# THE IDENTIFIER



https://www.dreamstime.com/photos-images/crime-scene-halloween.html

#### **INSIDE THIS ISSUE**

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- Happy National Forensic Science Week
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- Upcoming Training/Job Opportunities



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# ANDROID LATENT FINGERPRINT DETECTION TABLET

THE WORLD'S FIRST & ONLY 45.9 MP
8K LATENT FINGERPRINT DETECTION TABLET





45.9 MP UV (UVC - UVB - UVA) / VIS / IR Multispectral Camera with 8K Resolution

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on 500-1000-1500 DPI &

System



Real Time RAW Imaging & RAW Video Recording



Smart Buton Function Powered by Artificial Intelligence



Filter & Light System with Fully Automatic & Manual Control via Software



Android Operating System and Advanced Case Management System



The world's first 4K live imaging in its field



8,5" Inc Full HD+ High Quality Touch Screen

1:1

1:1 Ratio Imaging: Converting and exporting fingerprint images on their actual size



Innovation for Forensics



# SuperSpectral

The World's First & Only Portable 48 MP Superspectral Imaging System for Fingerprints, Body Fluids, GSR, Blood **Body Examinations and More!** 



#### WORLD LEADER IN MOBILE FORENSIC IMAGING SYSTEMS







Raw Photography















**Imaging** Distance

Video Resolution

**Smart Button Function** 



## **Evidence Management Solutions** for a Complete Chain of Custody

- Track & Manage Digital & Physical Evidence
- Locate & Retrieve Evidence
- Streamline Evidence Processing
- Process Digital Images

- Grant Secure Access to Digital Evidence
- Connect to Other Systems
- Comply With Accreditation Requirements

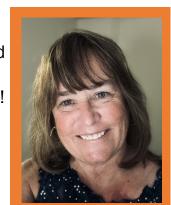


### LETTER FROM THE PRESIDENT

Hello Members!

I hope all of you have had a great Summer and are looking forward to the Fall season. I am enjoying seeing the changes in season now that I am living outside of Florida for the first time in 60 years!

I hope all of you are ready for the upcoming training SCIAI is offering free to all members in Columbia. This training will focus on crime scene diagramming and report writing. To some, it may be a very basic class and others may find it a new learning



experience but above all, everyone should be able to take away some information to help you in the future. Keep an eye out for future training in latent and ten prints as well.

The plans are in progress for the 2025 SCIAI conference to be held in Greer, SC. Keep watching for more information on this and I hope to see a lot of attendees. Remember, the conferences are very important to our community as it provides us with updated training on the latest tools of the trade and forensic developments. It also allows us to network with other agencies and make contacts for any assistance with future investigations.

The last thing I'd like to ask is for all of our members to go out and promote the organization. Having a membership in a forensic organization is a great way to build your resume, CV, and reputation. If you are a college instructor, encourage your students to become members. This will help them make connections for future employment.

I want to wish all of you a healthy and happy Labor Day and thank you for all of your hard work in this field. We don't always get the credit we deserve but I know how important you are to any case!

If you have any questions or comments you'd like to share please reach out to me at teresab450@gmail.com.

Teresa Bryant

**SCIAI President** 

### MEET THE OFFICERS

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



Please contact Teresa at teresab450@gmail.com if interested in filling the position!

### NOT CROSS CRIME SCENE DO NOT CROSS CRIME SCENE D

### **SCIAI ANNOUNCEMENTS**

- ALL MEMBERS are encouraged to review the SCIAI constitution and by-laws posted on the website located under the News tab.
- If you have not renewed your membership yet, be sure to do so before the fall workshop.
- 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!



# THE SOUTH CAROLINA DIVISION OF THE IAI

#### 2024 FALL CRIME SCENE SEMINAR !



- Teresa Bryant, Jupiter PD (Retired)-

SC Criminal Justice Academy 5400 Broad River Rd., Columbia, SC, 29212 October 3, 2024 @8:30am

Join our SCIAI President Teresa as she goes over crime scene documentation techniques like diagraming, measurements, and report writing in a hybrid classroom and hands-on class. A mock scene will be used for a hands-on opportunity to practice your documentation skills

WORKSHOPS <u>FREE</u> FOR MEMBERS!- REGISTRATION OPEN NOW

\$75 REGISTRATION FEE FOR NON-SCIAI MEMBERS PAYABLE AT WWW.SCIAI.ORG

GOOGLE FORM REGISTRATION LINK:

**CLICK HERE TO REGISTER** 

NOT A MEMBER? JOIN TODAY AT SCIAI.ORG

**Published: June 2021** 

# Forensic Photography: Concepts and Applications for better crime scene examination

#### **Abstract**

Forensic Photography is the fair and accurate recording of a scene or object, of legal interest, by a camera. "Photography is a valuable tool for recording the crime scene and explaining the evidence to others". The objective of forensic photography is to record an event, a scene, or an object correctly. It is always better to go for a good digital camera with an interchangeable lens. The physical size and quality of the image sensor along with the corresponding optics play a much bigger role in image quality than megapixels alone. Basic idea about exposure, depth of field and framing a shot is important to take a proper photograph. Photography is an important tool in most forensic examinations. Equipping all medico-legal units with necessary photographic equipment and providing a trained photographer is a very important action regarding the development of the field.

#### Introduction

It will not be farfetched to say that digital photography has revolutionized photography and brought it mainstream into the hands of common people. With mobile phones, cheap cameras and computers in homes, capturing memories is not a difficult task anymore. However forensic photography is not just an exercise of taking beautiful photos – it is an exercise which reproduces various forensically and legally important facts as permanent record and piece of evidence. When a photograph of a forged document was presented and allowed as courtroom evidence in 1851 photography as a forensic tool was born and soon became a boon to cases of identification and scene analysis.[1] Since then, it has grown from strength to strength and now become an essential part of forensic investigation. A photograph will be admissible in courts only if it is a 'fair and accurate' representation of the subject in question. [2] For more than 150 years since forensic photography was considered as evidence in the court of law photographers have had many difficulties in explaining various facts about photographs including technical aspects. However, no one can produce an image 'as seen' by someone else. No one will be able to accurately document an item, scene or a moment someone else saw it.[3] Due to the lack of knowledge, very often photography of crime scenes and other forensic events is done in a wrong manner and ultimate results are rendered useless. Forensic Photography is the fair and accurate recording of a scene or object, of legal interest, by a camera. The photographic documentation of crime scenes is the cornerstone of any criminal investigation.[4] Photography is a valuable tool for recording the crime scene and explaining the evidence to others.[5] "The objectives of crime scene photography are to record the conditions of the scene before alteration, record the location and position of evidence items collected, document the point of view of principals and potential witnesses, and document spatial relationships of pertinent items.".[6] (Continued on Page 9)

**Published: June 2021** 

# Forensic Photography: Concepts and Applications for better crime scene examination

#### **Discussion**

For most people photography is a hobby. Therefore, the outcome of their exercise depends on their expectations. Most people are happy to find a photo that has captured a general description of the object or the event they observed. However, this is far from the truth about forensic photography. The objective of forensic photography is to record an event, a Medico-Legal Journal of Sri Lanka, 2021 June; Volume 9, Issue 1 Concept paper 48 scene or an object correctly which is an almost exact reproduction of the facts noticed at a scene that could be used for referral evaluative and evidential purposes. Photographs are statements of what he or she saw at a scene.[7] Therefore, each medicolegal unit should have essential basic photography equipment and a person with the necessary technical skills and knowledge. To achieve the said objectives one should have the following requirements fulfilled. 1. Essential photographic equipment 2. Basic knowledge about cameras and their use. 3. Use of photography software 4. Principles of the crime scene and forensic photography 5. Knowledge about the expectation of forensic photography Essential photographic equipment: As film cameras are now considered outdated no one would even think about purchasing a film camera nowadays but if available using an SLR film camera is still acceptable. However digital cameras have many advantages over a film cameras. To mention a few when using a digital camera, one could instantly preview the photo just taken and therefore will be able to decide on taking a second shot or a shot from a different angle. Changing a memory card is far easier than loading a film roll into a camera. The capacity of the memory card is usually very high compared to the film roll. Generally, the maximum number of shots that could be taken using a film roll is 36 but a 16GB high speed card could store close to 1000 photos in fine jpeg format. On the other hand, the memory card can be reused many times. Choosing a camera to achieve this task could be a difficult task. Generally, the decision depends on various facts including the budget you can spend. It is always better to go for a Digital Single Lens Reflex (DSLR) camera with an interchangeable lens. The number of megapixels in a camera is a misnomer about the quality of the photograph taken with a particular camera. A camera with a higher number of pixels generally gives a good photo than a camera with less number of pixels but within a certain range this change cannot be appreciated by a naked eye. Do not judge a camera solely on its megapixel count. The physical size and quality of the image sensor along with the corresponding optics play a much bigger role in image quality than megapixels alone, so do not be misled that megapixels will produce better photographs. The following camera equipment would fulfil the basic need for a forensic photography unit.[4] DSLR Full-frame camera body - 1, DSLR body (preferably with a swirling viewfinder) - 1, Lenses; short zoom lens 18-55mm or similar range, long zoom 70 - 300 mm or simi-

(Continued on Page 10

**Published: June 2021** 

# Forensic Photography: Concepts and Applications for better crime scene examination

#### **Discussion (continued)**

For most people photography is a hobby. Therefore, the outcome of their exercise depends on their expectations. Most people are happy to find a photo that has captured a general description of the object or the event they observed. However, this is far from the truth about forensic photography. The objective of forensic photography is to record an event, a Medico-Legal Journal of Sri Lanka, 2021 June; Volume 9, Issue 1 Concept paper 48 scene or an object correctly which is an almost exact reproduction of the facts noticed at a scene that could be used for referral evaluative and evidential purposes. Photographs are statements of what he or she saw at a scene.[7] Therefore, each medicolegal unit should have essential basic photography equipment and a person with the necessary technical skills and knowledge. To achieve the said objectives one should have the following requirements fulfilled. 1. Essential photographic equipment 2. Basic knowledge about cameras and their use. 3. Use of photography software 4. Principles of the crime scene and forensic photography 5. Knowledge about the expectation of forensic photography Essential photographic equipment: As film cameras are now considered outdated no one would even think about purchasing a film camera nowadays but if available using an SLR film camera is still acceptable. However digital cameras have many advantages over a film cameras. To mention a few when using a digital camera, one could instantly preview the photo just taken and therefore will be able to decide on taking a second shot or a shot from a different angle. Changing a memory card is far easier than loading a film roll into a camera. The capacity of the memory card is usually very high compared to the film roll. Generally, the maximum number of shots that could be taken using a film roll is 36 but a 16GB high speed card could store close to 1000 photos in fine jpeg format. On the other hand, the memory card can be reused many times. Choosing a camera to achieve this task could be a difficult task. Generally, the decision depends on various facts including the budget you can spend. It is always better to go for a Digital Single Lens Reflex (DSLR) camera with an interchangeable lens. The number of megapixels in a camera is a misnomer about the quality of the photograph taken with a particular camera. A camera with a higher number of pixels generally gives a good photo than a camera with less number of pixels but within a certain range this change cannot be appreciated by a naked eye. Do not judge a camera solely on its megapixel count. The physical size and quality of the image sensor along with the corresponding optics play a much bigger role in image quality than megapixels alone, so do not be misled that megapixels will produce better photographs. The following camera equipment would fulfil the basic need for a forensic photography unit.[4]

(Continued on Page 11)

**Published: June 2021** 

# Forensic Photography: Concepts and Applications for better crime scene examination

#### **Discussion (continued)**

DSLR Full-frame camera body - 1, DSLR body (preferably with a swirling viewfinder) - 1, Lenses; short zoom lens 18-55mm or similar range, long zoom 70 – 300 mm or similar range, wide-angle (add a hyphen between these 2) lens (e.g., 14mm.), macro 105 mm, Dedicated Through The Lens metering (TTL) flashgun, Tripod/monopod (preferably both), Dry box or cabinet. Basic knowledge about cameras and their use: A basic idea about exposure, depth of field and framing a shot is important to take a proper photograph. Use of this knowledge on photography basics should be correctly done to take a properly focused, properly exposed and correctly framed photo so that it would depict the correct representation of what was there in the crime scene. Exposure bracketing is another method that could be used to achieve properly exposed photos.[8] A flashgun should be used appropriately to record the scene properly. Most people do not consider using the flash in daylight shooting but it might come in handy when capturing backlit objects or items found in dark shaded areas. There is no prescribed length of time it takes to photographically document a crime scene. The time spent depends on the extent and complexity of the crime and crime scene. Maintaining a log of the photographs taken is important if they are to be used as evidence in the court of law. [9] Crime scene photography should not be focused only on the obvious. The purpose of taking photographs is to document the crime scene and to show whether it is connected to the crime. As one of the primary documentation components, a systematic, organized visual record of an undisturbed crime scene must be achieved. [10] The photographer should be able to assess the conditions at the scene and use proper techniques in taking photographs. Another area that attention should be paid is when you use the macro lenses for macrophotography. The technique and settings are different from normal photography. Depth of field is important in close-up photography because unless otherwise proper aperture setting is used photograph might turn up to be not clear enough.[11] Photograph the scene as is before putting in scales and placards. [12] When taking photographs of evidence found a basic set of photographs should be taken of each item, with and without scale and colour code, general photographs showing it relationship to the scene and one shot of the location of evidence after the item has been moved or retrieved. Using the correct perspective and angle is also important in recording the scene properly. Using photography software like adobe Photoshop or light room is accepted if you retained the original photograph as the proof and record all changes done chronologically. However, software usage in Medico-Legal Journal of Sri Lanka, 2021 June: Volume 9, Issue 1 Concept paper 49 forensic photography mainly should be limited to enhancing technology like correcting the exposure, lighting etc. Deleting items of objects from the original photo or adding on of objects is not acceptable.

(Continued on Page 12)

**Published: June 2021** 

## Forensic Photography: Concepts and Applications for better crime scene examination

#### **Discussion (continued)**

It is always better to record the photos in both in RAW format (A RAW image (also known as a "digital negative") is an image file that contains unprocessed or minimally processed data) and JPEG (JPEG stands for Joint Photographic Experts Group) format where RAW format could be easily used for editing purposes. There are few more basic principles that should be adhered to. If you are using a film camera a new film role should be used to capture each new scene. In digital photography, the memory card could be reused but before photographing each new scene card should be formatted so there will not be any photographs unrelated to the scene remaining in the card.

#### Conclusion

Photography is an important tool in most forensic examinations. Therefore, developing standard operating procedures for forensic photography and equipping all medico-legal units with necessary photographic equipment and providing a trained photographer is a very important action regarding the development of the field. It is not difficult to master or at least to be somewhat competent with. If the unit does not have a designated photographer knowing the basics of photography and crime scene photography might become handy at a time most unexpected and important.



Mendis NDNA. Forensic Photography: Concepts and Applications for better crime scene examination. Medico-Legal Journal of Sri Lanka, 2021;9(1):47-49. DOI: http://doi.org/10.4038/mljsl.v9i1.7429

# Happy National Forensic Science Week

(September 15th-21st, 2024)

This week recognizes the contribution that

Forensic Science makes to the criminal justice system. This is the 12th annual recognition of National Forensic Science Week. It is an opportunity to celebrate academic programs, forensic professionals, and scientific research in the various forensic disciplines.

Thank you to all members of the SCIAI. Forensic Science in South Carolina would not be successful without you and your hard work that you do day to day in each of your agencies!



### FUN with ForEnsics

### In honor of National Forensic Science Week, this issue will feature forensic science related trivia!

D. Sanskrit

1.	The terr	n "forensic"	derives	from	which	language?
----	----------	--------------	---------	------	-------	-----------

A. Latin B. Greek C. Hebrew

2. Dactyloscopy refers to the procedure of using which characteristic as a means of identification?

A. Voice Prints B. Fingerprints C. Ear Prints D. Striations on a bullet

3. The discovery of the structure of DNA in 1953 was a great leap forward for forensic science. Who were awarded the Nobel Prize for this?

A. Watson and Crick B. Crick and Turner C. Crick and Holmes D. Hume and Watson

4. Forensic science and Forensics have become interchangeable terms, forensic now interpreted to mean what?

A. Related to jurors B. Related to logistics C. Related to Crime D. Related to law

5. In ballistics, some theories have been used that did not hold up years later. One discarded theory was used in the initial investigation and findings of which event?

6. Where in America was the first body farm located?

A. JFK Assassination

A. Los Angeles, CA

B. Richmond, VA C. New York, NY D. Knoxville, TN

C. Death of Al Capone

D. Son of Sam Murders

7. Which state in the US had the highest altitude body farm in the world when it opened its first one?

B. Murders of Bonnie and Clyde

A. Colorado B. Alaska C. Utah D. Hawaii

8. Which animal is said to have fingerprint virtually indistinguishable from those of human beings?

A. Panda B. Raccoon C. Koala D. Lemur

9. Which of the following observations would be a sure sign that a person is deceased?

A. Decapitation B. Lack of movement C. Lack of heartbeat D. Lack of breathing

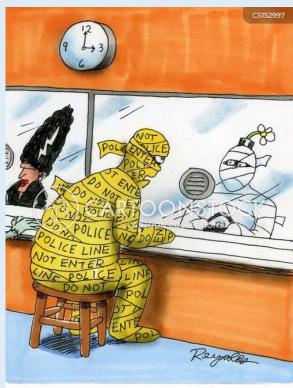
10. Which of the following is NOT a presumptive test for blood?

A. Phenolphthalein B. Acid Phosphatase C. Luminol D. O-Tol

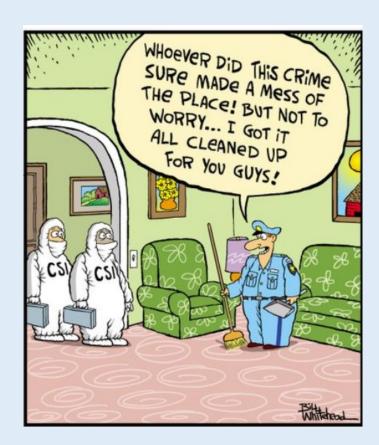


### FUN with ForEnsics

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. ©



"The cops gave me a bad wrap."





**Motel Hideout: 54** 

Crime Stinks: Crime -> Clime -> Cline -> Slink -> Stink

Addagram: Missing "I": Forensics, Thief, Examine, Investigate





### **UPCOMING TRAINING/EVENTS**

Sept 9th-11th, 2024, <u>Recovery of Human Remains</u> \$650 — Suncoast Forensics, Clover Police Department, Clover, SC

Oct 17th, 2024, Live Webinar: <u>Fingerprint Testimony—The Difficult Questions</u>
Uncover Forensics—\$140 registration

Oct 20th-22nd, 2024, <u>Recovery of Human Remains</u> \$650 — Suncoast Forensics, Myrtle Beach Police Department, Myrtle Beach, SC

Oct 28th—Nov 1st, 2024, Fundamentals of Criminal Investigation: Crime Scene to Courtroom

\$500—Godfrey-Wilson & Associates, Lexington Police Department, Lexington, SC

Feb 17th-21st, 2025, <u>Bloodstain Pattern Analysis I</u> \$745—Bevel, Gardner & Associates Inc, Greenville County Sheriff's Office, Taylors, SC

May 5th-8th, 2025, <u>SCIAI Spring Conference</u>

3 day, Greer Events Center, 301 E. Poinsett St, Greer, SC

\$100 for members, \$200 for non-members

### **EMPLOYMENT OPPORTUNITIES**

**Greenville County: Firearms Laboratory** 

**Greenville County: <u>Administrative Specialist II</u>** 



Editor: Brittany Brown bribrown@greenvillecounty.org