



Forensic Technology  
CENTER OF EXCELLENCE

A program of the National Institute of Justice

# HHRRC POSTER SESSION PROGRAM

The Humanitarian and Human Rights Resource Center (HHRRC) seeks to use the assets of the American Academy of Forensic Sciences (AAFS) to promote the application of contemporary forensic science and forensic medicine principles to investigate global humanitarian and human rights injustices. The HHRRC is funded in part by the National Institute of Justice's (NIJ's) Forensic Technology Center of Excellence (FTCOE).

HHRRC projects are selected for support by the International Advisory Council of the HHRRC and can include research applied to humanitarian and human rights projects, training materials and equipment, and advising or subject matter expertise. The HHRRC also aims to support and encourage AAFS members to increase their engagement in applying contemporary forensic science to global humanitarian and human rights matters.

In addition to direct support for forensic studies, the HHRRC provides access to publications and educational materials to disseminate knowledge on the issues and applications of contemporary forensic science and forensic medicine principles. The HHRRC assists projects by making laboratory and analysis equipment available to teams and laboratories and by connecting them with vendors and other resources. To strengthen the available pool of advisors, the HHRRC established a database of volunteers willing to assist and make a difference in global humanitarian and human rights issues.

Scan the QR code or visit this link to view the HHRRC Brochure: [ForensicCOE.org/private/63da84d3cdc04](https://ForensicCOE.org/private/63da84d3cdc04)

**Moderator:**

Dawnie Steadman, PhD  
HHRRC Chair  
Director, Forensic Anthropology Center  
University of Tennessee  
Knoxville, TN

**Co-Moderator:**

Jeri Roper-Miller, PhD  
AAFS Past President (2021–2022)  
FTCOE Project Director  
RTI International  
Research Triangle Park, NC



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## ACCURACIES OF ARTEC® SPIDER®, EINSCAN® PRO 2X, NEXTENGINE®, AND QLONE® (FOR IPHONE®) PHOTOGRAMMETRY FOR 3D BONE DATA ANALYSIS IN FORENSIC ANTHROPOLOGY

Tom D. Beresford\*, Carl N. Stephan, Tiina Manne, Kelvin Henderson, and Chris Glen |  
The University of Queensland

**Abstract:** Three-dimensional (3D) scanners are commonly used out of the box without bench tests to establish data acquisition accuracies. This is not ideal for skeletal analysis methods requiring precision in the courtroom. This study reports errors for eight human bones scanned on four 3D capture devices compared with a metrology-grade Solutionix reference scanner.

## AFRICAN SOCIETY FOR FORENSIC MEDICINE

Uwom Eze\* | African Society for Forensic Medicine & University College Hospital, Ibadan

Robert Ngude | University of Witwatersrand

Johansen Oduor | Ministry of Health

Gilbert Ngongang | University of Yaoundé I

**Abstract:** This project was originally designed to build the capacity of 40 forensic practitioners from Africa divided into four geographic zones. It aimed to train concerned practitioners on human rights within the legal framework in the treatment of detainees across African prisons and detention centers and to provide access to a forensic medical evaluation in line with the Istanbul Protocol when detainees have allegedly been tortured.

## CAPACITY BUILDING FOR RWANDAN MEDICAL OFFICERS IN THE FIELD OF FORENSIC PATHOLOGY BASIC SKILLS

Herbert Mushumba\* | Rwanda Forensic Laboratory

Joseph Kalisa | University of Rwanda

**Abstract:** This project aimed to build capacity for 50 selected non-specialist medical officers working in district hospitals by equipping them with basic forensic pathology skills to determine causes of death, ensure that families know the fates of their loved ones in all death situations, and contribute to vital health statistics in the country.

### HHRRC GRANTS PROPOSAL SUBMISSION INFORMATION

The AAFS HHRRC seeks to use the assets of AAFS to promote the application of contemporary forensic science and forensic medicine principles to global humanitarian or human rights projects requiring special forensic assistance.



Scan the QR code or visit the link below to view more information:

[www.AAFS.org/research-insights-type-hhrrc/hhrrc-grants-proposal-submission-information](http://www.AAFS.org/research-insights-type-hhrrc/hhrrc-grants-proposal-submission-information)

## CONSTRUCTION OF A NATIONAL HYDROGEN AND OXYGEN ISOSCAPE FOR COLOMBIA AS A BASELINE FOR THE IDENTIFICATION OF REGION OF ORIGIN OF UNIDENTIFIED VICTIMS OF THE INTERNAL ARMED CONFLICT

Daniela Orozco Ramelli\*, Ana Carolina Guatame García, and Erica Andrea Castaño Osorio | EQUITAS  
Tiffany B. Saul | Middle Tennessee State University

Jonathan Drake | American Association for the Advancement of Science

**Abstract:** This poster presents the challenges and lessons learned during the construction of a national hydrogen and oxygen isotope reference map for Colombia based on tap water samples (i.e., drinking water). This reference map will guide both the identification of unidentified persons within the country and contribute to global reference databases.

## DISASTER VICTIM IDENTIFICATION AND MIGRATION – THE VALUE OF USING SCARIFICATION AND TRIBAL MARKINGS AS SECONDARY IDENTIFIERS IN MASS FATALITY INCIDENTS

Tumisang Thabo Mbedzi\* | International Committee of the Red Cross & Bournemouth University

Stephen Fonseca | International Committee of the Red Cross

Sally Reynolds | Bournemouth University

**Abstract:** When any mass fatality incident occurs, disaster victim identification must be carried out; all the legal and humanitarian responsibility falls upon the forensic community regardless of the cause. Identification will always be of prime importance in life (ante-mortem) and after death (post-mortem), both for judicial reasons and for providing closure for family members. Scarification and tribal markings have prevailed in Africa. They have immense potential to aid identification in mass disasters and establish the origin of migrants who arrive at mortuaries often labeled as unknown. This research aims to create a comprehensive scarification database and create a digital application that can be used by professionals within forensic institutions.

### TOP 3 HHRRC WEBINARS:

1

#### A Review of Forensic Anthropology in Mexico

Presenters: Roxana Enriquez Farias, Juan Joel Hernández Olvera, & Diana Bustos Rios

2

#### Isotopes Aiding Identification of Undocumented Border Crosser Human Remains

Presenter: Saskia Ammer

3

#### Analysis & Conservation of Human Remains in Cambodia

Presenter: Julie Fleischman

Scan the QR code or visit the link below to view all HHRRC webinars:

[ForensicCOE.org/humanitarian-and-human-rights-resource-center-webinar-series/](http://ForensicCOE.org/humanitarian-and-human-rights-resource-center-webinar-series/)



## FINGERPRINT SCAN OF THE DEAD: REAL-TIME IDENTIFICATION DURING SEARCH AND RECOVERY PHASE IN LARGE SCALE DISASTER

Lay See Khoo\*, Poh Soon Lai, Muhammad Syafiq Zamasry, Ahmad Hafizam Hasmi, Mohamad Azaini Ibrahim, and Mohd Shah Mahmood |

The National Institute of Forensic Medicine Malaysia, Hospital Kuala Lumpur

**Abstract:** This study demonstrates the possibility of using a portable biometric reader to capture and match fingerprints for deceased individuals in out-of-mortuary settings. This study demonstrates that rapid victim identification through real-time fingerprint comparison at disaster scenes is a possible means of humanitarian forensic action in the disaster victim identification process.

## HUMANITARIAN FORENSIC ACTION AT THE INTERNATIONAL COMMITTEE OF THE RED CROSS FROM 2003 TO 2023

Pierre Guyomarc'h\*, D. Abboud, O. Finegan, S. Fonseca, D. J. Jimenez, C. Kainazarova, U. Krenzer, M. M. Morcillo Mendez, A. Page, B. Sablouh, J. Taylor, and M. Vennemeyer |

International Committee of the Red Cross

**Abstract:** This poster will present the evolution of Humanitarian Forensic Action from its introduction into the International Committee of the Red Cross in 2003 until 2023, highlighting some key responses that are indicative of the broad range of activities and showcasing the growth in staff and expertise.

## INSECT SUCCESSION PATTERNS DURING DECOMPOSITION IN SOUTHERN NIGERIA

Izuchukwu S. Etoniru\*, Desiré Brits, and Maryna Steyn | University of the Witwatersrand

Jolandie Myburgh | University of Pretoria

**Abstract:** There are no long-term studies on insect succession patterns in Nigeria. This study used 20 domestic pigs to observe decomposition and insect succession patterns in the wet and dry seasons over 14 months. The housefly was the first to arrive—within 5 minutes of depositing the pigs—closely followed by blowflies.



### LISTEN TO THE HHRRC JUST SCIENCE PODCAST EPISODES

Just Science is a podcast for justice professionals and anyone interested in learning more about forensic science, innovative technology, current research, and actionable strategies to improve the criminal justice system.

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## NAVIGATING STAKEHOLDER RELATIONSHIPS IN HUMANITARIAN FORENSIC WORK: LESSONS LEARNED FROM GEORGIA

Kelly Kamnikar\* | University of New Mexico

Meri Gonashvili, Tea Takniashvili, Nino Tavartkiladze, and Buba Chachkiani | Georgian Association of Forensic Anthropology

Micayla Spiros and Rhian Dunn | Michigan State University

Nicholas Herrmann, Petra Banks, Keegan Beane, Krysten Cruz, and Ivanna Robledo | Texas State University

Amber Plemons | University of Kentucky

**Abstract:** Mass graves related to Soviet-era terror were discovered near Batumi, Georgia, and excavated by clergy members of the Batumi Eparchy without consultation of professional archaeologists or anthropologists. Intending to adhere to international scientific standards, Dr. Meri Gonashvili, President of the Georgian Association of Forensic Anthropology, with support from U.S. colleagues, co-founded the Georgian Recovery, Documentation, and Identification Project (GRDIP), a completely volunteer effort. This effort aims to excavate and analyze the remains following international standards, communicate the scientific process, consult the living descendant communities, repatriate positively identified remains, and advocate for family members' wishes. The goals of GRDIP often conflict with other stakeholder desires and wishes, stalling and halting progress. This poster will discuss some of the impacts of stakeholder relationships on the GRDIP and how the presenters incorporated different tools to maintain transparency with the scientific process, provide credibility for scientific experts, and most importantly, communicate with family members about the project's progress.

## RECOVERY AND ANALYSIS OF HUMAN REMAINS DERIVED FROM THE 1921 TULSA RACE MASSACRE: CURRENT FINDINGS

Phoebe R. Stubblefield\* | University of Florida

**Abstract:** In October 2022, the Physical Investigation Committee of the 1921 Tulsa Race Massacre Investigation re-opened its previous excavations in the Tulsa Oaklawn Cemetery. An HHRRC award supported the travel of Dr. Phoebe R. Stubblefield; one of her graduate students; and colleagues Sydney Garcia, Arion Mayes, and Aaron Young to perform the osteological examinations for the individuals exhumed during this field season. The researchers' excavation targeted individuals buried in plain caskets because those specifications were indicated in newspaper accounts of the victim burials. Eight individuals were exhumed during the field season, one having observable cranial gunshot trauma. Based on information contained in death certificate data, the researchers sought to locate 15 gunshot victims and four burn victims. Osteological analyses of the 2022 individuals are ongoing. The demographics and idiosyncratic features of these individuals, in combination with those recovered in 2021, indicate further search of the cemetery is required.

## SCENE DOCUMENTATION FOR HUMAN RIGHTS INVESTIGATORS: HOW BETTER DOCUMENTATION HELPS EXPERTS ANSWER YOUR QUESTIONS

Tal Simmons\* | Virginia Commonwealth University

**Abstract:** Non-governmental organization human rights investigators often face situations in potentially hostile environments and, in contrast to law enforcement, cannot secure their scenes. A workshop was developed to teach scene documentation in accordance with best practices, including an emphasis on minimum standards for preserving critical scene information through photography, sketches, and contemporaneous notes.

## UNDERSTANDING THE EFFECTS OF REHYDRATION ON THE RATE OF DECOMPOSITION

Claire Du Toit\* and Desiré Brits | University of the Witwatersrand

Jolandie Myburgh | University of Pretoria

**Abstract:** This study assessed the effects of rehydration on the rate of decomposition by artificially rehydrating pig carcasses in advanced stages of decomposition measured by recording the Total Body Score. Post-mortem rehydration of the carcasses showed insect re-colonization, re-initiation, and increase of decomposition whereas the control carcasses stalled once stasis was reached.

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