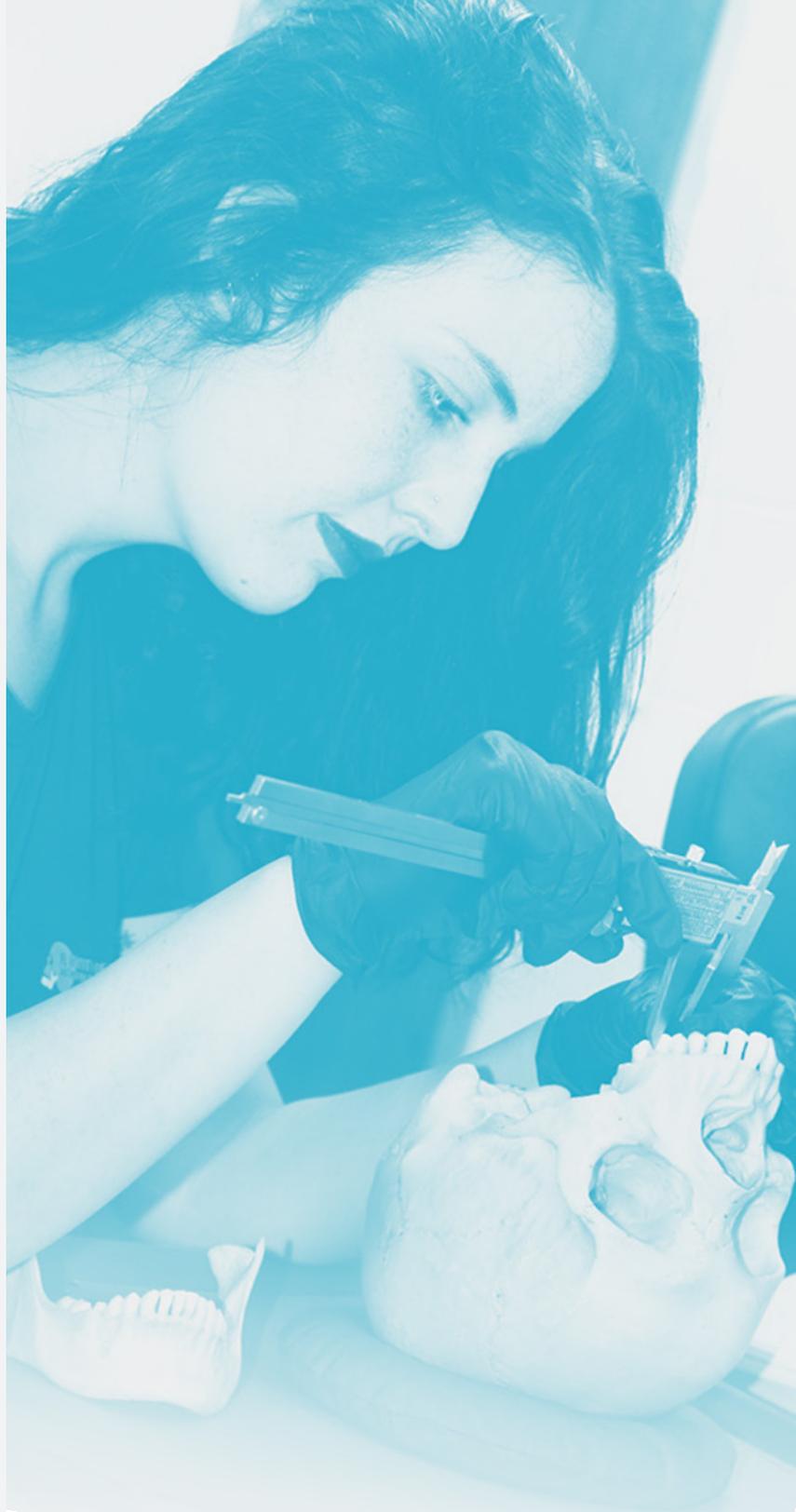




**FL INSTITUTE OF FORENSIC  
ANTHROPOLOGY & APPLIED SCIENCE**  
AT THE UNIVERSITY OF SOUTH FLORIDA

**FORENSIC ANTHROPOLOGY & COLD CASE  
TECHNICAL ASSISTANCE**



# TECHNICAL ASSISTANCE SERVICES

The Florida Institute of Forensic Anthropology and Applied Science (IFAAS) is dedicated to confronting issues of cold case, violent crime investigations, missing, endangered, exploited, and unidentified persons through innovative strategies for applying science to medico-legal and human rights investigations. TECHNICAL ASSISTANCE is offered through several laboratories and research programs in the areas of Forensic Anthropology, Homicide & Cold Case Investigations, Human Trafficking, Crime Scene, Geophysics, and Geochemistry and Soils. The areas of service include human identification, facial and forensic imaging, living person age estimation, clandestine grave search and recovery, grave excavation, crime scene documentation, geophysical and spatial technologies, trauma analysis, chemical isotope and elemental analysis, and expert testimony. We provide technical assistance in field and lab methods, including the following:

## Forensic Anthropology & Human Identification

- Skeletal analysis, geochemical profiling, and forensic anthropological analysis of human remains such as age at death, sex and ancestry.

## Visualization & Imaging

- Facial approximations, reconstructions, and clothing imaging, 3D visualization of skeletal anatomy/trauma.

## Trauma Analysis

- Skeletal autopsy and 3D visualization of injuries to bone to determine the cause and mechanisms of injury and death

## Remote Sensing – Crime Scene

- Ground Penetrating Rader (GPR), Aerial photography analysis & historic imaging, GIS analysis, mapping and modeling of crime scenes

## Burial Excavation & Outdoor Scene Processing

- Outdoor crime scene assistance, grave excavation, John Doe grave exhumations, Surface Scatter, Clandestine grave search, Historical Land Use Analysis

## Cold Case Review & Analysis

- Review long term open cases in homicide and missing persons to provide consulting on imaging, trauma analysis, scene reconstructions, and identification

GEOFORENSICS: FORENSIC ISOTOPES & SOILS FOR GEO-REFERENCING MOBILITY. We test hair, bone, and teeth for stable and heavy isotopes including Strontium (Sr), Lead (Pb), Carbon (C), Nitrogen (N), and Oxygen (O) to address questions about human mobility, diet, migration, and identification.



# FACTS ABOUT OUR TECHNICAL ASSISTANCE & SERVICES

- For biological profiling, we use standard methods in forensic anthropology. The data collection protocol we produced through a grant funded research initiative is very similar to the protocol we use for human identification and reflects our philosophy:

Kimmerle EH, Powell JW. 2012. 3D Digital Reference Guide for Research in Human Identification. Version 1.0.2012. University of South Florida

Kimmerle EH, Tise MA, Humphries A. 2012. Data Collection Protocol for Human Identification. Version 1.0.2012. University of South Florida

- For ancestry estimation we use two statistical programs, Fordisc and 3D-ID (a newer program that uses 3D coordinate data for size and shape analysis and has modern “Hispanic” and “Latino” reference populations).
- In cold case analysis – many times the ancestry classification for unknown persons is changed because of the newer methods and tools used. This has significant implications for trying to identify unknown persons.
- We test chemical isotope samples for geo-referencing in cases where identification is unknown, unless otherwise specified. We can test hair, bones, and teeth.
- Chemical isotope testing can tell you a geographical region where the person lived during different periods in their life and if they migrated or moved to different regions in the years before their death.
- For every case we provide a detailed report and copy of photographs and any imaging that was done for the case. This typically includes a 3D PDF of laser scanned images for facial reconstructions and/or elements for skeletal trauma.

# FREQUENTLY ASKED QUESTIONS

## **Is this bone human?**

On the issue of isolated elements that may or may not be human: various agencies have different methods for handling these types of cases. Some agencies will bring us bones or send photographs and in almost all cases, these turn out to be non-human and the MEO/LE does not require a report.

## **When can Facial and Clothing imaging be used?**

This includes postmortem images of a face that needs “retouching” to create an approximation for public viewing, facial composites from skeletal remains, or photographic superimpositions for presumptive identifications, and photographic imaging of decomposing clothing for public viewing. Please contact the lab for questions or examples of imaging.

## **When do you need assistance at the crime scene?**

Assistance in the field starts with search and recovery, searches may include surface scatter or clandestine burials. We search for persons who are missing, presumed dead and information leads investigators to a particular area to look for a burial. We work with agencies to establish the level of our involvement. In some cases, LE asks us to be present to assist with inventory of skeletal elements during the recovery process. In other cases, our team will take an active role in the processing and collecting of all remains/evidence, including photography, sketching, etc. We adjust our level of involvement based on the request of the LE.

# CASE SUBMISSION

To submit a case to USF Forensic Anthropology Laboratory – please fill out and include the Case Submission Form.

## **Be Sure to Indicate Which Services you are Requesting:**

- Skeletal Analysis/Human Identification
- Trauma Analysis
- Geochemical Profiling
- Forensic Imaging

To request search & recovery, remote sensing or other site work, please contact the lab directly.

## **Ship all packages to:**

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Or Kelsee Hentschel-Fey, M.A.

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