

Pre-Conference Specialised Short Courses

- Instrumentation, Modelling & Control
- Innovative Sludge Pre-Treatments
- Application of Molecular Biology Tools

*Short, intensive and highly specialised courses,
focussed on innovative and practical aspects
referred to wastewater and sludge
anaerobic treatment processes*

Supported by:



Santiago de Compostela (Spain)
Valladolid (Spain)
Braga (Portugal)
23rd - 24th June 2013



These 3 Specialised Short Courses will be launched prior to the beginning of the Conference under the following topics:

- *Instrumentation, Modelling and Control (IMC)*, organised by the Group of Environmental Engineering and Bioprocesses (GEEB, University of Santiago de Compostela)
- *Innovative Sludge Pre-Treatments (ISP)*, organised by the Group of Environmental Technology (University of Valladolid)
- *Molecular Biology Tools (MBT)*, organised by the Group of Bioresources, Bioremediation and Biorefinery (BRIDGE, University of Minho).

These courses are mainly oriented to PhD students and recent Post-docs who already know or work with anaerobic processes and want to achieve a higher degree of specialisation in one of these particular fields, as well as other researchers or professionals specifically interested in these topics and with a limited amount of time.

The duration of these courses will be 12 h and will be held in 1,5 days (Sunday 23rd and Monday 24th June 2013). Transportation will be provided from Valladolid and Braga to Santiago de Compostela on Monday afternoon.

Didactical methods used in these courses include:

- a) Lectures given by senior researchers
- b) Individual and group exercises in the classroom
- c) Practicum including: fully equipped pilot scale facilities, a computation modelling lab and a microbiology laboratory.

Furthermore, a social programme has been designed to enhance the interaction between all participants (students, lecturers and collaborators) in the courses.



CoMDigest (CTM2010-17196)
INNOTRAZA (CTQ2010-20240)

COURSES FEE

Courses fee: 300 €, which includes course material, coffee breaks, lunch and transportation from Valladolid and Braga to Santiago de Compostela.

There is an **Award Programme** which will offer 15 grants for Ph.D. students and recent Post-docs (less than 5 years) who attend the AD13 Congress for each course (**45 in total**). Selected candidates will pay a reduced fee (30 €).

REGISTRATION

■ Pre-registration procedure

Please fill in the form available [here](#) before **25th March 2013**

Grant applicants: PhD students and recent PostDocs (less than 5 years) may apply for a grant covering 90% registration fee. Applicants have to upload during de pre-registration **a single pdf file** containing the following documents:

- ▶ The *Grant Application Form*
- ▶ A *Short CV* (2 pages maximum)

■ Provisional list

Publication of temporary selected candidates on **8th April 2013**

■ Registration

Before **15th April** complete the registration and payment at www.ad13.org, and then send a copy of bank transfer to the secretariat.

■ Final list on 25th April 2013

SECRETARIAT

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Instrumentation, Modelling & Control (IMC)

Santiago de Compostela, Spain

COURSE PROGRAMME

SUNDAY, 23rd JUNE

9:00-9:15	Course opening
9:15 – 10:30	Instrumentation & Monitoring <i>Dr. Gonzalo Ruiz</i> <i>Catholic University of Valparaíso (Chile)</i>
10:30 – 11:45	Control and Automation <i>Dr. Eugénio Ferreira</i> <i>University of Minho (Portugal)</i>
11:45 - 12:15	<i>Coffee break</i>
12:15 – 13.30	Modelling of Anaerobic Digestion <i>Dr. Damien Batstone</i> <i>University of Queensland (Australia)</i>
13:30 - 15:00	<i>Lunch</i>
15:00 – 16:15	Case Studies <i>Dr. Jean Philippe Steyer</i> <i>INRA (France)</i>
16:15 – 18:30	Open Forum & Discussion Session <i>(All lecturers and students)</i>

MONDAY, 24th JUNE

9:00 – 11:00	Practicum <i>(ETSE Pilot Plant Hall & Computing Lab)</i>
11:00 – 11:30	<i>Coffee break</i>
11:30 – 13:30	Practicum <i>(ETSE Pilot Plant Hall & Computing Lab)</i>
13:30 – 13:45	Closure of the course

IMC COURSE DETAILED SUMMARY

- Course language: English
- Number of participants: 20
- Total hours: 12 (theoretical and practicum)
- Practicum groups: 5
- **Practicum devices with pilot-scale plants:**
 - ▶ A01: Fully automated pilot-scale UASB reactor
 - ▶ A02: Hybrid Anaerobic Aerobic Membrane biological reactor
- **Practicum software activities:**
 - ▶ A03: Modelling anaerobic digestion using ADM1
 - ▶ A04: Virtual plant for the anaerobic co-digestion of multiple organic substrates
 - ▶ A05: Biethane SMART control

Supported by:



SOCIAL PROGRAMME

- Coffee breaks at the ETSE Cafeteria (natural and relaxed environment).
- Lunch at the Grand Hotel Santiago

ORGANISATION

Coordinators:

Dr. Francisco Omil

Dr. Jorge Rodríguez

Group of Environmental Engineering and Bioprocesses
University of Santiago de Compostela
www.usc.es/biogrup



Innovative Sludge Pre-Treatments (ISP)

Valladolid, Spain

COURSE PROGRAMME

SUNDAY, 23rd JUNE

9:00- 9:15	Course opening
9:15 – 10:15	Sludge pretreatment and energy balance in WWTP <i>Sara I. Pérez/Fernando Fdz-Polanco</i> <i>University of Valladolid</i>
10:15 – 11:15	Pretreatment Technologies (1) – Review <i>Hélène Carrere</i> <i>INRA (France)</i>
11:15 - 11:45	<i>Coffee break</i>
11:45 – 12:45	Modelling the pretreatment effect <i>Andrés Donoso</i> <i>INRIA-Chile</i>
12:45 – 13:30	Open Forum & Discussion Session <i>(Lecturers and students)</i>
13:30 - 15:00	<i>Lunch</i>
15:00 – 18:30	Practicum <i>(A01-1hour, A02-1hour & A03-1.5hour)</i>

MONDAY, 24th JUNE

9:00 – 11:30	Thermal Hydrolysis <i>Paal J. Nilsen / Jesús A. Cacho / Pedro P. Nieto</i> <i>Cambi / Veolia Environment / Agbar</i>
11:30 – 12:00	<i>Coffee break</i>
12:00 – 12:40	Round table <i>(Lecturers and students)</i>
12:45 – 13:45	Practicum <i>(A04- 1 hour)</i>
13:45 – 14:00	Closure of the course

IMC COURSE DETAILED SUMMARY

- Course language: English
- Number of participants: 20
- Total hours: 12 (theoretical and practicum)
- Practicum groups: 5
- **Practicum activities:**
 - ▶ A01: From BMP tests to continuous operation
 - ▶ A02: Sludge characterisation techniques
 - ▶ A03: Pretreatment 1: sonication and temperature phased
 - ▶ A04: Pretreatment 2: thermal hydrolysis

Supported by:



SOCIAL PROGRAMME

- Coffee breaks at the EII Cafeteria (natural and relaxed environment).
- Lunch at the EII Restaurant

ORGANISATION

Coordinator:

Dr. Sara Isabel Pérez Elvira

Group of Environmental Technology
University of Valladolid
www.iqtma.uva.es/envtech



Universidad de Valladolid

Molecular Biology Tools (MBT)

Braga, Portugal

COURSE PROGRAMME

SUNDAY, 23rd JUNE

9:00-9:15	Course opening
9:15 – 10:15	Fundamentals of Molecular Biology <i>Diana Sousa / Alcina Pereira</i> <i>University of Minho (Portugal)</i>
10:15 – 11:30	Fundamentals of anaerobic microbial physiology <i>Fons Stams</i> <i>Wageningen University (The Netherlands)</i>
11:30 - 11:45	<i>Coffee break</i>
11:45 – 13:00	Microbial diversity analysis: methods and tools <i>Adam Smith</i> <i>University of Michigan (USA)</i>
13:00 - 14:30	<i>Lunch</i>
14:30 – 15:45	In-situ and ex-situ quantification in molecular ecology <i>Jose Luis Sanz</i> <i>Universidad Autónoma de Madrid (Spain)</i>
15:45 – 18:45	Practicum <i>(Laboratory of Environmental Biotechnology)</i>

MONDAY, 24th JUNE

9:00 – 11:00	Practicum <i>(Molecular and Synthetic Biology Platform)</i>
11:00 – 11:30	<i>Coffee break</i>
11:30 – 13:30	Practicum <i>(Molecular and Synthetic Biology Platform)</i>
13:30 – 13:45	Closure of the course

IMC COURSE DETAILED SUMMARY

- Course language: English
- Number of participants: 20
- Total hours: 12 (theoretical and practicum)
- Practicum groups: 5
- **Practicum activities:**
 - ▶ A01: Demonstration of anaerobic cultivation and enrichment methodologies
 - ▶ A02: Demonstration of FISH and DGGE methods
 - ▶ A03: Demonstration of analysis software

Supported by:



SOCIAL PROGRAMME

- Coffee breaks at the CEB Cafeteria
- Lunch at the UMinho Panoramic Restaurant

ORGANISATION

Coordinators:

Dr. Madalena Alves
Dr. Alcina Pereira
Dr. Diana Sousa

Bioresources, Bioremediation and Biorefinery Group-BRIDGE
University of Minho
<http://lba.deb.uminho.pt/home.asp>



Universidade do Minho