

Technical Workshop and Summer School

Application of innovative methods for site characterisation, water and contaminant flux measurement in the subsurface

Assessment of contaminant source identification, natural processes and remediation performance using stable isotopes

19th - 22nd June 2012

The Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

These two events run together. They are presented by the ADVOCATE Marie Curie Initial Training Network (www.theadvocateproject.eu/). The aim of the workshop and summer school is to introduce innovative methods, techniques and equipment for characterisation and remediation of contaminated groundwater sites in industrial and urban areas. Participants will learn about the techniques, mode of operation of equipment and management of contaminated sites, particularly in Germany.

After attending the workshop, participants will be able to:

- Understand the principles of remediation strategies for selected contaminants in groundwater
- Understand the mode of operation of *in situ* technologies for monitoring contaminated groundwater sites
- Understand different sustainable remediation strategies in comparison with conventional technologies
- Learn how urban water can be treated by decentralised technologies

After attending the summer school, participants will be able to:

- Understand theoretical principles of stable isotope analysis for the assessment of natural processes in environmental systems
- Understand how stable isotope techniques can be applied to evaluate sources of contaminants and biodegradation processes in groundwater
- Develop appropriate experimental studies at laboratory and field scale using stable isotope methods to interpret the environmental fate of contaminants

The workshop and summer school will be led by experienced scientists and lecturers from the Helmholtz Centre for Environmental Research UFZ (Germany), University of Liege (Belgium), VITO (Belgium) and University of Neuchâtel (Switzerland), supported by Associated Partners, LAF Magdeburg, GUT Merseburg, and SE Dresden from the ADVOCATE network.



Programme

Workshop Technical Programme

Tuesday 19th June

- Groundwater contamination - extent and remediation strategies
- Tracer techniques applied to groundwater issues and contaminated sites
- Sustainable remediation strategies
- Direct push technology - operation and application with demonstration

Wednesday 20th June

- Constructed wetlands - a sustainable technique for remediation of contaminated groundwater
- CMF approach - Passive Flux Meter technology
- Management of contaminated sites in Germany
- Treatment of urban waste water
- Excursion to demonstration centre for decentralised waste water treatment (BDZ), Compartment Transfer (CoTra) site at Leuna and former lignite mining pit: re-vitalisation of a mining landscape at Lake Cospuden

Summer School Technical Programme

Thursday 21st June

- Introduction to isotope research in contaminated groundwater
- Isotope signatures of organic pollutants and their metabolites
- Degradation processes for organic pollutants - case studies
- Process studies in groundwater polluted by nitrogen compounds

Friday 22nd June

- Introduction to isotope analysis and measurement - experiments and demonstration at lab scale
- Discussion and plenary session

The workshop will start at 08.30 on 19th June and end at 18.00 on 20th June. The summer school will start at 09.00 on 21st June and end at 13.00 on 22nd June. Information on the venue, travel to the events and accommodation options are provided overleaf.



Further Information

Venue Information

The workshop and summer school will be delivered in Building 1.0, 1st floor, of the UFZ. There will be notices to direct you to the specific teaching room. Full details will be provided with your registration confirmation. The UFZ is located in the north-east part of Leipzig at the "Wissenschaftspark" (Science Park). The address is Permoserstrasse 15, 04318 Leipzig. Further details can be found from the web site www.ufz.de.

You can reach the UFZ from the main railway station "Leipzig Hauptbahnhof" by tram No 3 heading to "Sommerfeld" or "Taucha" (ca. 20 min; station "Torgauer Strasse / Permoserstrasse"). A taxi from the main station to the UFZ is about 10-12 € See link: http://www.ufz.de/export/data/1/18540_leipzig_eng_blue_new.pdf

Travel to Leipzig

You can reach Leipzig by air via the airport, Leipzig-Halle (LEJ). From the airport, a train shuttle goes to the main railway station, Leipzig Hauptbahnhof (city center, about 15 min; 3.20 €). Taxi transport to the city or to the UFZ costs about 30-40 €

If you use the train you will arrive at the main station from all directions. ICE and IC trains arrive at Leipzig from all directions. More information is available on the following website: <http://www.leipzig.de/int/en/>

Accommodation

A range of accommodation to suit all budgets is available in Leipzig. Participants should make their own arrangements for accommodation and contact specific providers directly with enquiries. The following websites provide examples of the options available.

<http://www.leipzig.de/int/en/tourist/>

<http://www.zimmer-im-web.de/leipzig/indexe.htm>

<http://www.travellerspoint.com/budget-accommodation-en-ci-679.html>

What is provided

The workshop and summer school are free to attend. A hardcopy copy of the lecture notes will be provided to participants. Complimentary refreshments will be provided on each day, but participants are expected to pay for their own meals and accommodation. It will be possible to obtain a light meal (lunch) next to the venue or at the UFZ canteen.

Registration

Registration for these events is essential as places are limited. You may register for the workshop, the summer school or both. Please indicate which event you wish to attend when you make your registration. To book a place, send your name and email address to:

Dr Gerhard Strauch, Department of Hydrogeology, gerhard.strauch@ufz.de, tel +49-341-235 1985

Mrs Rosemarie Steudel, secretary, rosemarie.steudel@ufz.de, tel +49-341-235 1253

You must register by 30th May 2012 to reserve your place. Registrations after this time will not be accepted.