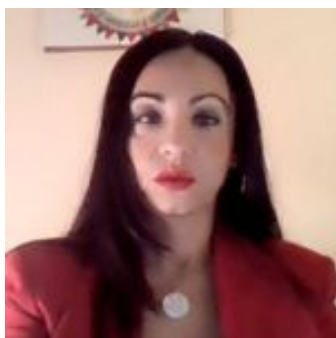
This will be a presentation of real crime scenes and the management of efforts bringing together the forensic experts and the investigative personal to solve real cases. Having lead the Homicide Department department unlike CSI and other programs, police fail to collect and properly analysis a crime scene which I will demonstrate. We need to interpret crime scenes. Sloppy police investigations, lazy forensic personnel team up to reduce the ability to solve cases with solid evidence.

The research profession needs to catch up with policing, corrections and juvenile justice, and define a role for itself in the problem solving process. The research community needs to find ways to bring its analytical skills, its objectivity, its rigor, its independence, its ability to link theory and practice, into the messy arena of contemporary practice. Although we have made progress, the need is tremendous.

#### **Biography:**

*Anthony Schembri is a respected law enforcement and academic professional with over four decades' experience in the field. Over the years, he has drawn praise from such varied sources as New York City Mayor, President Jimmy Carter, Florida Governor Jeb Bush, and New York Governor Mario Cuomo. First appointed to the Brooklyn District Attorneys Office he advanced to Deputy Chief of the Narcotics Bureau, then to Director of Training at the District Attorneys Police Academy. Anthony Schembri has served as the city's Deputy Inspector General, investigating cases of major crime and corruption. He was appointed by the Mayor of New York as Corrections Commissioner, a position putting him in charge of 12,000 uniformed officers and 20,000 inmates at 19 separate jail facilities. Today, the Citrus County, Florida, resident serves as a Visiting Professor at Oxford and Sheffield Hallam University and named Outstanding Professor of the Year at the University of Florida.*

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## **Dr. Anna Barbaro**

*Worldwide Association of Women Forensic Experts,  
Italy*

## **Forensic Science in Crime Fighting: Caseworks Review**

Forensic Science plays a crucial role in criminal investigation. Especially DNA typing represents the most important tool for solving forensic caseworks and biological relationships since it allows the identification of a victim or it can link an individual to a crime or can connect different crimes. The presentation is an overview about the application of forensic methods, importance of proper evidence collection, DNA technologies available, role of the forensic expert. In addition several real caseworks from SIMEF laboratory will be discussed.

### **Biography:**

*Anna Barbaro has completed her European PhD in Forensic Genetics (PhD) at University of Santiago de Compostela (Spain). She got a Diploma at the School of Specialization in Applied Genetics and a Master Diploma in Psychological and Behavioral Techniques of the Criminal Investigation at the University of Rome La Sapienza (Italy). She has published more than 150 papers, including conference presentation, she is Author of 5 technical Manuals and of some chapters in other books. She serves as President of the Worldwide Association of Women Forensic Experts, she is honor member of some scientific associations, she serves as reviewer for several international scientific journals and she is Member of the Editorial Committee of some international scientific journals. Invited speaker at various national and international conferences, organizer of courses and conferences about Forensic Sciences, member of the Scientific Committee of several courses and conferences. She has been researcher at the University of Alcalà (Spain) since September 2020 to December 2022. She is actually the Director of Studio Indagini Mediche E Forensi (SIMEF) laboratory in Italy.*

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**Prof. Marian Swindell**

*S Mississippi State University, Meridian*

## **Violent Homicide Offenders, ACES, and Brain Development**

Research on adverse childhood events (ACES) indicates an association with increased risk of offending in adulthood. Physical and sexual abuse, physical neglect, and household drug and alcohol abuse have been found to be correlated with adult criminal activity, according to the United National Human Development Index (HDI). Kessler et al (2010) found in research of 51,945 adults in 21 countries that 39% experienced at least one ACE before age 18 with the most common ACE being parental death (12.5%), followed by physical abuse (8%), divorce (6.6%) then family violence (6.5%). Self-reports of sexual abuse were startling at 12.7%, compared to .3% from official records and 36.3% for emotional abuse, compared to .4% from official records. Brain scans of homicide offenders show reduced gray matter in areas of emotional processing, behavioural control, and social cognition. Decades of research show that childhood events change brain architecture and formation. These changes often don't "show up" until adulthood and through adult behaviour. A new study involving MRI scans of hundreds of brains of convicted prisoners suggest significant differences in a homicidal offender compared to violent, non-homicidal offenders. The purpose of this presentation is to explore and discuss the relationship between adverse childhood events, resulting changed in the brain, and adult homicidal offending.

### **Biography:**

*Dr. Marian Swindell is the first teaching professor holding both a PhD and MSW in Social work to be awarded tenure and achieve the rank of professor at Mississippi State University. With over 30 years in forensic social work, Dr. Swindell brings a wealth of information from sociology, social work, and forensic social work to this conference. Dr. Swindell completed her Ph.D. (2001) and MSW (1992) in Social Work from the University of Alabama. She holds a certificate in both generalist and advanced forensic social work and is certified in Forensic Evidence Testimony Retrieval. She is also a Captain in the Mississippi State Guard.*

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**Barry A. J. Fisher**

*Forensic Science Consultant, USA*

## ***Elements of Effective Crime Scene Investigation***

The purpose of this lecture is to review some of the key elements of effective crime scene investigation. We have only one chance to do it correctly, so we must make the most of our effort. Collecting evidence has two distinct parts: legal aspects and scientific ones. Both need to be followed carefully. Evidence should be collected beginning with the most fragile first. This generally means documenting the crime scene through photography and notes. This is done first before moving or collecting anything. Many jurisdictions do not allow anyone other than the coroner or medical examiner to touch the body. Crime scene searches should be done systematically and, when possible, with two crime scene investigators. Investigators should be consulted, but crime scene personnel should not be biased by the police investigator's initial opinions on the case as they may not be correct. Notions of what transpired during the commission of the crime should be fluid, and CSIs should be able to modify their conjectures as additional facts are uncovered. Crime scene investigation requires patience, attention to detail, and careful observation. These skills improve with practice.

### **Biography:**

*Barry A. J. Fisher served as crime laboratory director for the Los Angeles County Sheriff's Department until his retirement in 2009. He is a past president of the American Academy of Forensic Sciences. He served as president of the International Association of Forensic Sciences and president of the American Society of Crime Laboratory Directors. He has lectured internationally on forensic science laboratory practices, quality assurance, and related topics. Fisher has consulted for the UNODC, and the US DOJ, International Criminal Investigative Training Program (ICITAP). His BS degree is in chemistry. He also has an MS degree in Chemistry, and an M.B.A. degree.*



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**Dr. Heather Miller Coyle**

*University of New Haven, United States*

## **Forensic Phenotyping: The Use of SNPs to Identify Eye Color in Facial Reconstruction for Human Identification**

Single nucleotide polymorphisms (SNPs) are a form of genetic variation that can be useful for generating an image of an individual from DNA information. This is often referenced as forensic phenotyping that allows for the predictive biological modeling of externally visible characteristics (EVCs). As an example, Irisplex can be used to model eye color from biological material left at a crime scene such as blood, semen, saliva and human remains such as bones and teeth. Irisplex has 6 SNPs (HERC2, OCA2, SLC24A4, SLC45A2, TYR and IRF4) used for modeling eye color and we are investigating the functional practicality of using this system in a forensic laboratory using buccal swabs, baby teeth and adult wisdom teeth. The Irisplex system is highly accurate for the prediction of brown and blue eye color but less accurate for the prediction of intermediate colors such as green, grey and hazel. An evaluation of eye image, forensic SNP profile and the effects of ultra-violet (UV) exposure and sample age on DNA was made. Results indicate that the Irisplex SNPs are highly resistant to DNA degradation in UV treated buccal swab samples as well as adult and baby teeth extracted and stored more than 10 years ago. In our hands, replicate SNP assays increased accuracy in predictive modeling. The SNP methodology is simple to learn, works well with both destructive and nondestructive DNA extraction methods for teeth, and provides investigative information useful in generating forensic phenotype information for the eye colors.

### **Biography:**

*Heather Miller Coyle is an Associate Professor in the Forensic Science Department at University of New Haven, a small private University located in West Haven, CT. She obtained her B.S. in In Vitro Cell Biology from State University of New York – Plattsburgh in 1986 and her Ph.D. in Plant Biology from University of New Hampshire in 1994. She is a consultant for DNA review of forensic laboratory casework on request and is court qualified to testify in 6 states and U.S. federal court. Her research interests focus on trace biological evidence, genetics of populations (including EVCs), and DNA quality control.*

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**Dr. James Frizzell**  
McGill University, Canada

## ***The Forensics of Suicide***

In a synopsis, investigation of suicides. Methods of suicide: gunshot wounds, hanging, drug overdoses, jumping off bridges or Niagara Falls or the Golden Gate Bridge, and chemical suicide. In poverty countries, hanging suicide is economically cheaper than any other suicide, and is the most common suicide method of choice.

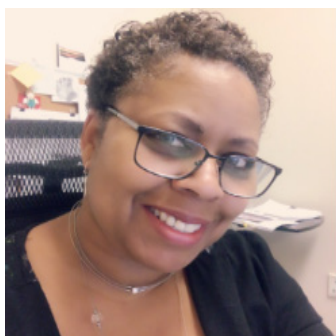
Also, forensic analysis of these types of suicides. And a look into how the victims are thinking mentally at pre-suicide.

### **Biography:**

*Dr James graduated from a one year course, McGill University, Dental Forensics Program; part on-campus training with the Surete du Quebec Forensics Team. Dr James is focusing on Child Abuse, Elderly Abuse, Human Trafficking, and Intimate Partner Violence. He also gives educational PowerPoint presentations on these topics. Also, trained at University of Tennessee, Body Farm, and Clandestine Grave Recovery. Dr Frizzell's motto is: "The Power of Observation", in the forensic's world.*



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## Dr. Leggie L. Boone

*Forensic Practitioner, Walden University, United States*

### ***Vicarious Trauma versus Wellness, when 'Every Contact Leaves a Trace' in Forensic Professions***

This presentation will describe the secondary trauma potentially experienced by the forensic professional in varying disciplines. Edmond Locard's exchange principle is reinforced in forensic application and it can also be referenced for the psychological traces that remain after encountering forensic evidence. Tools for coping, self-assessing, and preventive care will be explained. Recognition of the symptoms that may incur, develop, and evolve is necessary for peers and leadership as there is a growing effort to maintain quality of performance, transition in skill, and advancement with the growing demands, pressures, and typical morbid nature of the position.

#### **Biography:**

*Dr. Leggie Boone is a Forensic Analyst in Florida, an educator at Walden University, and president of Generation ForSciTe, a combination of Forensic Science and Technology subject area consultation services, publishing assistance, and research advising. Dr. Boone completed her PhD from the Public Policy and Administration program through Walden University. She has worked in forensic science fields since 1993, as an autopsy technician, crime scene investigator, and latent print analyst, as well as an educator in Maryland and Florida. She has also contributed to multiple publications, including Someday My Prints will Come (a forensic foundation to fingerprints with puzzles and activities), So You Want to Be a CSI, a forensic textbook, and the international Manual of Crime Scene Investigation.*

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**Dr. Stacy Ann Nwodo**

*Charisma University, United Kingdom*

## ***Investigating Occupational Fraud Through Forensic Auditing Techniques***

This paper aims to explore the application of forensic auditing techniques in uncovering occupational fraud and shedding light on the underlying factors contributing to fraudulent behavior. The research methodology employed in this study involved a comprehensive review of existing literature, including academic journals, industry reports, and case studies, to gain insights into the various forensic auditing techniques used to investigate occupational fraud. The paper examined the different types of occupational fraud, such as asset misappropriation, corruption, and financial statement fraud, and discusses the specific red flags and warning signs associated with each. The findings of this study highlighted the significance of preventive measures and proactive detection strategies to mitigate the risks of occupational fraud. It emphasized the importance of implementing robust internal controls, conducting periodic risk assessments, and fostering a strong ethical culture within organizations. Furthermore, this research investigated the integration of advanced technologies, such as data analytics, artificial intelligence, and machine learning, in forensic auditing processes. The paper concludes by emphasizing the need for a multidisciplinary approach to combating occupational fraud, which involves collaboration between forensic auditors, internal auditors, management, and other relevant stakeholders.

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## Biography:

*Dr. Stacy Ann Nwodo ( Mrs.) is a scholar-practitioner and holds a doctorate degree in Forensic Accounting and Audit from the prestigious Charisma University, Turks and Caicos Islands UK, and another PhD in the field of Security and Strategic Studies from Nasarawa State University, Nigeria. Mrs. Nwodo is a quintessential administrator, a licensed Forensic Expert and a Chartered Accountant. She is a Fellow and Global President of the International Academy of Criminology, Disaster, Emergency and Forensic Professionals,- IACDEFP-UK. Also the current Country Director of International Institute of Certified Forensic Investigation Professionals (IICFIP) Nigeria, the*

*Director Operations and Strategy (DOS) of the International Academy of Forensics (IAF), the Alumina Director of Charisma University, Turks and Caicos Island Uk, and the Lead Managing Consultant for JJTC Consulting Ltd and International College of Disaster Management and Forensic Studies (ICDMFS). She has presented research papers in international conferences and has facilitated the development of curriculum and training students and professionals in the field of Forensics across the world.*

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## Prof. Beatrice Gabriela Ioan and Dr. Bianca Hanganu

*Grigore T. Popa University of Medicine and Pharmacy of Iasi, Romania*

### ***A Forensic Perspective on Extreme Intimate Partner Physical Violence***

**Introduction:** Intimate partner violence is a broad term that includes various types of violence (i.e., physical violence, sexual violence, stalking and psychological aggression) towards a current or former romantic partner. In general, this type of violence is often encountered all over the world. However, its extreme form- homicide is a rare phenomenon and research on this topic resulted in several differences between cases where the victims are men and cases where the victims are women. As such, the aim of this paper is to present the pattern of injuries from these two perspectives.

**Material and methods.** Starting from two cases of intimate homicide- one where the victim was the husband and one where the victim was the wife, the authors performed a literature review to identify specific patterns that characterize the injuries found during autopsy on this type of victims.

**Results:** Comparing the two dead bodies, a significant difference regarding the injuries could be observed: the female body sustained many different types of injuries, recent and old, with various degrees of severity, while the male body sustained a single lethal stab wound, in the left anterior chest area. As the literature confirms, female partners die after prolonged period of violence, rather as a result of exhaustion than as a result of intentional killing from their partners. On the other side, male partners die after a sole severe injury, aimed specifically at killing. Usually, the female offender was previously a victim herself, and the decision to kill came as a desire to end the abuse.

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**Conclusion:** The analysis of the presented cases and the literature data highlight the magnitude of different forms of intimate partner physical violence that can lead to death of any of the partners and the need to take appropriate measures to prevent such extreme consequences.

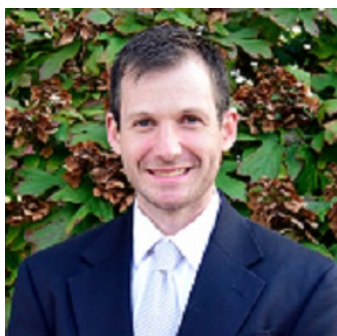
## Biography:

*Forensic Pathologist, Beatrice Gabriela Ioan is Professor of Legal Medicine and Bioethics at "Grigore T. Popa" University of Medicine and Pharmacy of Iasi, Romania, She also serves as forensic pathologist at the Institute of Legal Medicine of Iași. She graduated from the Faculty of Medicine in 1993, the Faculty of Psychology in 2002 and the Law Faculty in 2012. In 2004 she graduated from the Master Program in Bioethics at Case Western Reserve University, USA. She is a member of the Committee on Bioethics of the Council of Europe and its former Chair and a member of the International Bioethics Committee- UNESCO.*

*Bianca Hanganu is a forensic pathologist, specialist physician, and assistant professor in Forensic medicine at Grigore T Popa University of Medicine and Pharmacy of Iasi. She attended many international scientific meetings where she presented her work and has published papers in the field of forensic medicine, bioethics, and medical communication, her main areas of interest.*



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**Prof. Erik Hall**

*Saint Louis University, United States*

## ***The Rapidly Evolving World of Forensic DNA Analysis***

Forensic DNA analysis will be discussed using current terminology, techniques, and case studies. The students will encounter both new and existing terminology in the study of the forensic DNA process. In addition, the students will interact throughout the presentation with practical examples of DNA interpretations. The students will also gain knowledge of the updated techniques being used in the crime lab today to process DNA samples effectively and efficiently. In addition, the students will be exposed to new technologies which are currently being studied for use in forensic settings. All of these topics will be tied into a historical context of how quickly DNA has evolved and where it is going from here. Lastly the students will use the knowledge gained throughout the lecture to understand how DNA is applied to case studies.

### **Biography:**

*Erik Hall is the Director of the Forensic Science Program at Saint Louis University in St Louis, Missouri. Mr. Hall was the former Biology Technical Leader and a DNA analyst at the St Louis Metropolitan Police Department Crime Laboratory. At the crime laboratory, Mr. Hall was the head of the DNA crime scene response team which was tasked with aiding detectives in investigating major crime scenes using bloodstain pattern analysis and advanced DNA techniques to gain insight into the crimes. Mr. Hall has expanded his passion for forensic science as the founder and principal consultant of Hall Forensic Consulting, which specializes in assisting law enforcement, crime laboratories, and attorneys in areas such as DNA analysis, crime scene investigation, and bloodstain pattern analysis. Mr. Hall has a Master's degree in Forensic Science from the University of New Haven and a Bachelor's degree in Biochemistry from Messiah University.*

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**Associate Prof. Dr. Sheeba Armoogum**

*University of Mauritius, Mauritius*

## ***The Impact of Generative AI on Digital Forensics***

Digital forensic science has helped investigators in unravelling crimes on digital platforms to a vast extent. Although substantial pieces of evidence and DNA of the culprits can convict a criminal in a real-world crime, digital forensics relies entirely on digital footprints. However, the evidence obtained mostly identifies the users or the user account(s) associated with the digital shadow. With the escalating growth in the usage of generative Artificial Intelligence in cybercrime, the metadata acquired by the digital investigation requires further examination to identify the actual digital footprints. Cybercriminals are using generative AI to counterfeit text, images, voice and videos. This Deepfake technology and catfishing method may misdirect forensic observation and investigation, posing a significant threat to the investigation. Our research work observed that digital forensics investigation requires extensive and exhaustive methods to infer the shreds of evidence obtained.

### **Biography:**

*Dr. Sheeba Armoogum is an Associate Professor at the Department of Information and Communication Technologies (ICT) at the University of Mauritius (UoM). She holds a PhD in Cybersecurity and a South African Patent related to Cybersecurity classified under the World Intellectual Property Organisation (WIPO) Inventor Class H04L from the South African Patent Office. She has been recently awarded the Global Women Inventors & Innovators Network (GlobalWIIN) Special Recognition Award 2023. Currently, she heads the CyberSecurity & Forensics Research Group.*

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**Dr. Andrei Ceobanu**

*Stefan cel Mare University, Romania*

## ***Mental Illness: A Cause of Terrifying Crime. Case Study***

To be culpable for a criminal act, a person must be criminally responsible or legally sane. Certain mental conditions may lead to a person being acquitted from the charges. Though legislation differs between nations, psychotic conditions are the mental conditions most often leading to legal insanity. The forensic conclusion depends on evaluated symptoms of mental illness in the defendant at the time of the crime, and on how these symptoms affected the defendant's behavior and perception of reality at the time of the alleged crime. This is in some sense true regardless of legislation. The preponderance of people found not guilty by reason of insanity are schizophrenic. Schizophrenic murderers generally commit, alone, a non-premeditated murder. They usually strangle their victim in a sudden attack, whereas murderers without any pathology usually premeditate their crime. 86% of perpetrators with schizophrenia have been in a delirium at the time they committed murder, among four main themes: persecution, thought insertion, mysticism and megalomania. Schizophrenia is a chronic brain disorder that affects less than one percent of the population. When schizophrenia is active, symptoms can include delusions, hallucinations, disorganized speech, trouble with thinking and lack of motivation.

The case study presents a double murder committed by a schizophrenic perpetrator. Particularities of this case include „voices from Heaven” and a mix of affection for one of the victims and mysticism.

### **Biography:**

*Andrei Ceobanu graduated Faculty of Law and Romanian Police Academy, Bucharest, in 2010. Ever since he works as a forensic specialist, crime scene investigator, and fingerprints specialist. He developed a local forensic laboratory and manages the activity since 2017. In 2020 started teaching forensic classes as an Associate Assistant at the Faculty of Law at Stefan cel Mare University, Suceava, Romania.*

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**Dr. Aviva Twersky Glasner**

*United States*

## **Applied Crime Theory**

Criminology includes the study of all aspects of crime and law enforcement, thus legislators, social workers, probation officers, judges, etc., can become “working” criminologists.

In an applied, professional context, being able to identify and provide intervention for this small population, who despite size, are at risk for offending.

According to Wistanley, Webb and Conti-Ramsden, 2007, “There is now substantial literature demonstrating that a disproportionate number of young people who encounter youth justice services evidence unidentified language difficulties. Conversely, there is a dearth of research pertaining to criminality outcomes among those individuals with identified developmental language disorders (DLD) who have received such interventions.”

Early Intervention employs the ideals of the Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA). Early intervention primarily is designed to intervene with at risk children “For those infants and toddlers with a disability or developmental delay, intervening early can make all the difference in the world. Early intervention provides services and support to promote the best possible developmental outcomes, and it enhances the capacity of families to meet their child’s needs. For children at significant risk, early intervention can serve as a protective buffer against the multiple adverse influences that may hinder their developmental progress (found online, Making Hope A Reality: Early Intervention for Infants and Toddlers With Disabilities | ZERO TO THREE).

Discussion with center on risk factors associated with delayed language in youth.

### **Biography:**

*Dr. Aviva Twersky Glasner, Ph.D. received a Masters in Forensic Psychology and her doctorals degree in Criminal Justice. She has worked with Deaf individuals and developed her research interests around using criminological theories to examine the role that socialization may play in criminality of Deaf inmates.*

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**Dr. Dena MN Abdel Moawed**

*Zagazig University, Egypt*

## ***Forensic DNA profiling in forensic field: Challenges and recent perspectives***

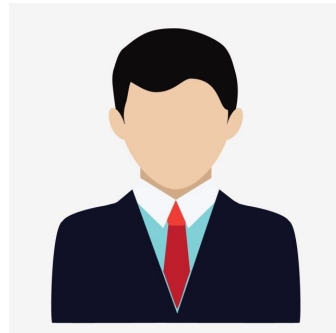
Forensic DNA profiling has become vital in solving many crimes nowadays. DNA fingerprinting (also called DNA profiling or forensic genetics) is a technique used in forensic work for the identification of individuals or samples by their unique DNA profiles. DNA profiling can be used in personal identification, paternity testing, mass disaster cases and identification of body fluids. In practice, precautions should be adopted for accurate and precise outcomes. This review highlights the challenges in using DNA profiling in forensic field and discusses important tips related to practical work and applicability referring practical experience and review of literature.

### **Biography:**

*Dena Mohamed Naguib has completed the PhD in forensic medicine and toxicology from faculty of medicine, Zagazig university, Egypt in 2018. She developed her practical experience by completing the Egyptian fellowship in forensic medicine and toxicology in 2022. She is an assistant professor of forensic medicine and toxicology in Zagazig university and senior forensic consultant in the Egyptian ministry of health. She has a long experience of 14 years in forensic field through teaching, research work, clinical practice, conferences speaker and workshop training.*



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## Dr. John Coxhead and Dr. Michael Harrison

*University of East London, UK*

### ***The need for operationalising situational crime prevention using forensic science to disrupt the organised crime business profiteering landscape***

In last year's conference, forensic capacity and capability was critiqued because its central practice was essentially identified as the retrospective investigation of crime; an inheritance from the late nineteenth century. The reason for the critique was that the continued growth of entrepreneurial Organised Crime Businesses (OCBs) have too few prevention and disruption inhibitors: in other words, it is too easy to make, and benefit from, criminal profit. Hence an argument for a new strategic paradigm shift towards proactive forensic disruption, particularly in reducing, or removing, financial anonymity. The proactivity referred to concerns essentially reframing the current financial ecosystem in order to make it far more hostile and less appealing to criminal enterprise profit exploitation. Financial and asset profit in this context refers not just to fraud (financial crime) offences but all and any crime types that generate any subsequent criminal profit: the context here is thus about the financial rewards and proceeds of crime, rather than just 'financial crime'. Felson and Cohen (1980) and Clarke (1997) have previously articulated the applied principles of situational crime prevention (SCP), whilst Rashid, et al, (2022) have applied such principles to financial crime prevention more specifically. SCP advocates three core principles, that of increasing the perceived difficulty of crime; increasing the risks; and reducing the rewards. Clarke (Ibid.) identified twenty-five operational techniques to operationalize these principles, that made it harder, riskier and less rewarding for would-be criminals. Crime profit is unknown but has been estimated to be at least \$870 billion (equivalent to 1.5% of global GDP) (United Nations Office on Drugs and Crime, 2009). The United Nations

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(UN), in turn, via its transnational organized threat assessments, propose four core pillars to tackle Serious and Organised Crime (SOC) profiteering namely better international integrated coordination; more consumer awareness raising; better equipped intelligence capability; and enhanced capacity building for States to resist OCB operations and infrastructure. The gap between the strategic intention for SCP for OCB profit is that forensic science capacity and capability has not fully harnessed all of its capacities and capabilities to support such a strategic intention in a global, synergised way. The gap requires more international contemporary co-operation across the Bank for International Settlements, an ethical trading challenge to the anonymity of crypto currencies and a form of global forensic science task force and agreed manual of proactive tactics and operating model to seriously apply SCP concepts to the OCB profit marketplace.

## Biography:

*Dr John Coxhead is a pracademic having served as a police professional for over 30 years whilst also being engaged in academic research. He has held Professorships at Keele University and Loughborough University, and is currently Professor and Director of the International PIEL Centre, at the University of East London, which collaborates with researchers in the USA, Canada, Australia, India and the West Indies. He has researched and published both overt and covert materials across a wide range of industrial high impact topics, particularly serious and organised crime. He has worked for several years in police academic collaborations, to bring academic research closer to operational policing application.*

*Dr Michael Harrison is Senior Lecturer in Finance and Fintech and Programme Leader for Economics in the Royal Docks School of Business and Law. He is currently researching non-cooperative interaction in financial markets characterised by the presence of high frequency and algorithmic traders. Further to this Michael participates in research projects which address issues of economy and society.*

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**Dr. Rakhi Khanna**

*Deputy Director Training at State Forensic Science  
Laboratory, Jaipur, Rajasthan, India*

## ***Detection and Determination of Carboxy-haemoglobin in Blood of Deceased by UV-Visible Spectrophotometry***

Many cases of deaths due to respiratory distress and lack of oxygen are reported every year. In such cases, it is required to decide the cause of death whether the death is due to formation of carboxyhaemoglobin or due to methaemoglobin formed via chemical action of a poison. One such case came to analysis where a man died at night while sleeping. The matter was suspicious as the man was of good built. AC got some spark; formation of hazardous gases in the room results in accumulation of CO and causes accidental death. As the person has the habit of taking alcohol, it was asked that whether he died of alcohol poisoning or of carbon-monoxide gas poisoning.

Different methods to determine CoHb in blood are described in the literature. In our laboratory three methods to analyze CoHb in post-mortem blood samples as Hoppe seyley's, Kunkel's and Palladium chloride tests are performed for the detection of carbon monoxide in blood. Several CoHb containing blood samples of deceased persons were analyzed. Results of all three methods were compared. In this paper we have used the UV-Visible Spectrophotometry method of detection and determination of carbon monoxide in postmortem blood samples. Many important points need to consider for this study. The variable factors as preservative have lot of impact on the readings of samples. The effect of alcohol need to discuss in this regard makes it more meaningful aspect about clinical and forensic perspective.

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## Biography:

*Dr. Rakhi Khanna is presently the Deputy Director Training at State Forensic Science Laboratory, Jaipur, Rajasthan, India. As Head of Toxicology section, Analyzed more than 10 thousand cases. Manage Analysis and Reporting of Poisoning cases, Produce Reports in time, Give evidence in court, Adoption of new innovative techniques of analysis according to specific cases. Performed Research work in many cases. President of Internal Complaint committee of Prevention, Prohibition and Redressal Act against sexual harassment of women at workplace, 2013. Has wide experience of analytical and administrative work as DDO, Building construction of new building, Development of new Laboratory and Toxicology Division at Ajmer, Attend conferences, sending papers in conferences, taking invited lectures. Working experience of 22 years as Forensic Scientist cum Toxicologist from 1998 and have experience of analyses of large number of cases. approx. 20,000 cases and 60000 exhibits are reported.*

July 19-20, 2023



**John J. Baeza**

NYPDTRUTH.COM, United States

## **The Scientific Method and Forensic Shooting Reconstruction**

Presented will be a homicide case that myself and my partner reconstructed using the scientific method-knowing that falsifiability is the cornerstone of the scientific method. There is a 20 minute video of the reconstruction using the exact words and explanation (from depositions and other testimony) of the shooter and then a reconstruction and discussion of what the forensics show in the case. There is a 20 minute video of the reconstruction included with this PowerPoint.

### **Biography:**

*Retired Detective John J. Baeza started his career in law enforcement as a New York State Correction Officer working at the Sing-Sing Correctional Facility. He was then appointed to the New York City Police Department and began his police career on patrol in Harlem's 32nd Precinct. He was then assigned to the Manhattan North Narcotics Tactical Narcotics Team and the Manhattan North Narcotics Major Case Unit where he performed undercover work for three years. John J. Baeza was promoted to the rank of Detective and was next assigned to the Manhattan Special Victims Squad where he was personally involved and/or reviewed more than 1,000 sex crimes and child abuse cases. Det. Baeza has also been temporarily assigned the Manhattan North Homicide Squad where he investigated sexual homicide cases.*

*Upon retiring from the NYPD, Detective Baeza worked for a county Sheriff's Office in Florida for three years. Detective Baeza has over 20 years of experience in law enforcement.*

*In 2011, Detective Baeza became the Director of Security for the Ron Paul 2012 Presidential campaign where he was assigned to supervise the security and safety of both the candidate and staff for 15 months.*

*In 2016, Detective Baeza became the Director of Security for the Rand Paul Presidential campaign where he was assigned to supervise the safety and security of both the candidate and staff.*

*Detective Baeza is now a police procedures expert witness at NYPDTRUTH.COM. He consults on numerous homicides, sexual assaults, police shootings, police misconduct cases, false allegations, and other criminal cases. He works with Det. Joseph Guida, NYPD (ret.).*

*The second expert on this case is Det. Joseph Guida, NYPD (ret.). Detective Guida worked his way up from Patrol to Narcotics. He was then assigned as a Detective to the 46th Precinct Domestic Violence Unit. He is an expert witness for NYPDTRUTH.COM. He will be unable to personally attend.*



July 19-20, 2023



**Ms. Ana-Maria Acosteaiei**

*Cranfield University, United Kingdom*

## ***Fingerprint visualization techniques on non-porous surfaces previously exposed to extreme temperatures***

There is common knowledge among criminals that the crime weapon can be thrown in the water or in the fire after committing a crime and that forensic evidence is in-existent after collecting it from these types of environments. Water and fire have a damaging impact, especially on non-porous surfaces, which are more vulnerable to harm. However, this does not mean that the fingerprints cannot persist. The research involved conducting controlled experiments on non-porous surfaces, simulating extreme temperature exposures, such as low and high temperatures. These surfaces are then examined using a range of established fingerprint visualization techniques such as Cyanoacrylate fuming, Small Particle Reagent, Black Powder and Vacuum Metal Deposition, including powders and alternate light sources. The findings of these studies indicate that while extreme temperature exposure may affect the overall quality and persistence of fingerprints, certain visualization techniques can still yield valuable results. The research highlights the importance of selecting appropriate visualization methods based on the surface type, the temperature variation magnitude, and the prolonged exposure to humid environments. Different surfaces may respond differently to extreme temperatures, requiring tailored approaches for optimal fingerprint detection. The results contribute to the advancement of forensic science by guiding investigators in selecting the most suitable techniques for examining fingerprints in cases involving temperature-induced surface alterations.

### **Biography:**

*Ana-Maria Acosteaiei is an international student from Romania that has completed a BSc (Hons) in Criminology and Forensic Studies at the University of Portsmouth (UK) and is now completing her MSc in Forensic Investigation at Cranfield University (UK). She has a passion for forensic science and fingerprints and aspires to work in the field of forensic science and add her knowledge to this field as a Crime Scene Investigator and a fingerprint expert.*

July 19-20, 2023



## Ms. Katie-Jane Hobbs

*Havant and South Downs College - Alton,  
United Kingdom*

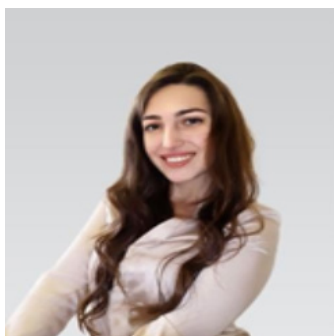
### ***A critical review of forensic profiling techniques from two different authorities***

When considering a suspect of a crime there are many possible aspects that must be considered about the individual themselves and the crime scene they have left behind. The methods used by law enforcement in order to try and create a criminal/forensic profile that ultimately can lead to the discovery of the perpetrator/s are compared in a number of cases. American Top Down FBI Profiling methodology that looks at type of offender (when compared with the crime scene and the evidence found there) and looking at other cases that perpetrator/s may have been attributed to, are compared with the British Bottom-Up Scotland Yard Forensic/GeoProfiling Methodology. This is a data driven approach that looks at the statistical data of any crimes that are similar in the area to generate data and make predictions about offender behaviour. This is normally completed alongside GeoProfiling which allows a rough offending area to be identified and predictions to be made about possible areas the offender/s could reside and/or work. By comparing these methodologies the most effective methodologies for current criminal cases will be evaluated and reviewed.

#### **Biography:**

*My name is Katie-Jane Hobbs and I am currently working as a Forensic Science and Criminology course leader and lecturer at Havant and South Downs College - Alton in the United Kingdom. I have always had a passion for forensic science ever since I was young and specialise in the Archaeological aspects of forensic science. I have obtained my degree and masters from Staffordshire University and will be starting a PhD in Criminology next September. I really enjoy the subject knowledge and looking into the reasons why criminals behave in a certain way. I have a passion for the field and work well with my colleagues and learners. My field allows me to grow and develop and work to my ability.*

July 19-20, 2023



**Ms. Meri Stojanovska**

*University of St. Cyril and Methodius, Macedonia*

## **Forensic Toxicology-Where science becomes Sherlock, unraveling clues and scripting the truth**

Forensic toxicology serves as the guardian of truth, employing rigorous scientific methods to identify, quantify and interpret the presence of toxic substances in biological samples. By meticulously analyzing blood, urine, hair and tissues, toxicologists have the power to unveil the invisible footprints left behind by drugs, poisons and chemicals. But why is forensic toxicology such a vital component in criminal investigations? The answer lies in its ability to provide crucial evidence that can make or break a case. Through meticulous analysis, toxicologists can determine if a substance played a role in a crime, identify potential perpetrators, and establish timelines of events. Whether it's uncovering the presence of illicit drugs at a crime scene or revealing the effects of a toxic substance on a victim's body, forensic toxicology is an indispensable tool for investigators and legal professionals. Moreover, forensic toxicology extends beyond the realm of crime. It is instrumental in ensuring public safety by identifying toxic substances in the environment, monitoring drug use trends, and assessing the impact of chemicals on human health. Toxicologists play a vital role in identifying and combating the illicit drug trade, enhancing workplace safety, and safeguarding communities from the perils of toxic exposure. Ultimately, forensic toxicology is an indispensable tool for untangling the complex web of chemical interactions within the human body. It empowers investigators, prosecutors, and legal professionals to piece together the evidence, substantiate or debunk claims, and ensure the fair administration of justice.

### **Biography:**

*Meri Stojanovska has completed her MPharm degree from the Faculty of Pharmacy at the University of St. Cyril and Methodius in Skopje, Republic of Macedonia. Prior to her graduation, she completed a two-month internship at Roche, where she immersed herself in valuable experiences and insights, followed by another two-month internship in Madrid, Spain focusing on forensic science. She's currently working at Veeva Systems and one of her published abstracts is "Knowledge, opinions and attitudes of the general population in the Republic of N. Macedonia about vaccines and vaccination" which was presented at the 7th Congress of Pharmacy with international participation.*





**OUR NEXT EVENT**

**9<sup>th</sup> Global Webinar on  
Forensic Science  
November 15-16, 2023**

<https://www.globalscientificguild.com/forensic-science/>