The Official Newsletter of the SCIAI

THE IDENTIFIER

HTTP://WWW.SCIAI.ORG/ | FALL ISSUE | VOLUME 4 ISSUE 3

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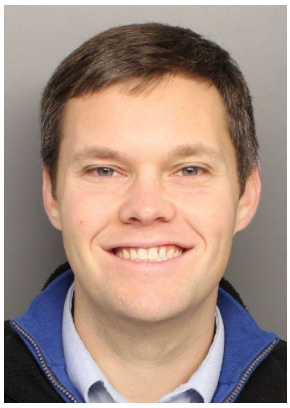
SCIAI Fall Issue

LETTER FROM OUR PRESIDENT

I would like to thank everyone for their support as I serve as this year's President of the SCIAI. I am excited for the opportunity to continue growing this great organization and continue on the momentum that has been put into place by the previous Officers. The outgoing Officers served an extended term due to COVID-19, and we are thankful for their service. A special thank you goes out to outgoing President Trish Odom for all of her hard work on the 2021 Educational Conference as well as Nada Kerstein for serving for four years as Treasurer. All of the current Officers are looking forward to picking up where they left off and organizing exciting training opportunities for our members.

Our thrice postponed Educational Conference finally kicked off in Columbia and it was very successful with 53 attendees and 10 speakers. We received some great lectures from our speakers and networked over axe throwing at lunch. It was wonderful to gather together as an association after being unable to do so during to the pandemic. Of course, we couldn't have had this level of offering if it wasn't for the outpouring of support from our vendors. We are continually thankful for their support.



As the world continues to open up we are looking forward to more in-person training classes this year as well as next year's conference. The current Officers are currently working on planning these events. If you have an idea or a topic that you would like covered then please reach out to me or one of the other officers. Remember – the purpose of the SCIAI is to serve the training needs of our members.

Until next time, I wish you well as we enter the holiday season. I hope it is filled with lasting memories, health, and some relaxation with family.

Chris Gary

SCIAI Store

Check us out!

https://sciai.creator-spring.com/listing/sciai-gear?

2021 Conference

2021-2022 SCIAI Officers

Christopher Gary – President

Chris Wilson – 1st Vice President

Anita Moore – 2nd Vice President

Kristen Polis – Secretary / State Representative

Harold Bouknight – Sergeant at Arms

Tyler Bucholtz – Treasurer

Jeffery Scott – Vendor Representative

Jodi Hunt – Editor

Historian – Luke Spratt

'Fingerprints Are Not a Science, Defense Attorney Explains during Murder Trial Closing Statement'

Posted by Sydney KaplanDate: July 31, 2021

OAKLAND, CA – Defense attorney Todd Bequette began his closing statement here in Alameda County Superior Court Thursday with a matter-of-fact statement to the jury: "Fingerprints are not a science."

His client, David Martin, is charged with murder with two other co-defendants in an ongoing trial following a violent home invasion in 2018.

A latent fingerprint, determined to have been Martin's, was found on a roll of duct tape and is the only piece of evidence tying the defendant to the scene. The print is composed of traces of sweat or oil, and not ordinarily visible. *(continued on page 6)*

IN THE NEWS

'Fingerprints Are Not a Science, Defense Attorney Explains...

Bequette insisted that latent fingerprints, on average, comprise 22 percent of a complete fingerprint, suggesting to the jury that there is reasonable doubt as to his client's guilt. Bequette hammered home his point that fingerprint technology is not an exact science because it provides no concrete source of measurement of the length of ridges or the depths of the fingerprint valleys.

Earlier in the trial, Rebecca Coutant, a certified latent print examiner at Oakland Police Department, took the stand, and Bequette referenced Coutant's testimony often. Coutant explained that fingerprint technology uses "objective criteria to [draw] subjective [conclusions]." She also testified that experts may disagree on both fingerprint matches and the number of similarity points required to draw the conclusion of a fingerprint match.

One specific point Bequette noted was about bias. According to Bequette, some scholars criticize fingerprint examiners who gain information about the case because of possible bias. Coutant testified to having been briefed on the case by a police officer before making the fingerprint identification. This accusation of bias was brought further when Bequette discussed the Automated Fingerprint Identification System (AFIS) used to identify Martin. According to Bequette, AFIS works "like Google" by providing similar prints to a set print. Allegedly, when the latent print was put into this search engine, 20 fingerprints with similarities appeared, he said to the jury. However, the only one of these fingerprints that was investigated by Coutant belonged to Martin, the defense counsel noted, speculating that one of the other 19 prints could have been a closer match to the latent print if they were examined. *(continued on page 7)*

IN THE NEWS

'Fingerprints Are Not a Science, Defense Attorney Explains...

There had also been confusion between Coutant and other fingerprint analysts over who prepared the latent fingerprints they had been analyzing.

Bequette emphasized again and again the fact that Martin's alleged fingerprint was the only piece of evidence tying him to the crime scene. Allegedly, when Martin was being questioned by police, they had informed him that one of his fingerprints was found on the scene and Martin maintained his previous story of denial. When Martin was asked to explain then how his print was found on a roll of duct tape at the scene of the crime, Bequette said Martin exclaimed "I can't explain it."

For the vast remainder of his closing statement, Bequette focused on the lack of additional evidence, including no information of any previous relationship between Martin and the victim, unlike other defendants in this case. Additionally, there were no known eyewitnesses who could place Martin at the scene of the crime. A final point of focus was the lack of any phone evidence, including location reports and communication between Martin and the other defendants. Bequette maintained the lack of any evidence found on Martin's phone was one of the most important aspects of missing evidence.

"Given the technology with cell phones, you would expect that there would be some communication or location or surveillance video," Bequette speculated. Bequette concluded by saying "the evidence cannot [provide] evidence [beyond a reasonable doubt] that he was there. It just can't." https://www.davisvanguard.org/2021/07/fingerprints-are-not-a-science-defense-attorney-explains-during-murder-trial-closing-statement/

IN THE NEWS

Illuminating invisible bloody fingerprints with a fluorescent polymer

Date: April 21, 2021

Source: American Chemical Society

Careful criminals usually clean a scene, wiping away visible blood and fingerprints. However, prints made with trace amounts of blood, invisible to the naked eye, could remain. Dyes can detect these hidden prints, but the dyes don't work well on certain surfaces. Now, researchers reporting in ACS Applied Materials & Interfaces have developed a fluorescent polymer that binds to blood in a fingerprint -- without damaging any DNA also on the surface -- to create high-contrast images.

Fingerprints are critical pieces of forensic evidence because their whorls, loops and arches are unique to each person, and these patterns don't change as people age. When violent crimes are committed, a culprit's fingerprints inked in blood can be hard to see, especially if they tried to clean the scene. So, scientists usually use dyes to reveal this type of evidence, but some of them require complex techniques to develop the images, and busy backgrounds can complicate the analysis. In addition, some textured surfaces, such as wood, pose challenges for an identification. Fluorescent compounds can enhance the contrast between fingerprints and the surface on which they are deposited. However, to get a good and stable image, these molecules need to form strong bonds with molecules in the blood. So, Li-Juan Fan, Rongliang Ma and colleagues wanted to find a simple way to bind a fluorescent polymer to blood proteins so that they could detect clear fingerprints on many different surfaces.

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IN THE NEWS

Illuminating invisible bloody fingerprints with a fluorescent polymer

The researchers modified a yellow-green fluorescent polymer they had previously developed by adding a second amino group, which allowed stable bonds to form between the polymer and blood serum albumin proteins. They dissolved the polymer and absorbed it into a cotton pad, which was placed on top of prints made with chicken blood on various surfaces, such as aluminum foil, multicolored plastic and painted wood. After a few minutes, they peeled off the pad, and then let it air-dry. All of the surfaces showed high contrast between the blood and background under blue-violet light and revealed details, including ridge endings, short ridges, whorls and sweat pores. These intricate patterns were distinguishable when the researchers contaminated the prints with mold and dust, and they lasted for at least 600 days in storage. In another set of experiments, a piece of human DNA remained intact after being mixed with the polymer, suggesting that any genetic material found after processing a print could still be analyzed to further identify a suspect, the researchers say.

https://www.sciencedaily.com/releases/2021/04/210421124525.htm

Online Training—Fall Dates

Delta Forensics Virtual Academy. This new learning platform is a vast improvement on the current learning platform used for the Training programs.

https://delta-forensics.thinkific.com/

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