



Lab & Scene

2024 EDUCATIONAL CONFERENCE

Hello INIAI members,

We are one month away from our 30th Annual Educational Conference! Your newsletter is arriving early to inform you of everything we have planned for the three day conference this year.

Don't miss out on our activities we have planned for the week, as well as a few featured speakers you will be listening to throughout the conference.

In this volume of the newsletter, you will find a sneak peek of the weekly schedule, links to the hotel and registration forms (it is not too late to sign up!), and our social night at The Tap in Bloomington.

We hope you can join us and we cannot wait to see everyone soon!

-INIAI Board

FORENSIC SCIENCE TRIVIA

Answers will be revealed in the next issue!

T/F: Mens rea is the Latin term used to describe the act of committing a crime.

The best-known detector of bloodstains not visible to the naked eye is known as what?

After death, the human body takes on a stiffness. What is this called?

What is DNA derived only from the mother called?

Last issue's answers on page 8

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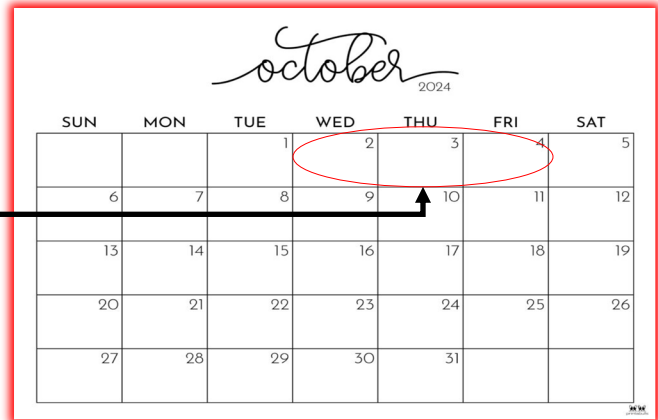
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2024 EDUCATIONAL CONFERENCE

INFORMATION

Dates

October
2nd-4th



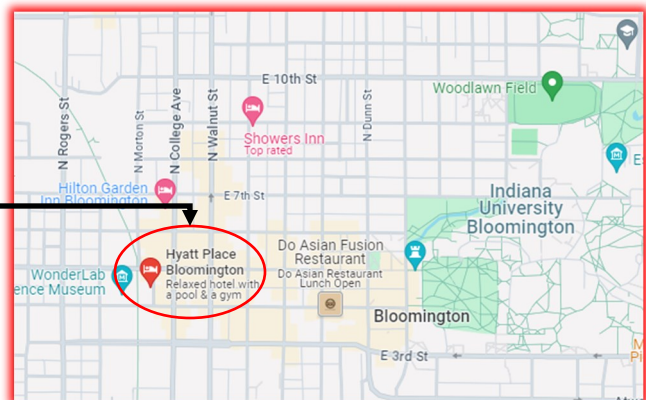
Location

Hyatt Place Bloomington
Kirkwood I & II
Conference Rooms



Hotel

Hyatt Place Bloomington
(Link Below)



Please click image
above to register for this
year's conference



Please click image
above to book hotel
rooms

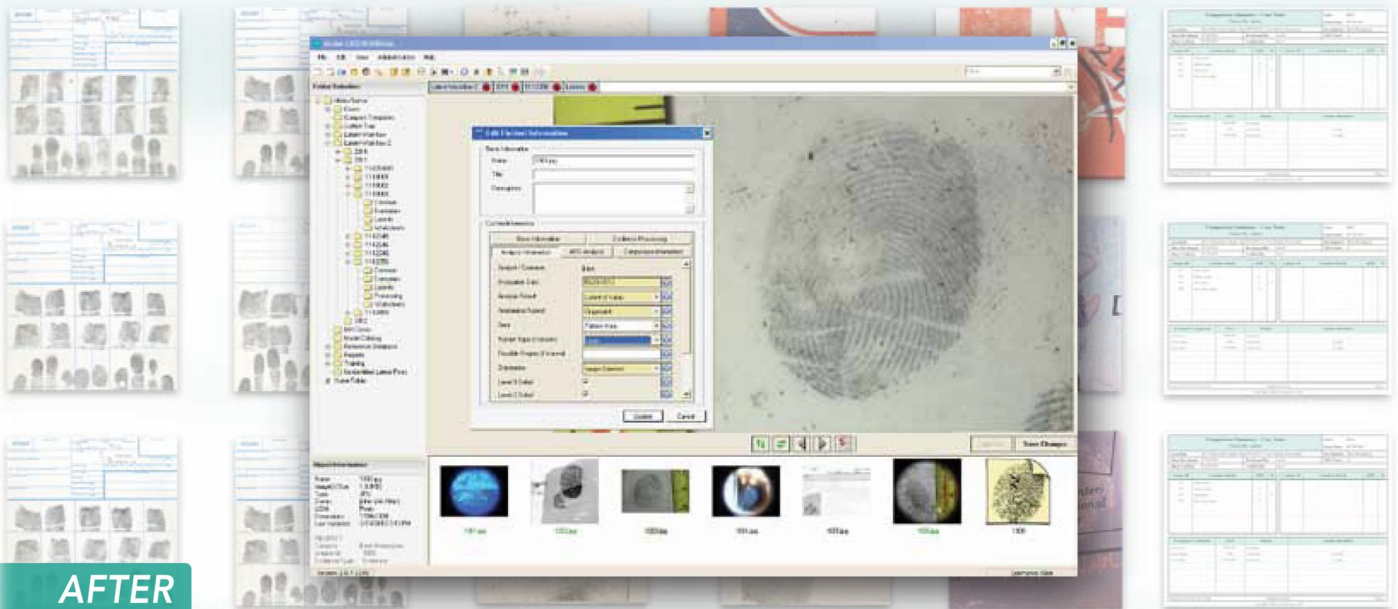


BEFORE

mideo LATENTWORKS

e-LATENT CASE MANAGEMENT

Bringing a **systematic** approach
to the **Latent Examination Process**



AFTER

Ten Print Cards
Case # 2055

Ten Print Cards
Case # 2056

Latents
Case # 2055

Latents
Case # 2056

Latents
Case # 2055

Reports
Case # 2055

CONFERENCE SCHEDULE

Wednesday, October 2nd

8:00-9:00 am:

Registration and Breakfast

9:00-9:30 am

Opening Ceremonies
Welcome Speech
Presentation of Flags by Bloomington PD Honor Guard
Opening Remarks from President, Kaitlin Hayes

9:30-11:00 am

Tom Busey

“Not All Identifications are Equal: Quantifying the Strength of Fingerprints”

11:00-12:00 pm

Boyd Baumgartner

“Is Biased Research Bias?”

12:00-1:30 pm

Lunch Break

1:30-2:30 pm

Joseph Chaney

*“The FBI Laboratory’s Evidence Response Team Assistance During
Local Investigations and Complex Crime Scenes”*

2:30-2:45 pm

Break

2:45-4:15 pm

Dave Zauner

“Sherlock Holmes”

CONFERENCE SCHEDULE

Thursday, October 3rd

8:00-12:00 pm:

Brian Adcock

“Beyond Sketching” & “Fire Investigation”

12:00-1:30 pm

Luncheon

Business Meeting

All members of INIAI are welcomed to attend

1:30-4:30 pm

John Vanderkolk

“Fracture Examination Workshop”

CONFERENCE SCHEDULE

Friday, October 4th

Continuing Education

Some helpful resources to keep updated on the forensic sciences field

8:00-10:00 am:

Amanda Reno

“Investigative Genetic Genealogy “

The American Academy of Forensic Science



10:00-10:15 am

Break

Forensic Magazine On the Scene and in the Lab



10:15-11:45 am

Erin Barnhardt

““An Ohio Innocence Project and Many Federal Public Defender for the Southern District of Ohio Capital Habeas Unit Cases”

Center For Integrity in Forensic Science





Forensic SERIES

Air Science provides forensic laboratory equipment to meet the needs of each step in the evidentiary chain, from field processing, to transport and storage, to analytical procedures in the laboratory.

- Ductless Fume Hoods
- Forensic Evidence Drying Cabinets
- Automatic Cyanoacrylate Fuming Chambers
- Mobile Forensic Evidence Benches
- DFO and Ninhydrin Fingerprint Development Chambers
- Fingerprint Powder Workstations
- Benchtop Decontamination Chambers
- Evidence Storage Cabinets
- Swab Drying Cabinets
- Mobile Evidence Transporters
- Fume Chambers

Review our product offerings at [airscience.com/forensics](https://www.airscience.com/forensics)



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NEW FORENSIC TECHNIQUE COULD HELP POLICE COMPARE CRIME SCENE DNA

Researchers from Flinders University in Australia are looking for a way to measure DNA shedding, which could ultimately have an impact on criminal investigations.

Currently, there is no reliable way to measure and collect the natural shedding of skin and other cells for individuals considered low shedders to compare with the DNA gathered from crime scenes.

However, the researchers have tested a new novel forensic technique on 100 volunteers to confirm how individuals shed varying levels of touch DNA, but do so consistently.

This could have a big impact on criminal investigations as police could reliably collect DNA from crime scenes and compare what was found to what is shed by the individual once a suspect is identified.

The robust, inexpensive, and simple test can show consistent levels of DNA shedding in individuals as a way to build a DNA profile of suspects and test the possible time spent at a crime scene.

"Our latest study also shows that males are more prolific at shedding in general, depositing more cells per square millimeter than females," Professor Adrian Linacre, from the College of Science and Engineering, said in a statement. "Also, there was no difference in the deposition of cells between right and left thumbs, so it

doesn't matter if an item is held in someone's right or left hand."

The results show individuals can vary from very low DNA shedding to very high DNA shedding.

In the study, 98 of the 100 donors gave consistent and reproducible cell number depositions. This proved that individuals will shed the same number of cells regardless of when the samples are taken.

"Depending on what type of 'shedder' a person is, confirmation of their shedder status can guide investigators as to the propensity of an individual to pass on their DNA to an item via touch contact with the hand," Linacre said. "This information can be used in a likelihood ratio to evaluate the probability of finding a person's DNA on an item."

The pursuit of this breakthrough began three years ago with an initial pilot study. The investigators indicated they will continue to study this process in an effort to fine tune the test and better utilize the techniques for real world applications.

LAST ISSUE'S ANSWERS

Hemo is the prefix referring to blood

Modern DNA analysis, known as the PCR-STR process, has been around since the 1980s

After death, blood pools at the lowest points of the body called livor mortis

Fingerprints that are not visible to the naked eye are called latent prints

ANSWER



Indiana Division of the International Association for Identification



2024 INIAI Educational Conference Photography Contest



The Indiana Division of the International Association for Identification is announcing our annual PHOTOGRAPHY CONTEST, which will be held at our educational conference in September. This is your chance to show off your photography abilities from either a “FORENSIC” case or something more “PERSONAL” (i.e. nature or family). Prizes will be awarded for the top entries in both

REQUIREMENTS:

Maximum of two submissions per person

Black and white, color, film and/or digital are all acceptable

Photo size minimum 8” x 10”, maximum 20” x 24”

Each submission should be mounted on foam or card board without borders and should include a brief description of the photo, the type of media used, and any other significant information needed to explain the picture.

WE WANT YOUR FEEDBACK

Did you enjoy the last conference?

Learn anything new?

Who was your most and least favorite speaker?

Did you like the location?

What can we do better this year?

Please give your feedback!

Email: khayes@isp.in.gov

If you have any photos from past educational conferences or outings, please email them; we would love to share on our social media pages and newsletters!

Sudoku

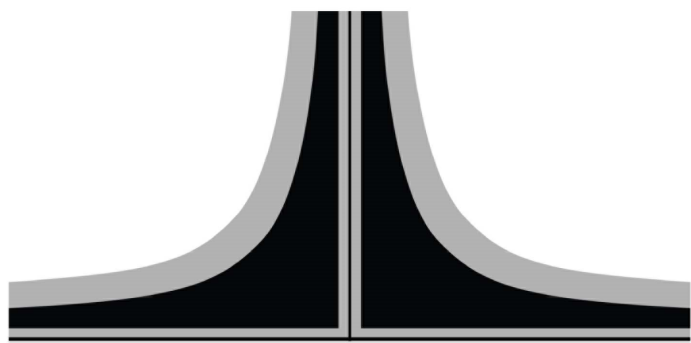
LEVEL: HARD

	8							
				3	9	8	6	
3								
5						4		
1					2	6		
			4					3
6		3		1				
8					5			
		5	2					1

	2		4				1	9
				9				
		9			1			
5			3		2	1	9	
	9	3	1					
	7	1		4	6			
	5				9		3	
		8	2					5

			3					
		9			2			8
	8		1			3	2	
				3		2		7
8	2					9		
4								3
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	7			6	3		9	
			8		7			

				8				3
3	2							
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	5	2						
	4						3	
7	1	3	6				4	
1		5	9					
					8	5		
2	8							3



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John R. Vanderkolk

Consultant in Forensic
Comparative Science

&

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SPEAKER SPOTLIGHT



Tom Busey
Indiana University

***Not all Identification Conclusions are Equal:
Quantifying the Strength of Fingerprint Decisions***

When forensic examiners make a source attribution such as Identification, what is the evidentiary weight of this conclusion? Suppose that 5 examiners complete a forensic comparison. Three say Identification and two say Inconclusive. Why are there differences among examiners? Are the two Inconclusive examiners poorly trained or not brave enough to commit? Or are the three Identification examiners overly confident in their abilities? We might want to see the impression and decide for ourselves. But maybe the differences among examiners is telling us something important: This comparison might not carry much evidentiary weight. If we default to the majority and report this as an Identification, we might overstate the strength of the evidence. In this talk I will discuss a project we have developed that converts the distribution of human responses into a measure of the strength of the evidence. I will explain how in some cases we believe that current reporting overstates the strength of the evidence by more than 5 orders of magnitude. We discuss proposed solutions to this problem.

Brian Adcock
Lieutenant/Arson Investigator/Licensed Part-107 Drone Pilot

Fire Investigation

Fatal fire scene processing is a crucial component of forensic investigation, aimed at determining the origin of the fire and the circumstances surrounding the fatalities. This intricate process necessitates a multidisciplinary approach involving fire investigators, crime scene investigators (CSIs), forensic pathologists, and law enforcement personnel. Essential aspects of the investigation include identifying the fire's origin and cause, analyzing burn patterns, and collecting physical evidence that may indicate foul play, such as the presence of ignitable liquids.

Amanda Reno
Investigative Genetic Genealogist for the Columbus, OH Division of Police

Investigative Genetic Genealogy

“Kelly Ann was our beauty and our love. She sparkled with laughter and her blooming spirit shined amidst the thorns. Her light has been – and always will be – deeply missed. One moment we had this dazzling, mischievous little 8-year-old little girl. Then suddenly all we had left were memories, photographs that will never age, a calendar marking a dreadful new “holiday,” a grave, and pieces of Kelly’s life stored in a box.” – The Family of Kelly Ann Prosser. This presentation will review the case and how a lead developed through Investigative Genetic Genealogy (IGG) offered a conclusion after 38 years and paving the way for this new technology to be implemented on a larger scale at Columbus Division of Police.

AUTHORITIES IDENTIFY 1991 MURDER SUSPECT AS PERSON WHO DIED IN 2008 FBI SHOOTOUT

Officials have identified a suspect from a 1991 San Jose murder as the man killed in a 2008 shootout with the FBI in Ohio.

The Santa Clara County District Attorney's Office Cold Case Unit was able to identify Gerardo Aguilar, also known as Gerardo Mulato, as the individual responsible for the gang murder of a 14-year-old.

Aguilar was ultimately killed in a shootout with the FBI in Ohio after being investigated for drug trafficking.

"It's never too late to identify a killer," District Attorney Jeff Rosen said. "People may forget. But victims' families and my Office do not."

Aguilar, 15 at the time, allegedly shot and killed 14-year-old Raymond Ojeda on September 28, 1991, after a gang argument in the Foxdale Loop section of San Jose.

"A juvenile arrest warrant was issued for Aguilar, but local authorities were not able to locate him. The suspect disappeared," the district attorney's office said at the time.

Following the murder, authorities issued an arrest for Aguilar but were unable to locate him.

However, officials had a breakthrough earlier this year when they began to suspect Mulato and Aguilar were the same person. John Cary, the lead investigator for this case, said he was following a hunch in checking on the Ohio case to see if it connects to the San Jose murder.

After doing a background check on Mulato, investigators identified his sister living in Mexico as having the last name Mulato.

Further search showed a physical resemblance between the teenager responsible for the San Jose murder and the person who died in the shootout in Ohio. Using DNA analysis, they confirmed that they were the same person.

"DNA analysis confirmed they were the same person. Aguilar had been living in Ohio under the (last) name Mulato for several years," the DA's office wrote. Aguilar moved to Forest Park, Ohio at some point after the murder and began using the name Mulato.

However, trouble continued to follow him. In 2004, he was arrested in connection with an assault with a baseball bat in Springfield.

While investigating him for drug trafficking, the FBI placed a tracking device on Mulato's car. After discovering the FBI agents and the tracking device, Mulato believed he was being followed by car thieves and began to engage in the gunfight that ultimately led to his death.

According to Rosen, the Cold Case Unit has had a lot of success in recent years and has solved 20 homicides and 15 sexual assaults since 2018.



UPCOMING TRAINING OPPORTUNITIES

[Collection & Preserving Entomology Evidence at a Death Scene](#) —Tritech Forensics

WEBINAR | Nov 7th, 2024

Attendees of this 2-hour webinar should gain an understanding of how to promote common standards of practice in forensic entomology, and what to do if they encounter forensically significant entomology at a death scene.

[Crime Scene Photography](#) —TriTech Forensics

Painesville, OH | December 9th, 2024

This 40-hour Crime Scene Photography course teaches the techniques needed to successfully document evidence and scenes in a professional manner. The course begins with instruction of basic photographic techniques such as the mechanics of exposure, depth-of-field, and motion control. Camera handling and operation are stressed in all areas to include camera controls and how they work, electronic noise causes and controls, and much more. This course also includes instruction on basic electronic flash operation and techniques.

[Social Media Fingerprints and Other Inadvertently Photographed Ridge Detail](#) —RS&A

WEBINAR | ANYTIME

Knowing how to adjust perspective, how to appropriately calibrate the fingerprint to scale, and how to enhance these types of images to properly visualize the ridge detail gives examiners important skills for their toolkit to assist in new methods of investigations. Furthermore, being able to advise investigators of the value of this type of evidence will be possible when examiners have the knowledge of what is achievable.

[Examination of Simultaneous Impression](#)—RS&A

Northville, MI | Dec 4th-6th, 2024

This advanced course is designed for examiners who want to learn more about the use of simultaneous impressions in the identification process.

Webinars offered by Evolve Forensics are approved by the IAI for Latent Print Certification and Recertification continuing education hours.

Click on the photograph below to view more training opportunities.



Find more training opportunities at the websites below:

<https://www.theiai.org/training.php>

<https://www.tritechtraining.com/upcoming-courses.html>

<http://www.iniai.org/training.html>

HUMAN REMAINS IDENTIFIED AFTER NEARLY 35 YEARS



Human remains found in 1993 near I-65 (what is now Otte Golf Course) in Greenwood have been positively identified following months of DNA and genealogy work. This case had remained cold with no leads until our Coroner's Office revisited it using updated DNA and genealogy procedures.

Significant progress was made with the help of Greenwood PD, The University of Indianapolis, and the Othram Forensic DNA Testing Laboratory. After months of emails, phone calls, and assistance from other law enforcement agencies across the U.S. and Canada, we were able to locate potential family members who received DNA kits funded by Indianapolis based Audiochuck / Crime Junkie Podcast Founder and CEO Ashley Flowers and distributed by Othram.

The field was narrowed, and positive DNA results and genealogy tracking located immediate family members who reported losing track of their family member in the late 1980s. After nearly six months of work the Coroners Office has identified the remains as Michael Benjamin Davis. This is Johnson County's only known unidentified set of remains. Although this case has long been suspected of having been a homicide, the cause and manner of death have been ruled undetermined unless more information is discovered. The family will be coming to Indiana to claim the remains of Michael who was born in Richland County, South Carolina.

He would have been in his mid-20s at the time of his death.
Thank you to my Chief Deputy Derek Wilson and Administrative Deputy Coroner Valerie Castro for taking the lead on this case and giving Michael's family closure. - Michael D Pruitt, Johnson County Coroner

INIAI

The Indiana Division of the IAI was chartered July 29, 1994. This organization was established as a not-for-profit organization to associate persons working in the fields of forensic investigation, examination, and identification for the following purposes:

- ◇ To encourage communication and the sharing of ideas and information among the forensic science and criminal justice communities.
- ◇ To keep members advised of the latest developments in the forensic and identification sciences.
- ◇ To encourage research into new methods and techniques of forensic investigation, examination and identification.
- ◇ To encourage professionalism and high standards in the fields of forensic investigation, examination and identification.

MEMBERSHIP APPLICATIONS AND RENEWALS

If there is anyone you may know who would be interested in joining the Indiana Division of the IAI, all membership information can be found [here](#).

New members will need to fill out an application and send a payment of \$25 in the form of check, money order, or through the Division's [PayPal](#).

Please send any and all questions regarding membership, applications, and renewals to MWebb@isp.in.gov.

To submit physical applications, renewals, or payments please send them to:

Mallory Webb
19411 Hwy 41 North
Evansville, IN 47725

Read the [bylaws](#).

Read the [constitution](#).

INIAI

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Kaitlin Hayes
khayes@isp.in.gov

