

THE IDENTIFIER



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Why is Valor Technical Cleaning Right for South Carolina?

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LETTER FROM THE PRESIDENT

Dear SCIAI Members,

I am honored to serve as your President for the South Carolina Division of the International Association for Identification for 2024/2025. I hope all of you enjoyed the annual training conference held in Rock Hill, SC May 6-9th, 2024. I was happy to present two of the cases I worked in South Florida.

I started my career in law enforcement in South Florida where I worked with the city of Fort Lauderdale and the town of Jupiter police departments. I spent almost 39 years serving in the field and have enjoyed every minute of it. The good, the bad, and the ugly. I entered law enforcement at a time when there were no computers or fancy equipment and I have watched the field grow and advance in technology and credibility. I will always be grateful to what this field has taught me and helped to develop the person I am today.

I would like to thank all of the conference staff members for their hard work and dedication to putting on a great training opportunity. If you missed this year's training conference, I hope you will plan to attend the 2025 training conference to be held in the Greenville/Greer area. If you have an interesting case to present, reach out to me, or any of the board members, to request to be a presenter.

I want to take the time to thank all the vendors who attended and donated to the training conference and for all they do for the forensic community. Without the vendors, it would be hard to do the job we do. They provide forensic investigators with the latest equipment and research to do the processing of evidence and back up that processing in court.

To those who are the backbone of the SCIAI, I say thank you. Without your dedication to serve the SCIAI would not be what it is today. I look forward to adding to the SCIAI with my training and knowledge and will be available to all who need me.

Thank you for electing me as President. I hope to do all of you proud with my service.

Teresa Bryant
Teresab450@gmail.com



MEET THE OFFICERS

- **President—Teresa Bryant**
- **Vice President—Jane Powell**
- **Treasurer—James Kearney**
- **Secretary—Chris Gary**
- **Historian—Brittany Brown**

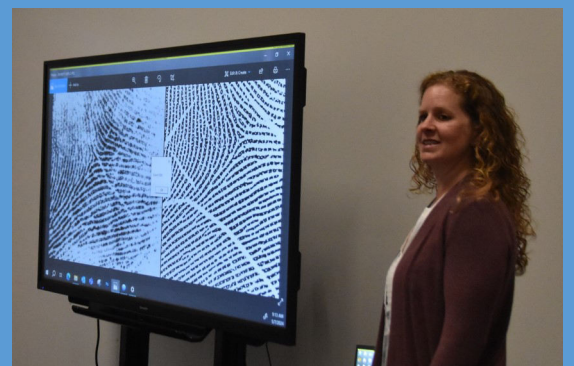


2024 SCIAI Conference Recap

Thanks to all who attended our Spring Conference in Rock Hill, SC! Former President Jodi Hunt organized the conference at the Rock Hill Sports and Event Center. In total, there were over 40 attendees representing agencies from across the state and 16 vendors who provided about \$7500 in sponsorships. There were 9 speakers who provided quality and useful information through various presentation topics and workshops!



A big round of applause goes out to all who were involved in the success of the Rock Hill Conference!



INTERVIEW WITH AN OFFICER

Getting To Know Your 2024-2025 Elected Officers

During each issue of *The Identifier*, we will take time to introduce some of the newly elected SCIAI officers in order to introduce our members to get their elected officers better. For this issue, we interviewed the SCIAI's new president, Teresa Bryant, who shared with us various topics that have made a positive impact and influenced her throughout her career.



MEET Teresa Bryant, President

What do you enjoy most about your job? I enjoyed working the big cases because that's what we are trained for. I understand that the minor crimes, such as burglaries or recovered vehicles, are part of the job, but a complicated death investigation where you can utilize your knowledge and talents really make the job interesting.

Tell us about your work experience. How long have you been a practitioner in the field and what is your current position? I have been in law enforcement since 1987 when I began working as a Communications Specialist at Fort Lauderdale Police Department. After 11.5 years, the city decided to disband the communications unit and I was transferred to Patrol as a Police Service Aide. As a PSA, I worked road patrol, community policing, traffic homicide, and the marine unit. I even assisted crime scene with death investigations when time permitted. In 2004, I was hired by Jupiter Police Department as a PSA but in 2005 I was promoted to Crime Scene after the town had a homicide occur on Christmas night. There was no crime scene unit but because I had multiple classes for crime scene, they asked me to work the scene. I remained a CSI until September 2023 when I retired.

What improvements would you like to see in the forensic community? I'd like to see that those in forensics get the recognition they deserve and not have the glory go all to the detectives working the case. A lot of times, it's the work the forensic employee does that solves the case. I'd also like to see more attention given to mental health. Not only in forensics but throughout law enforcement. Too many times, we lose good people to suicide due to the continued exposure to critical incidents. And last, I'd like to see the departments provide more funds to the forensic unit to obtain the needed equipment to process evidence.

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INTERVIEW WITH AN OFFICER

(Continued)

What are you passionate about or what hobbies do you enjoy (this does not have to be work-related!)? My passions have changed over the years, as I'm sure most people experience. Presently, I love to crochet and paint rocks. I love traveling and photography. I like to go hiking and go on random adventures.

What is something you have learned in your work experience that you can pass along to others? In my nearly 39 years of law enforcement employment, I have had the opportunity to train many people. I was a training officer in communications, service aide, and CSI. I also taught forensic science at a university for 5 years. I have passed on a lot of my knowledge to the young fledglings and many of my students are working in the field today. The one thing I focused on in training was the ability to write good police reports. The importance of grammar and spelling and documenting the scenes in writing and diagramming are essential in bringing justice to the victims.

What is your vision or (what goals do you have) for the SCIAI? My vision for the SCIAI is to see more members get involved, the membership grow, and bring new ideas to make training a main focus in the organization. I know SCIAI is not regionalized, but I'd like to see regions created (even virtually) and have free training for various parts of the state that would be open to all those interested in CSI. I'd like to see more interaction with local colleges and universities to students working on forensic science to promote the SCIAI and get those students involved.

Is there a training course or certification you have completed that you feel has furthered your career? I believe all the courses I have attended (and that is a lot) have made some type of impact on my career. I believe you are never too old to learn and every class you attend you should learn something new or renew your interest in a topic.

Who or what has had a major impact on your career? Two mentors that I have looked up to in my career are King Brown (West Palm Beach PD Supervisor of Forensics) and Dawn Watkins (retired). Dawn Watkins tutored me in latent print identification and King Brown taught me many tricks of the trade. Also Harold Ruslander (retired) and Danny Formosa (retired). These people have supported me throughout my career and my terms of office with the FDIAl.

Why did you decide to pursue a position in the field of forensic science? I have always been interested in forensics and death investigations. When I entered law enforcement in 1987, I was always visiting the criminal investigations unit when I was on break and the detectives in that unit showed me lots of techniques and went over cases they had worked. I could spend hours listening to them and the stories they told. I truly enjoyed my time in law enforcement and sometimes I miss the excitement, but I am learning to enjoy retirement as well.

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INTERVIEW WITH AN OFFICER

(Continued)

What has been a challenge you faced professionally, and how did you respond to it? There are many challenges in this field. I have been very blessed to work with good people and good departments. I found some of the most challenging times were in court. I didn't have to go to trial very often and mostly I was in and out without any issues, but once in a while, there is that one defense attorney that wants to test your knowledge. I was always as prepared as possible to deal with this and just remained pleasant as possible. I always address the jury when I spoke and talked to them on their level. Not everyone understands the complexity of forensics so I talked to jurors as if I was teaching them something.

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SCIAI ANNOUNCEMENTS

- **ALL MEMBERS** are encouraged to review the SCIAI constitution and by-laws posted on the website located under the News tab.
- Renewal for memberships must be submitted by Monday July 1st 2024 for the upcoming years' membership.
- Submissions for case study features and Member Spotlights are open. We want to highlight our members and interesting or unique cases that you have personally been involved with. If you would like to see yourself, a coworker, or one of your cases featured, please contact the Editor at bribrown@greenvillecounty.org
- Have a topic you would like to see covered or have an article you would like to submit for future issues of *The Identifier*? Submit your proposals to the Editor at bribrown@greenvillecounty.org — guest authors are welcome!
- If you've taken a newsletter appropriate forensic related photograph that you would like to see featured in an upcoming issue of The Identifier — Please contact the Editor at bribrown@greenvillecounty.org!

Was that fingerprint left during a crime? A new test may answer that

By Avery Elizabeth Hurt

January 11, 2023

If you read mystery stories, you know the value of fingerprints at a crime scene. Evidence suggests that no two people have the exact same fingerprints. That's why experts often use them to identify a suspect. But showing the print had not been left at the time of the crime might help exonerate a suspect. Until now, forensic teams haven't been able to tell a print's age. A new chemistry technique may solve that problem.



Fingerprints — those whorls and swirls left by the ridges on your fingers — consist mostly of oily chemicals secreted by the skin, notes Young Jin Lee. He's a chemist at Iowa State University in Ames. Through reactions with the oxygen in air, these chemicals can change. By knowing the rate at which some chemicals degrade or disappear, scientists should be able to calculate how old a print is. Lee and graduate student Andrew E. Paulson, also at Iowa State, teamed up to see if they could do that.

The pair started with ozone. This molecule, made of three oxygen atoms bound together, can be found indoors and out. These chemists knew that even small traces of the gas will react with some of the chemicals typically found in a print. Those reactions can create a soup of new compounds, says Lee, causing some print constituents to morph over time. Others won't change.

He and Paulson sought to identify how the share of certain key marker chemicals change relative to those that don't degrade quickly. By measuring the relative abundance of these chemicals in a print, they could make a molecular time-stamp showing the fingerprint's age.

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Was that fingerprint left during a crime?

A new test may answer that *(Continued)*

Aging those oily residues

The chemists asked a volunteer to leave 14 thumbprints on a series of glass slides. Then they left those slides open to the air for a week. Each day, the researchers analyzed the prints using mass spectrometry. To precisely identify a chemical, this technique identifies atoms and molecules based on their mass. The researchers also measured how the share of each identified chemical in a print changed from one day to the next.

For a closer look at the data, they used a tool called a Kendrick mass defect (KMD) plot. This graphing technique adjusts the scale of the mass-spectrometry findings. Explains Paulson, “It clusters things together so they’re easier for us to interpret.” The method, he says, was borrowed from chemists in the oil and gas industry.

Those chemists use it to analyze the hydrocarbons that make up a particular sample of crude oil. The KMD plot clearly showed changes in the fingerprints’ oily compounds over the span of seven days. One was squalene, a hydrocarbon produced in the skin. Another was triacylglycerol. That’s a lipid (fatty material) made by the body and found on our skin. The amount of both in a fingerprint dropped in just two to three days. A different compound found on the skin increased during the week: a fatty acid known as decanoic acid.

By comparing the amounts of such compounds, Paulson and Lee think they may be able to determine the age of a print that had been left within the past two weeks.

Their new data could help home in on which chemical changes matter — and which don’t. Then they’d build them into a computer model. Such a computer program would look to match the patterns and amounts of chemicals found in a print against some database. That database would show how quickly the starting chemicals tend to decay or increase when exposed to the oxygen in air. In this way, forensic teams should be able to assign an age to recent prints.

Paulson and Lee shared their early findings in September 2022 in *ACS Central Science*.

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Was that fingerprint left during a crime?

A new test may answer that *(Continued)*

Not yet ready for prime time

The new technique shows promise, says Karl Desil. This forensic scientist is a fingerprint expert with the Virginia Department of Forensic Science in Richmond. A print's oily residues have helped solve plenty of crimes. Knowing the age of a print would be very helpful, he says. For example, investigators could rule out suspects if the prints on a murder weapon came from before a crime occurred. That's not possible today.

But for now, he says, the Iowa State technique has a long way to go before it will be useful at a crime scene. For one, he says, it needs testing under real-life conditions, not just in the lab. He'd also like to see it tested on prints left on different kinds of surfaces or exposed to various types of weather.

Paulson and Lee don't argue with that. The method also can't yet show exactly when the prints were left. They're still refining their technique to help resolve that. One day, they hope, it can help forensic teams establish whether prints are linked to when a crime occurred — not just where it took place.

Journal: A.E. Paulson and Y.J. Lee. Novel ambient oxidation trends in fingerprint aging discovered by Kendrick mass defect analysis. *ACS Central Science*. Vol. 8, September 28, 2022, p. 1328. doi: 10.1021/acscentsci.2c00408.

Hurt, A. E. (2023, February 6). *Was that fingerprint left during a crime? A new test may answer that*. Science News Explores. <https://www.snexplores.org/article/fingerprint-age-crime-forensics-chemistry>



FUN with FORENSICS

Frequently in the field of Forensics, we, as a whole, deal with a variety of difficult and demanding scenes, tough scenarios, and are often placed in stressful situations. This panel is designed for you to have the opportunity take a quick mental break, refresh your mind, and also to have a little fun. 😊

ADDAGRAM

This puzzle functions exactly like an anagram with an added step: In addition to being scrambled, each word below is missing the same letter. Discover the missing letter, then unscramble the words. When you do, you'll reveal four words related to detection.

- CONFERS
- HEFT
- AXE MEN
- STATE GIVEN

CRIME STINKS

Change just one letter on each line to go from the top word to the bottom word. Do not change the order of the letters. You must have a common English word at each step.

- CRIME
- _____
- _____
- _____
- STINK

MOTEL HIDEOUT

A thief hides out in one of the 45 motel rooms listed in the chart below. The motel's in-house detective received a sheet of four clues, signed "The Logical Thief." Using these clues, the detective found the room number within 15 minutes—but by that time, the thief had fled. Can you find the thief's motel room quicker?

1. It is not divisible by 5.
2. It is divisible by 3.
3. The first digit is larger than the second.
4. The second digit is greater than 2.

51	52	53	54	55	56	57	58	59
41	42	43	44	45	46	47	48	49
31	32	33	34	35	36	37	38	39
21	22	23	24	25	26	27	28	29
11	12	13	14	15	16	17	18	19

Above puzzles taken from: "Brain Games: Forensic Puzzles" by Publications International Ltd.



**The decoded phrase from the Spring Issue
If you can't hide the crime scene,
then pretend to be a victim**



UPCOMING TRAINING/EVENTS

Sept 9th-11th, 2024, [Recovery of Human Remains](#)
\$650 – Suncoast Forensics, Clover Police Department, Clover, SC

Oct 17th, 2024, Live Webinar: [Fingerprint Testimony–The Difficult Questions](#)
\$140 registration–Uncover Forensics

Feb 17th-21st, 2025, [Bloodstain Pattern Analysis](#)
\$745–Bevel, Gardner, & Associates Inc., Greenville County Sheriff's Office, Taylors, SC

May 6th-8th, 2025, SCIAI Spring Conference, Greer, SC

If you have upcoming training that you would like advertised in the newsletter, contact the Editor with course information and details!

EMPLOYMENT OPPORTUNITIES

Greenville County: [Criminalist - Firearms Laboratory](#)

City of Charleston: [Crime Scene Investigator](#)



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