

Technical Workshop

Analysis and interpretation of biodegradation in soils and groundwater using physicochemical and molecular microbiological methods

15-16th March 2012

AGH University of Science and Technology, Krakow, Poland

The aim of the workshop is to explore the principles and application of physicochemical and molecular microbiological methods for the analysis and interpretation of biodegradation processes in contaminated soils and groundwater. It also provides the opportunity to put theory into practice via group exercises and case studies. The workshop is presented by the ADVOCATE Marie Curie Initial Training Network (www.theadvocateproject.eu/). After attending this workshop, participants will be able to:

1. Understand theoretical principles and limitations for use of physicochemical and molecular-based methods for microbiological analysis of biodegradation processes
2. Understand appropriate monitoring and sampling approaches to characterise biodegradation processes using different methods
3. Understand the application of different methods for laboratory and field-based studies of biodegradation processes
4. Develop appropriate experimental and sampling strategies to characterise biodegradation processes using different methods

The workshop will be presented by experienced training facilitators from the AGH University of Science and Technology, Krakow and Warsaw University of Technology (Poland), and the University of Sheffield (UK).

Technical Programme

Thursday 15th March

- Biodegradation and microbiological processes at field scale
- Physicochemical methods of microbiological characterisation and limitations
- Monitoring and sampling strategies for soil and groundwater
- Molecular-based methods of microbiological characterisation and limitations, with example case studies
- Bioremediation case studies (focused on heavy metals, bioaugmentation and sequenced reactive barrier systems)
- Introduction to group exercise

Friday 16th March

- Group-based exercise to design a sampling and monitoring programme for a biodegradation assessment in either a contaminated soil or groundwater scenario using the different methods and considering the development of a conceptual model, objectives of the analysis, method limitations and interpretation with other data
- Group presentation and plenary session

The workshop will start at 09.00 on 15th March and end at 15.00 on 16th March. Information on the venue, travel to the workshop and accommodation options is provided overleaf.

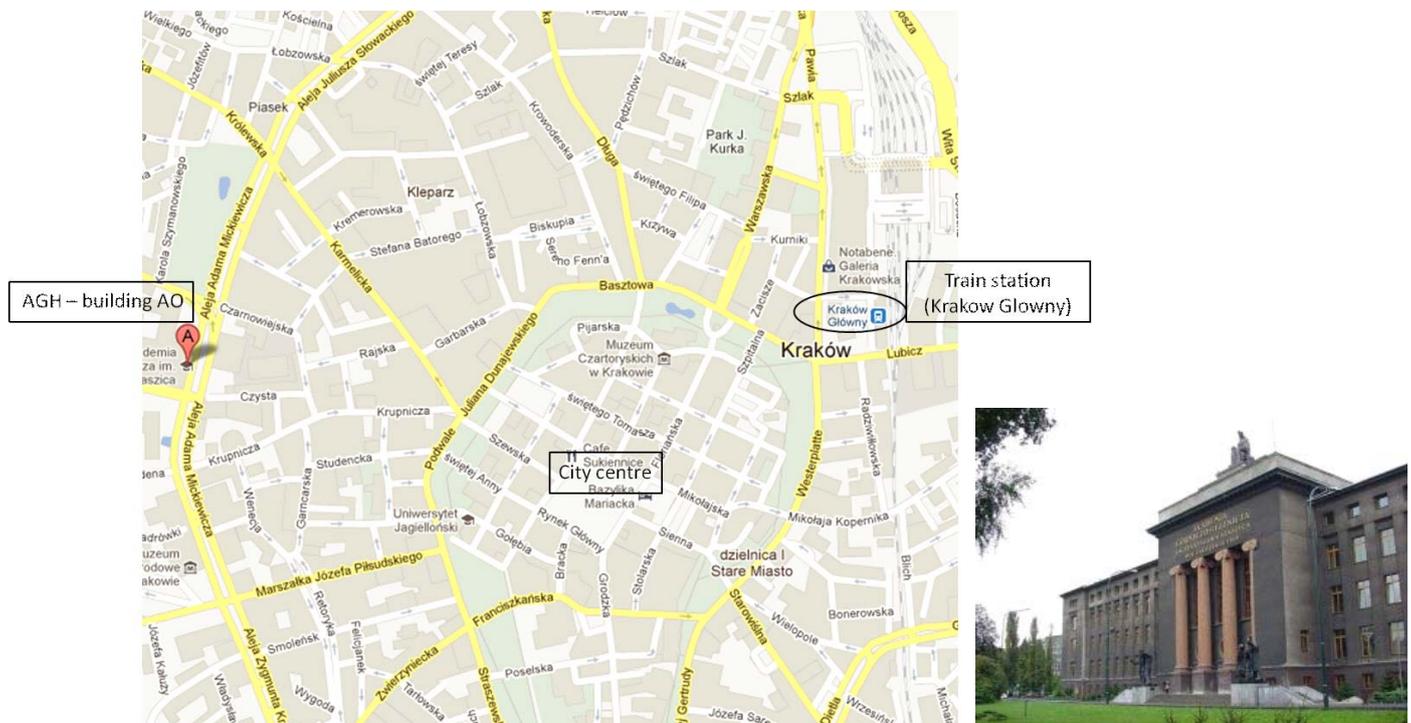


Further Information

Venue Information

The workshop will be delivered in the Main Building A-O, located in the Faculty of Geology, Geophysics and Environmental Protection, AGH University of Science and Technology, Al. Mickiewicza 30, 30-059 Krakow. There will be notices to direct you to the specific teaching room. More information about the AGH can be found at www.agh.edu.pl.

The workshop venue is located within walking distance (ca. 20 minutes) from the main railway station 'Krakow Główny' and the city centre (ca. 15 minutes). There is also public transportation (bus/tram services) from the station and city centre. The names of the bus/tram stations closest to the venue are: 'AGH' or 'Plac Inwalidow'. Bus and/or tram tickets (2.80 PLN for a single ticket) can be purchased in the ticket machines in most buses, or in small shops with newspapers and tobaccos called 'kiosk'. The taxi fare from the railway station is ca. 15-20 PLN.



Location of AGH University and building A-0, the workshop venue (right image)

Travel to Krakow

Air travel

Krakow can be reached by flights to the following airports:

- Balice-Krakow International Airport is very close and well connected to the city centre by public transportation (train/bus services) and by taxis. Bus tickets to the main station/city centre (3.2 PLN single trip, bus no. 292) can be purchased from the bus driver, the RELAY newsagent's shop – T1 international terminal, mezzanine, the ticket machine at the bus stop and ticket vending machines on 292 line buses. Train tickets to the main railway station (10 PLN one-way ticket) can be purchased on a train from the train attendant/automated cashier, in terminal T1 from the automated cashier located near the centre exit. Taxi fares to the city centre start from 50 PLN - for details, visit: www.krakowairport.pl.
- Katowice-Pyrzowice International Airport – a direct mini-bus service from the airport to Krakow is available (46.5 PLN one-way ticket). For details, visit: www.katowice-airport.com/en.
- Okecie International Airport (Warsaw). For details, visit: www.lotnisko-chopina.pl.

Further Information

Rail travel

Krakow is well connected with Warsaw by InterCity trains (ca. 3 hours, fares from 50 to 130 PLN depending on the type of train) and InterRegio trains (ca.3.5 hours, fare 50 PLN). For details and train time-tables, visit: www.intercity.pl.

For further information on travel to Krakow visit:

<http://www.krakow-info.com/travel.htm>

<http://www.krakow-info.com/trains.htm>

For other information relevant for visitors to Krakow, visit: <http://www.krakow.pl/en>

Accommodation

A range of accommodation to suit all budgets is available in Krakow. 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.cracow-life.com/sleep/hotels.php>

<http://www.cracowonline.com/accomodation.php>

<http://www.staypoland.com/krakow-hotels.asp>

<http://www.krakow.pl/en>

The Hotel Polonez is situated 500 metres from AGH University of Science and Technology. For details see: <http://www.booking.com/hotel-polonez>

What is provided

The workshop is free to attend. A hardcopy copy of the lecture notes for each session 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 during the workshop.

Registration

Registration for this workshop is essential as places are limited. To book a place on the workshop, send your name and email address to:

Prof Grzegorz Malina

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Sandra Johana Grajales Mesa, MSc; e-mail: jgrajales@geol.agh.edu.pl

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**You must register for this workshop by 1st March 2012 to reserve your place.
Registrations after this time will not be accepted.**