

MODELLING ACTIVATED SLUDGE PLANTS

**Organised by IWA Task Group on Good Modelling Practice
21-22 September 2018, Tokyo, Japan**

Post-conference training to the IWA World Water Congress and
Exhibition (16-21 September 2018, Tokyo, Japan)

How to use Activated Sludge Models in Practice?

There is an ample need for hands on practice of mathematical modelling of Activated Sludge plants.

The two day modelling course provides detailed instruction on mathematical models, their structure and use in practice such as design, operation and control in activated sludge plants, and ample hands-on opportunity to use these models in a class-room setting. The learner will gain an understanding of structure of the IWA Activated Sludge Models (ASMs) and get a hands-on opportunity to use these models.

Target Audience

Professionals interested in modelling of wastewater treatment plants

- Students and PhD students,
- Consultants,
- Plant managers or operators,
- Water boards and
- Academics

Registration and participation

This training comes at extra cost and is separately accessible to non-delegates of the conference also. Registration fee* of the modelling course:

Low-income countries

IWA member: 250 EUR

Non IWA member: 350 EUR

High-income countries

IWA member: 350 EUR

Non IWA member: 450 EUR

*The fee includes morning and afternoon coffee/tea, lunches and materials.

Technical: Modelling course will take place at Chuo University Tokyo. The modelling course is limited to a participation of max. 30 persons. Participants are requested to bring their laptops.

For details on registration please visit <http://worldwatercongress.org/trainings/>
If you have further questions about the content of the training, please contact Guenter Langergraber at guenter.langergraber@boku.ac.at

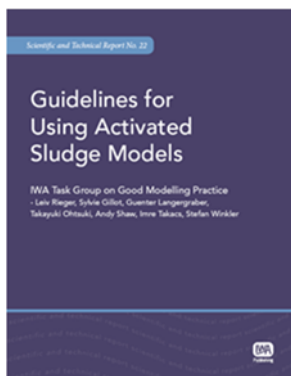
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Learning objectives

After completion of the training you will

- know and understand the principles of mathematical models for wastewater treatment plants,
- understand the structure of the IWA Activated Sludge Models (ASMs) and their use in practice,
- understand the requirements and needs for performing a simulation study for AS plants, and
- be able to use a simulator for building, running and calibrating a model for a AS plants.



Content

The content of the training is based on the work of the GMP TG, i.e. the IWA Scientific and Technical Report (STR) No.22 on "Guidelines for Using Activated Sludge Models" (<http://www.iwapublishing.com/books/9781843391746/guidelines-using-activated-sludge-models>) released in 2012. Participants of the course will have opportunity to purchase the STR at a special rate.

The goal of the GMP TG was to set up an internationally accepted framework to deal with the ASM type models in practice. This framework makes modelling more straightforward and systematic to use especially for practitioners and consultants. Additionally, it helps to define quality levels for simulation results and provides a procedure to assess this quality and assists in the proper use of the models. The framework describes a methodology for goal-oriented application of activated sludge models demonstrated by means of a concise guideline about the procedure of a simulation study and some illustrative case studies. The case studies give examples for the required data quality and quantity and the effort for

Trainers



Guenter Langergraber is a senior scientist at the Institute for Sanitary Engineering and Water Pollution Control at the University of Natural Resources and Life Sciences, Vienna, (BOKU University), Austria. He is IWA Fellow and active in several IWA Specialist Groups and Task Groups including the IWA GMP TG, and co-author of the GMP STR. His main research interests are sustainable resources-oriented sanitation systems, treatment wetlands and numerical modelling.



Takayuki Ohtsuki is Senior Researcher at Kurita Water Industries Ltd., Japan. He was active member of the IWA GMP TG and is co-author of the GMP STR. He has been involved in a wide range of model application projects in industrial field for more than 25 years, including biological process design, wastewater plant retrofit consulting for factories, operator training simulator, web based process performance monitoring and optimization.



Dániel Bencsik is a process engineer at Dynamita SARL, Budapest, Hungary. He holds an MSc in Bioengineering from the Budapest University of Technology and Economics. He has previously worked as a process designer of municipal and industrial WWTPs and has experience in operational supervision and pilot-scale experimentation. His main research interests are modelling aeration systems, greenhouse gas production and reverse osmosis processes.

Key information

Date and time: Day 1: 21 September 2018: 10:00 - 18:30
Day 2: 22 September 2018: 10:00 - 18:00

Location: Chuo University Tokyo (details will be announced in due time)