

## The FIRMS Conference 2025: AGENDA

TUESDAY, 16 SEPTEMBER 2025	
09:00 – 09:30	Arrival, registration & poster installation
MORNING SESSION: SEAN DOYLE, SESSION CHAIR	
09:30 – 10:00	<b>Welcome to the FIRMS Conference 2025</b> - RSC, LGC, and FIRMS
10:00 – 11:00	<b>Forensic science at the crossroads – Which way will we go?</b> - Niamh Nic Daeid (Keynote Presentation)
11:00 – 11:30	COFFEE/TEA BREAK
11:30 – 11:50	<b>Determining the nature of exposure in athlete doping violations using isotopes</b> - John D. Howa
11:50 – 12:10	<b>Evaluation of the endogenous or exogenous origin of testosterone in children by carbon isotope analysis: Report of two cases by the Drug Control Centre</b> - Fabio Azamor de Oliveira
12:10 – 12:30	<b>Identification of synthetic urine by analysis of natural carbon and nitrogen isotope ratios</b> - Frank Hülsemann
12:30 – 12:50	<b>Advancing isotope ratio measurements of trace metals and metalloids in the environment: Results of MetroPOEM project in the context of environmental forensics</b> - Dmitriy Malinovskiy
12:50 – 13:00	Final questions for this morning's presenters
13:00 – 14:00	LUNCH
AFTERNOON SESSION: JIM CARTER, SESSION CHAIR	
14:00 – 14:20	<b>Exploring the potential of amino acid <math>\delta^2\text{H}</math> analysis as a forensic tool to identify region-of-origin</b> - Emma A. Elliott Smith
14:20 – 14:40	<b>A comparative study of isotope ratios in human bones and hair from a known contemporary skeletal collection</b> - Tiffany B. Fracchia
14:40 – 15:00	<b>Isotopic signatures of insects from decomposing carcasses</b> - Fernanda G. Augusto
15:00 – 15:20	<b>Intracortical radiocarbon (<math>\text{F}^{14}\text{C}</math>) and stable isotope variation in human femora</b> - Karolina Cameron-Werens
15:20 – 15:50	COFFEE/TEA BREAK
15:50 – 16:10	<b>Optimized static headspace sampling method for carbon isotope analysis of methanol and ethanol in water matrix</b> - Mario Tuthorn (Thermo Fisher Scientific)
16:10 – 16:30	<b>The next generation LC-IRMS for honey authenticity investigation</b> - Niel Williams (Thermo Fisher Scientific)
16:30 – 16:50	<b>Evaluation of high temperature LC-IRMS for detecting fraudulent addition of sugar to orange juice</b> - Mike Seed (Elementar)
16:50 – 17:00	Final questions for this afternoon's presenters
17:00 – 19:00	WELCOME DRINKS & POSTER SESSION

## The FIRMS Conference 2025: AGENDA

<b>WEDNESDAY, 17 SEPTEMBER 2025</b>	
09:00 – 10:00	Arrival (with coffee/tea)
<b>MORNING SESSION: PHIL DUNN, SESSION CHAIR</b>	
10:00 – 10:20	<b>A stable foundation for the use of tooth enamel oxygen isotopes in human identification</b> - Gabriel J. Bowen
10:20 – 10:40	<b>Improving inter-laboratory comparability of tooth enamel carbonate stable isotope analysis (<math>\delta^{13}\text{C}</math>, <math>\delta^{18}\text{O}</math>)</b> - Chris Stantis
10:40 – 11:00	<b>Intra-individual and within-tooth isotopic variability: Implications for forensic identification</b> - Kirsten Verostick
11:00 – 11:20	<b>Accounting for human mobility in bulk enamel isotope analysis</b> - Thomas A. Delgado
11:20 – 11:50	COFFEE/TEA BREAK
11:50 – 12:10	<b>How to validate a tooth enamel carbonate carbon &amp; oxygen isotope analysis method: A tale of unexpected challenges and important lessons learned</b> - Daniel L. Johnson
12:10 – 12:30	<b>Using non-exchangeable hydrogen isotope analysis to trace wildlife origins across aquatic and terrestrial boundaries</b> - David Soto
12:30 – 12:50	<b>Advancing wildlife forensics: Multi-isotopic evidence to combat animal trafficking in Brazil</b> - Fábio José Viana Costa
12:50 – 13:00	Final questions for this morning's presenters
13:00 – 14:00	LUNCH
<b>AFTERNOON SESSION: ETHAN STRAK, SESSION CHAIR</b>	
14:00 – 14:20	<b>Potential for identification of the source of an explosive material based on analyses of the stable isotope ratios of residues</b> - James R. Ehleringer
14:20 – 14:40	<b>Using isotopic analysis to determine the origins of synthetic potassium chlorates used in explosives</b> - Denise Peacock
14:40 – 15:00	<b>Isotopic characterisation of the homemade explosive (HME) R-salt</b> - James F. Carter
15:00 – 15:20	<b>IRMS analysis of polymeric material for comparison casework</b> - Joe Meikle
15:20 – 15:50	COFFEE/TEA BREAK
15:50 – 16:10	<b>Establishing baseline stable isotope data for humanitarian forensic tracing in Tanzania</b> - Maximilian Jan Spies
16:10 – 16:30	<b>Disentangling dietary habit, sex differences, and tissue signature in human hair and nails via <math>\delta^{13}\text{C}</math> analysis of bulk and individual amino acids</b> - Gunjan Agrawal
16:30 – 16:50	<b>Assessing C and H isotopic fractionation of aliphatic hydrocarbons during microbial degradation: Microcosm studies and environmental implications</b> - Syahidah Akmal Muhammad
16:50 – 17:00	Final questions for this afternoon's presenters
18:45 – 23:00	DINNER CRUISE - West End on the Thames (WEOTT); boat departs from Westminster Pier

## The FIRMS Conference 2025: AGENDA

THURSDAY, 18 SEPTEMBER 2025	
09:00 – 10:00	Arrival (with coffee/tea)
MORNING SESSION: JOE MEIKLE, SESSION CHAIR	
10:00 – 10:20	<b>Implementation of the stable isotope analysis laboratory at the National Institute of Criminalistics of the Brazilian Federal Police: First investigations aided using the technology</b> - J.M. Freitas
10:20 – 10:40	<b>Isotopic fingerprinting of illegal timber: A provenance tool for the Amazon Basin</b> - Luiz A Martinelli
10:40 – 11:00	<b>Forensic determination of tropical timber provenance using strontium isotopes and multi-element signatures: Development and validation of a geochemical fingerprinting protocol</b> - Camilla Kafino
11:00 – 11:20	<b>World Forest ID: Large scale stable isotope ratio modeling for product verification</b> - Victor Deklerck
11:20 – 11:50	COFFEE/TEA BREAK
11:50 – 12:10	<b>Applications of stable isotope ratio analysis and site-specific natural isotope fractionation-nuclear magnetic resonance in discriminating between synthetic and natural analogs</b> - Matteo Perini
12:10 – 12:30	<b>Stable isotope analysis of <i>Paubrasilia echinata</i> violin bows: Insights into the illegal exploration of an endangered tree species</b> - Tais Ribeiro Muniz
12:30 – 12:50	<b>Stable isotope fingerprinting of tomato processing: A forensic approach to food authenticity and traceability</b> - Oana Romina Botoran
12:50 – 13:00	Final questions for this morning's presenters
13:00 – 14:00	LUNCH
AFTERNOON SESSION: JIM CARTER, SESSION CHAIR	
14:00 – 14:20	<b>Evaluation of measurement uncertainty during inter-laboratory characterization of isotope delta reference materials and lessons for routine analyses</b> - Philip Dunn
14:20 – 14:40	<b>Guidance for stable isotope databases</b> - Ethan Strak
14:40 – 15:00	<b>Prizes</b> - James F. Carter
15:00 – 15:20	<b>Closing remarks</b> - Philip Dunn
15:20 – 15:50	Departure (with coffee/tea)

Note: All events except the dinner cruise will take place at the Royal Society of Chemistry's Burlington House, Piccadilly, London