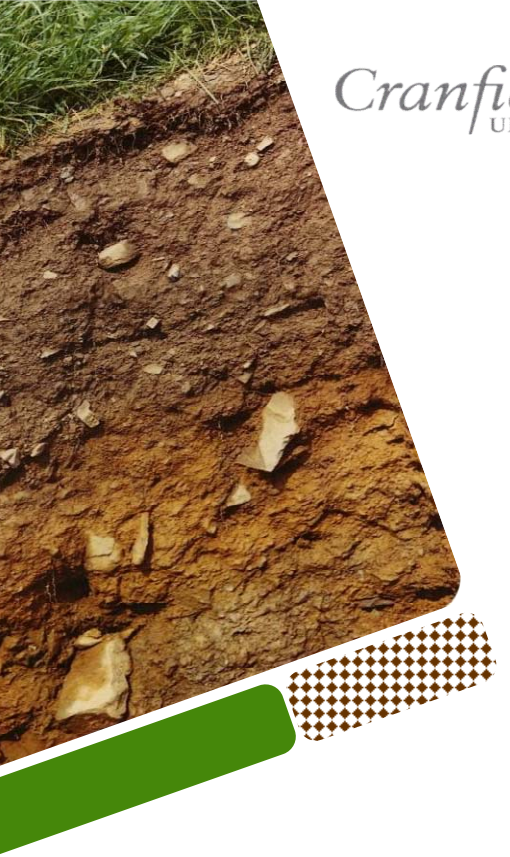

Cranfield UNIVERSITY

Workshop on Soil Magnetism

Multi-disciplinary Perspectives, Emerging Applications, and New Frontiers

18-20 August 2008

Sponsored by US Army Research Office

www.cranfield.ac.uk/sas/events

Introduction

In recent years it has become increasingly evident that magnetic susceptibility of soils can have strong effects on the performance of geophysical sensor systems designed to detect buried objects, particularly those of military and humanitarian interest such as landmines, unexploded ordnance, and other explosive devices. In some soils the 'ground effect' is so severe that detection by electromagnetic induction is sometimes not possible.

Currently, understanding of the spatial heterogeneity of magnetic properties in natural soil environments is limited. Information in soil maps and surveys describes the spatial extent of different soil types but does not provide information on magnetic properties, as currently this is not part of any standard soil description procedure. Therefore, little information is available globally that is relevant to landmine detector technologies.

Magnetic properties of soils have traditionally been investigated to indicate soil development, climate, and pollution, and as a tool for archaeological prospecting. The application in mine and UXO detection and clearance is a relatively new consideration and communication between the academic community and mine clearance users is essential to further developments in soil magnetism and applications in demining technologies.

Speakers

This workshop will bring together researchers and technologists from a broad spectrum of disciplines to discuss the theoretical base of soil magnetism and to identify emerging applications of soil magnetism in environmental, geological, and soil sciences.

Invited speakers

Dr Yoga Das
(Canadian Centre for Mine Action Techn.)
Professor John Dearing
(University of Southampton, UK)
Dr Mark Dekkers
(Utrecht University, The Netherlands)
Dr Mark Keene
(Qinetiq, UK)
Dr Neil Linford
(English Heritage, UK)
Dr Morten Madsen
(University of Copenhagen, Denmark)
Dr Thomas Mayr
(Cranfield University, UK)
Dr Janet Simms
(US Army Corps of Engineers, USA)

Workshop chairs

Dr Jacqueline Hannam
(Cranfield University, UK)
E: j.a.hannam@cranfield.ac.uk
Dr Remke van Dam
(Michigan State University, USA)
E: rvd@msu.edu
Dr Russell Harmon
(US Army Research Office, USA)
E; russell.harmon@us.army

Outcomes

The workshop aims to define the current state of understanding, identify knowledge gaps, and determine priority areas for research investment and technology development.

Key research outcomes identified during break-out sessions will be documented in a report that will be distributed to workshop participants and made available to the research and technology development community.

Schedule

Monday 18 August

Morning
- -Registration and lunch

Early afternoon
- -Opening
- -Keynote presentations

Late afternoon
- -General presentations
- -Introduction to posters

Evening
- -Reception and poster session
- -Dinner

Tuesday 19 August

Morning
- -Keynote presentations
- -General presentations

Afternoon
- -Break out sessions

Evening
- -Social event and conference dinner

Wednesday 20 August

Morning
- -Break-out session presentations
- -R&D priorities and wrap-up

Call for participation

There are limited places for participation in the workshop.

Please contact the workshop chairs if you require further information. Updates will be added to the conference website at:

www.msu.edu/~rvd/soilmag08/

Registration

Please register by completing an online registration form at www.cranfield.ac.uk/sas/soilmagform

Registration deadline : 7 July 2008

Registration fees: £150
(includes lunch, refreshments and dinner for one night)

Conference dinner: £45

Accommodation

En-suite bed and breakfast accommodation for workshop delegates is available at Mitchell Hall, Cranfield University.

The delegate rate is:
£45 per person per night

Please indicate the number of nights required on the online registration form.

Location

Cranfield University is situated between Milton Keynes and Bedford.

Road: The campus is 10 minutes from J13 off the M1 motorway.
Rail: Bedford and Milton Keynes Central are the closest stations.
Air: Luton Airport is the closest airport to the campus. Other London airports are also accessed by good rail links.

For more travel information, visit:
www.cranfield.ac.uk/locations/cranfield/

Contact

Academic Operations Unit
Cranfield University
Cranfield
Bedfordshire, MK43 0AL
Tel: +44 (0) 1234 754176
Email: shortcourse@cranfield.ac.uk