

## Lecture and events programme: Wednesday 17 December 2008

Time (hour)	Duration (minutes)	Title of presentation, authors and affiliations
		<b>Registration &amp; coffee:</b> <b>The Geological Society, Burlington House, London</b>
08:30 - 09:25	55	Ruth Morgan, Laurance Donnelly & Kym Jarvis
		<b>Welcome &amp; opening</b>
09:25 - 09:30	5	<b>Laurance Donnelly</b> Chair, The Geological Society, Forensic Geoscience Group
		<b>Session 1. Chair of session, Jamie Pringle</b>
09:30 - 09:40	10	<b>A comparative study into the effectiveness of geophysical techniques for the location of buried handguns</b> James Murphy <sup>1*</sup> , Paul Cheetham <sup>1</sup> <sup>1</sup> Centre for Forensic Sciences, School of Conservation Sciences, Bournemouth University, Bournemouth, BH12 5BB, UK <i>*Corresponding author: James Murphy (g7895042@bmath.ac.uk)</i>
09:40 - 09:50	10	<b>Seeing the wood for the trees: the use of GPR in detecting clandestine graves</b> George Tuckwell <sup>1,4*</sup> , John Jervis <sup>2,4</sup> , Jamie Pringle <sup>2,4</sup> , John Cassella <sup>3,4</sup> <sup>1</sup> STATS Ltd, Porterswood House, Porters Wood, St Albans, AL3 9PQ, UK <sup>2</sup> Applied & Environmental Geophysics Group, School of Physical Sciences & Geography, Keele University, Keele, Staffordshire, ST5 5BG, UK <sup>3</sup> Department of Forensic Science, Faculty of Science, Staffordshire University, Mellor Building, College Road, Stoke-on-Trent, Staffordshire, ST4 2DE, UK <sup>4</sup> Burials Research Group, West Midlands, University of Keele & Staffordshire University, UK <i>*Corresponding author: George Tuckwell (george.tuckwell@stats.co.uk)</i>
09:50 - 10:00	10	<b>Electrical resistivity surveys over several simulated graves in Staffordshire, UK</b> John Jervis <sup>1*</sup> , Jamie Pringle <sup>1</sup> , John Cassella <sup>2</sup> , George Tuckwell <sup>3</sup> <sup>1</sup> Applied & Environmental Geophysics Group, School of Physical Sciences & Geography, Keele University, Keele, Staffordshire, ST5 5BG, UK <sup>2</sup> Department of Forensic Science, Faculty of Sciences, Staffordshire University, Stoke-on-Trent, Staffordshire, ST4 2DE, UK <sup>3</sup> STATS Ltd, Porterswood House, St. Albans, Hertfordshire, AL3 6PO, UK <i>*Corresponding author: John Jervis (j.jervis@epsam.keele.ac.uk)</i>
10:00 - 10:10	10	<b>The use of topographic and geophysical survey techniques in the characterisation of search sites</b> Peter Barker <sup>1*</sup> , Claire Graham <sup>1</sup> <sup>1</sup> Stratascan Ltd, Vineyard House, Upper Hook Road, Upton-upon-Severn, Worcestershire, WR8 0SA, UK <i>*Corresponding author: Peter Barker (peter.barker@stratascan.co.uk)</i>
10:10 - 10:20	10	<b>Pigs in Shelf</b> Armin Schmidt <sup>1*</sup> , Chris Gaffney <sup>1</sup> , Rob Janaway <sup>1</sup> , Andy Wilson <sup>1</sup> , Hazel Woodhams <sup>1</sup> <sup>1</sup> Archaeological Sciences, Division of AGES, University of Bradford, Bradford, West Yorkshire, BD7 1DP, UK <i>*Corresponding author: Armin Schmidt (A.Schmidt@Bradford.ac.uk)</i>



10:20 - 10:30	10	<p><b>An evaluation of the combined application of ground penetrating radar and 3D laser scanning in the location and rapid recording of skeletal human remains</b></p> <p>James Fenn<sup>1*</sup>, Paul Cheetham<sup>1</sup>, Jeremy Pile<sup>1</sup></p> <p><sup>1</sup>Centre for Forensic Sciences, School of Conservation Sciences, Bournemouth University, Bournemouth, BH12 5BB, UK</p> <p><i>*Corresponding author: James Fenn (jamesfenn1@gmail.com)</i></p>
10:30 - 10:40	10	<p><b>Forensic geophysics in support of the comprehensive nuclear test ban</b></p> <p>George Tuckwell<sup>1*</sup>, Luis Gaya-Pique<sup>2</sup>, Rainier Arndt<sup>2</sup></p> <p><sup>1</sup>STATS Ltd, Porterswood House, Porters Wood, St Albans, Hertfordshire, AL3 6PQ, UK</p> <p><sup>2</sup>On-Site Inspection Division, CTBTO PrepCom, Vienna International Centre, PO Box 1200, A1400, Vienna, Austria</p>
10.40 - 10.50	10	<p><b>From Cromwell Street to Jersey: 25 years of cables and images</b></p> <p>John Hunter<sup>1*</sup>, Barrie Simpson<sup>1</sup></p> <p><sup>1</sup>University of Birmingham, Department of Ancient History &amp; Archaeology and Forensic Support Archaeology Group, Edgbaston, Birmingham, West Midlands, B15 2TT, UK</p> <p><i>*Corresponding author: John Hunter (j.r.hunter@bham.ac.uk)</i></p>
10:50: - 11:00	10	<b>Discussion &amp; questions. Rapporteur, Ruth Morgan</b>
11:00 - 11:30	30	<b>Refreshments &amp; poster session</b>
		<b>Session 2. Chair of session, Duncan Pirrie</b>
11:30 - 11:40	10	<p><b>Raman Spectroscopy: A forensic geological and geoarchaeological perspective</b></p> <p>Howell Edwards<sup>1*</sup>, Tasnim Munshi<sup>1</sup></p> <p><sup>1</sup>Chemical &amp; Forensic Sciences, University Analytical Centre, School of Life Sciences, University of Bradford, Bradford, BD7 1DP, UK</p> <p><i>*Corresponding author: Howell Edwards (h.g.m.edwards@bradford.ac.uk)</i></p>
11:40 - 11:50	10	<p><b>The application of Raman Spectroscopy for the analysis of a range of biomaterials with forensic implications</b></p> <p>Tasnim Munshi<sup>1*</sup>, Howell Edwards<sup>1</sup></p> <p><sup>1</sup>Chemical &amp; Forensic Sciences, University Analytical Centre, School of Life Sciences, University of Bradford, Bradford, BD7 1DP, UK</p> <p><i>*Corresponding author: Tasnim Munshi (t.munshi@Bradford.ac.uk)</i></p>
11:50 - 12:00	10	<p><b>Application of micro-Raman spectroscopy to forensic geosciences</b></p> <p>Alexandra Guedes<sup>1*</sup>, Angel Carmelo Prieto<sup>2</sup>, Armanda Dória<sup>1</sup>, Bruno Valentim<sup>1</sup>, Perla Ferrer<sup>1,2</sup>, Fernando Noronha<sup>1</sup></p> <p><sup>1</sup>Centro e Departamento de Geologia, Faculdade de Ciências, Universidade do Porto, Portugal</p> <p><sup>2</sup>Física de la Materia Condensada, Cristalografía y Mineralogía, Facultad de Ciencias, Universidad de Valladolid, Spain</p> <p><i>*Corresponding author: Alexandra Guedes (aguedes@fc.up.pt)</i></p>
12:00 - 12:10	10	<p><b>Forensic investigation of soil in the Russian Federation</b></p> <p>Olga Borisovna Gradusova<sup>1*</sup>, Ekaterina Michalovna Nesterina<sup>1</sup></p> <p><sup>1</sup>Russian Federal Centre of Forensic Science, Ministry of Justice of Russian Federation, Moscow, Russia</p> <p><i>*Corresponding author: Olga Gradusova (bio_soil@rambler.ru)</i></p>



12:10 - 12:20	10	<p><b>Field Portable X-ray Fluorescence (FPXRF) spectrometry of soils and the transfer issue</b></p> <p>Elisa Bergslien<sup>1*</sup></p> <p><sup>1</sup>Earth Sciences &amp; Science Education, Buffalo State College, 271 Science Building, 1300 Elmwood Avenue, Buffalo, NY, 14222, USA</p> <p><i>*Corresponding author: Elisa Bergslien (BERGSLET@buffalostate.edu)</i></p>
12:20 - 12:30	10	<p><b>The spatial and temporal distribution of pollen in an indoor setting and upon writing paper</b></p> <p>Ruth Morgan<sup>1*</sup>, Emma Allen<sup>2</sup>, Federica Balestri<sup>2</sup>, Gabriella Davies<sup>2</sup>, Peter Bull<sup>2</sup></p> <p><sup>1</sup>UCL Jill Dando Institute of Crime Science, Brook House, 2-16 Torrington Place, London, WC1E 7HN, UK</p> <p><sup>2</sup>Oxford University, Centre for the Environment, South Parks Road, Oxford, OX1 3QY, UK</p> <p><i>*Corresponding author: Ruth Morgan (ruth.morgan@ucl.ac.uk)</i></p>
12:30 - 12:40	10	<p><b>Application of geological knowledge in solving disputes</b></p> <p>Isabel Fernandes<sup>1*</sup>, Fernando Noronha<sup>1</sup></p> <p><sup>1</sup>Centro e Departamento de Geologia, Faculdade de Ciências, Universidade do Porto, Portugal</p> <p><i>Corresponding author: Isabel Fernandes (isabel.migfer@gmail.com)</i></p>
12:40 - 12:50	10	<p><b>Bricks and mortar: how much circumstantial evidence is enough?</b></p> <p>Andrew Smith<sup>1*</sup></p> <p><sup>1</sup>Principal Consultant, CERAM Building Technology, CERAM Research Ltd, Queens Road, Penkhull, Stoke-on-Trent, Staffordshire ST4 7LQ, UK</p> <p><i>*Corresponding author: Andrew Smith (andrew.smith@ceram.com)</i></p>
12:50 - 13:00	10	<b>Discussion &amp; questions. Rapporteur, Ruth Morgan</b>
13:00 - 14:20	80	<b>Lunch &amp; poster session</b>
		<b>Session 3. Chair of session, Alastair Ruffell</b>
14:20 - 14:30	10	<p><b>Preservation and analysis of three-dimensional footwear evidence in soils: the application of optical laser scanning</b></p> <p>Matthew Bennett<sup>1*</sup></p> <p><sup>1</sup>School of Conservation Sciences, Bournemouth University, Dean of Conservation Sciences, Talbot Campus, Fern Barrow, Poole, Dorset, BH12 5BB, UK</p> <p><i>*Corresponding author: Matthew Bennett (mbennett@bournemouth.ac.uk)</i></p>
14:30 - 14:40	10	<p><b>Instrumental Neutron Activation Analysis (INAA): practice and potential forensic applications</b></p> <p>Nelson Eby<sup>1*</sup>, Stephanie Eby<sup>2</sup></p> <p><sup>1</sup>Department of Environmental Earth &amp; Atmospheric Sciences (EEAS), University of Massachusetts, Lowell, Massachusetts, USA</p> <p><sup>2</sup>Department of Biology, Syracuse University, Syracuse, New York, USA</p> <p><i>*Corresponding author: Nelson Eby (Nelson_Eby@uml.edu)</i></p>



14:40 - 14:50	10	<p><b>Communication in forensic geoscience featuring an example from TV</b></p> <p>Lorna Dawson<sup>1,5*</sup>, Laurance Donnelly<sup>2*</sup>, David Miller<sup>1</sup>, John Cassella<sup>3</sup>, Jamie Pringle<sup>4</sup>, Kate Hollingsworth<sup>5</sup>, Alastair Ruffell<sup>6</sup>, Mark Harrison<sup>7</sup></p> <p><sup>1</sup>The Macaulay Institute, Craigiebuckler, Aberdeen, AB15 8QH, UK  <sup>2</sup>Halcrow Group Ltd, North West Regional Office, Manchester, Deanway Technology Centre, Wilmslow Road, Handforth, Cheshire, SK9 3FB, UK  <sup>3</sup>Department of Forensic Science, Faculty of Science, Staffordshire University, Mellor Building, College Road, Stoke-on-Trent, ST4 2DE, UK  <sup>4</sup>Applied &amp; Environmental Geophysics Group, School of Physical Sciences &amp; Geography, Keele University, Keele, Staffordshire, ST5 5BG, UK  <sup>5</sup>BBC Countryfile, Level 9, The Mailbox, Wharfside St, Birmingham, West Midlands, B1 1RF, UK  <sup>6</sup>School of Geography, Archaeology &amp; Palaeoecology, Queens University, Belfast, BT7 1NN, Northern Ireland  <sup>7</sup>National Policing Improvement Agency, Knowledge Centre, Wyboston Lakes, Bedfordshire, MK45 3JS, UK  *Corresponding author: Lorna Dawson (<a href="mailto:l.dawson@macaulay.ac.uk">l.dawson@macaulay.ac.uk</a>)  *Corresponding author: Laurance Donnelly (<a href="mailto:donnellylj@halcrow.com">donnellylj@halcrow.com</a>)</p>
14:50 - 15:00	10	<p><b>The Council for the Registration of Forensic Practitioners (CRFP): an opportunity for forensic geoscientists</b></p> <p>Mike Allen<sup>1*</sup></p> <p><sup>1</sup>Council for the Registration of Forensic Practitioners (CRFP), 3rd Floor, Tavistock House, Tavistock Square, London, WC1H 9HX, UK  *Corresponding author: Mike Allen (<a href="mailto:mike.allen@crfp.org.uk">mike.allen@crfp.org.uk</a>)</p>
15:00 - 15:10	10	<p><b>Using remote sensing to map and monitor London's geohazards</b></p> <p>Richard Teeuw<sup>1*</sup></p> <p><sup>1</sup>School of Earth &amp; Environmental Sciences, University of Portsmouth, Burnaby Building, Burnaby Road, Portsmouth, PO1 3QL, UK  *Corresponding author: Richard Teeuw (<a href="mailto:richard.teeuw@port.ac.uk">richard.teeuw@port.ac.uk</a>)</p>
15:10 - 15:20	10	<b>Discussion &amp; questions. Rapporteur, Ruth Morgan</b>
15:20 - 15:50	30	<b>Refreshments &amp; poster session</b>
		<b>Session 4. Chair of session, Laurance Donnelly</b>
15:50 - 16:00	10	<p><b>The future of geoforensics</b></p> <p>Alastair Ruffell<sup>1*</sup>, Laurance Donnelly<sup>2</sup>, Lorna Dawson<sup>3</sup>,</p> <p><sup>1</sup>School of Geography, Archaeology &amp; Palaeoecology, Queens University, Belfast, BT7 1NN, Northern Ireland  <sup>2</sup>Halcrow Group Ltd, North West Regional Office, Manchester, Deanway Technology Centre, Wilmslow Road, Handforth, Cheshire, SK9 3FB, UK  <sup>3</sup>The Macaulay Institute, Craigiebuckler, Aberdeen, AB15 8QH, UK  *Corresponding author: Alastair Ruffell (<a href="mailto:a.ruffell@qub.ac.uk">a.ruffell@qub.ac.uk</a>)</p>
16:00 - 16:10	10	<p><b>Soils, plants, pollen, and fungi: a key multidisciplinary approach in criminal investigation</b></p> <p>Patricia Wiltshire<sup>1*</sup>, David Hawksworth<sup>2</sup></p> <p><sup>1</sup>Patricia Wiltshire, Forensic Ecology &amp; Palynology, Milford House, The Mead, Ashted, Surrey, KT21 2LZ and University of Aberdeen, Department of Geography &amp; Environment, Elphinstone Road, Aberdeen, AB24 3UF, UK  <sup>2</sup>Natural History Museum London, Department of Botany, Cromwell Road, London, SW7 5BD and University of Gloucestershire, Department of Natural &amp; Social Sciences, Francis Close Hall, Swindon Rd, Cheltenham, GL50 4AZ, UK  *Corresponding author: Pat Wiltshire (<a href="mailto:patricia.wiltshire1@btinternet.com">patricia.wiltshire1@btinternet.com</a>)</p>



		<b>Forensic Geoscience Group, Invited Guest Speaker 1: Marianne Stam</b>
16:10 - 16:25	15	<b>Forensic geology in the United Kingdom and the United States</b> Marianne Stam <sup>1*</sup> , Raymond Murray <sup>2</sup> <sup>1</sup> California Department of Justice, Riverside, California, USA <sup>2</sup> 106 Ironwood Place, Missoula, Montana, 59803, USA <i>*Corresponding author: Marianne Stam (marianne.stam@doj.ca.gov)</i>
16:25- 16:35	10	<b>The 3rd international conference on soil forensics, California, USA</b> Marianne Stam <sup>1*</sup> <sup>1</sup> California Department of Justice, Riverside, California, USA <i>*Corresponding author: Marianne Stam (marianne.stam@doj.ca.gov)</i>
16:35 - 16:45	10	<b>Discussion &amp; questions</b>
		<b>Forensic Geoscience Group, Honorary Guest Speaker 2: Mark Harrison</b>
16:45 - 16:55	10	<b>Summary of the conference</b> Mark Harrison <sup>1</sup> <sup>1</sup> National Policing Improvement Agency (NPIA), UK National Police Search Advisor
		<b>Conclusions and close</b>
16:55 -17:00	5	<b>Laurance Donnelly</b> Chair, The Geological Society, Forensic Geoscience Group

**The following abstracts are included and may be presented (in reserve)**

**Forensic investigations in engineering geology, mining geology, geomorphology and geohazards**

Laurance Donnelly<sup>1\*</sup>

<sup>1</sup>Halcrow Group Ltd, North West Regional Office, Manchester, Deanway Technology Centre, Wilmslow Road, Handforth, Cheshire, SK9 3FB, UK

*\*Corresponding author: Laurance Donnelly (donnellylj@halcrow.com)*

**The development and significance of a conceptual geological model, in different geomorphological setting, to search for murder victim's graves**

Laurance Donnelly<sup>1\*</sup>

<sup>1</sup>Halcrow Group Ltd, North West Regional Office, Manchester, Deanway Technology Centre, Wilmslow Road, Handforth, Cheshire, SK9 3FB, UK

*\*Corresponding author: Laurance Donnelly (donnellylj@halcrow.com)*



## Posters

### **Cutting it fine: blood pattern detection on grass**

Mieke Dekens<sup>1\*</sup>, Paul Cheetham<sup>1</sup>

<sup>1</sup>Centre for Forensic Sciences, School of Conservation Sciences, Bournemouth University, Bournemouth, BH12 5BB, UK

*\*Corresponding author: Mieke Dekens (mieke\_dekens@hotmail.com)*

### **Diatoms: how useful are they in the recovery of human remains?**

Caroline Sims<sup>1\*</sup>, Peter Masters<sup>1</sup>

<sup>1</sup>Centre for Archaeological & Forensic Analysis, Department of Applied Science, Security and Resilience, Cranfield University, Shrivenham, Swindon, SN6 8LA, UK

*\*Corresponding author: Caroline Sims (caroline.sims2@virgin.net)*

### **Analysis of simulated clandestine grave contents to assist search teams in the detection of clandestine burials**

John Cassella<sup>1\*</sup>, Jamie Pringle<sup>2</sup>, John Jervis<sup>2</sup>

<sup>1</sup>Department of Forensic Science, Faculty of Science, Staffordshire University, Mellor Building, College Road, Stoke-on-Trent, Staffordshire, ST4 2DE, UK

<sup>2</sup>Applied & Environmental Geophysics Group, School of Physical Sciences & Geography, Keele University, Keele, Staffordshire, ST5 5BG, UK

*\*Corresponding author: John Cassella (j.p.cassella@staffs.ac.uk)*

### **Forensic geophysics**

Alastair Ruffell<sup>1\*</sup>, Jamie Pringle<sup>2</sup>

<sup>1</sup>School of Geography, Archaeology & Palaeoecology, Queens University, Belfast, BT7 1NN, Northern Ireland

<sup>2</sup>Applied & Environmental Geophysics Group, School of Physical Sciences & Geography, Keele University, Keele, Staffordshire, ST5 5BG, UK

*\*Corresponding author: Alastair Ruffell (a.ruffell@qub.ac.uk)*

### **A modelling/inverse-scattering approach to investigate the potential of GPR for the location of archaeological human remains**

Tim Millington<sup>1\*</sup>, Luigia Nuzzo<sup>1</sup>, Nigel Cassidy<sup>1</sup>, Jamie Pringle<sup>1</sup>

<sup>1</sup>Applied & Environmental Geophysics Group, School of Physical and Geographical Sciences, Keele University, Keele, Staffordshire, ST5 5BG

*\*Corresponding author: Tim Millington (t.m.millington@epsam.keele.ac.uk)*

### **Source apportionment of nuisance dust with directional collection and multi-element fingerprints**

Ben Williams<sup>1</sup>, Hugh Datson<sup>2</sup>, Mike Fowler<sup>1\*</sup>

<sup>1</sup>Earth & Environmental Sciences, University of Portsmouth, Burnaby Road, Portsmouth PO1 3QL, UK.

<sup>2</sup>DustScan Ltd, Griffin House, Market Street, Charlbury, Oxfordshire OX7 3PJ, UK

*\*Corresponding author: Mike Fowler (mike.fowler@port.ac.uk)*



## Commercial displays and exhibitors

### Geoscan Research Ltd

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<sup>1</sup>Geoscan Research Ltd, Heather Brae, Chrisharben Park, Clayton, Bradford, BD14 6AE, UK

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### Allied Associates Geophysical Ltd

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### DW Consulting

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## FGG 2008 supported meetings

### The Geological Society Geochemistry Group, Annual General Meeting (AGM)\*

Kym Jarvis<sup>1</sup>

<sup>1</sup>Chair, Geological Society, Geochemistry Group, Imperial College, Centre for Environmental Policy, Room 108, Manor House, Silwood Park, Ascot, SL5 7PYUK

\*The Geological Society, main lecture theatre, 17 December 2008, 13:00 - 14:20

### Geoforensics and Information Management for crime Investigation (GIMI)\*

Lorna Dawson<sup>1</sup>, David Miller<sup>1</sup>

<sup>1</sup>The Macaulay Institute, Craigiebuckler, Aberdeen, AB15 8QH, UK

\*The Geological Society, Burlington House, William Buckland Room, 16 December 2008, 18:00 - 19:00



