

I herewith definitely register for the  
**dex summer school**  
from 2<sup>nd</sup> of July to 7<sup>th</sup> of July, 2017 in  
Rottenbach (Upper Austria) and Vienna, Austria

Title or Function

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First- and Family Name/Company/Affiliation Address

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Country/Postcode/City

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E-Mail/Mobile Phone

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The total amount of EUR 390.- (no VAT) will be  
transferred to the bank account

dex  
BIC COBADEFFXXX  
IBAN DE91 7004 0041 0333 4380 00

Please indicate on your bank transfer document  
your name and the reference „**dex-summer school**”.

City/Date/Signature

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Please transfer your registration form either by  
fax to **+49-8092-854579** or by  
e-mail to **info@expertenrat.org**  
Registrations will be accepted **until April 30, 2017**

### Registration

Please register until April 30, 2017  
(by fax or e-mail) using the attached form.

### Costs

Fee: 390, - €  
The fee includes full board, accommodation and the  
bus transfer to accommodation and excursions.

Accommodation in double bed rooms in  
Geboltskirchen (Upper Austria) and Vienna  
from 2<sup>nd</sup> of July – 7<sup>th</sup> of July, 2017  
Single bed rooms at additional costs.

Confirmation of registration is sent after  
payment of € 390, - has been received.

### Bank account

Commerzbank (Germany):  
dex  
BIC COBADEFFXXX  
IBAN DE91 7004 0041 0333 4380 00

### Venue

VTA Austria GmbH  
Umweltpark 1  
AT - 4681 Rottenbach / Upper Austria  
Austria  
&  
TU Wien - TU the Sky  
Getreidemarkt 9  
AT-1060 Vienna  
Austria



## 8<sup>th</sup> dex summer school

[www.expertenrat.org](http://www.expertenrat.org)

2<sup>nd</sup> of July to 7<sup>th</sup> of July, 2017

# WWTP Design and Advances in Energy Positive Wastewater Treatment

Prof. Dr.-Ing. N. Jardin  
Prof. Dr. techn. N. Matsché  
Prof. Dr.-Ing. F.W. Günthert  
Prof. Dr.-Ing. N. Dichtl  
Prof. Dr.-Ing. F.-B. Frechen  
Prof. Dr.-Ing. M. Wichern  
Prof. Dr.-Ing. R. Hilliges  
Prof. Dr.-Ing. C. Schaum  
Prof. Dr.-Ing. J. Krampe

Venue:

VTA Austria GmbH  
4681 Rottenbach,  
Austria

TU Wien  
1060 Vienna,  
Austria

Organiser:

Deutscher Expertenrat (dex)  
German Experts  
Association for  
Environmental Technology  
and Infrastructure



# Eighth dex summer school 2017 Rottenbach/Vienna, Austria

## WWTP Design and Advances in Energy Positive Wastewater Treatment

### Goals of dex summer school

Transfer of scientific background, advanced knowledge and actual experience on methodologies and technologies for water quality management as it is required to implement European Water legislation (Water Framework Directive) and is supported by new scientific research results.

Progress in this trans-disciplinary field of expertise relies on a common professional language which will promote international human networking of (young) water professionals and enhance team working.

### 2017

dex summer school started in 2009 and was successfully continued since then with more than 120 young water professionals from more than 12 different countries. The 2017 program follows the strategy of maintaining basic lectures enriched with new topics of interest. As a special feature in 2017, part of the summer school will be held together with the summer school of the EU financed project Powerstep in Vienna, where innovative and cutting-edge research on creating energy positive waste water treatment plants will be presented.

The contents of the course covers: Advanced scientific background, actual knowledge, experience and practical aspects for design and operation of waste water treatment plants, sludge-handling and advances in energy positive wastewater treatment plants.

### Participants

Post graduate and doctoral students (civil/environmental engineering or similar), young water professionals from consulting companies utilities and equipment suppliers from all of Europe. Special emphasis on young professionals from the new EU and accession countries in Central and Eastern Europe (sponsoring of fee is possible with a separate application supported by a supervisor). Max.~25 participants.

### Sunday, 02<sup>nd</sup> of July 2017 - Rottenbach

**17:00** Arrival at Geboltskirchen

**19:00 – 22:00** Dinner with dex Professors

### Monday, 03<sup>rd</sup> of July 2017 - Rottenbach

**08:30 – 09:00** Introduction

*Prof. Dr.-Ing. N. Jardin, Ruhrverband (DE)*

*Prof. Dr. techn. N. Matsché, TU Wien (AT)*

**9:00 – 12:00** Planning and design data of wastewater treatment systems

*Prof. Dr.-Ing. N. Jardin, Ruhrverband (DE)*

**13:00 – 13.30** Introduction of VTA

*Dr.hc. U. Kubinger, VTA (AT)*

**13:30 – 17:30** Laboratory work - sludge parameters and microscopical analyses

*Prof. N. Matsché, TU Wien (AT)*

*J. Stelzer, MSc and M. Peter, B.Eng, VTA (AT)*

### Barbecue evening

### Tuesday, 04<sup>th</sup> of July 2017 - Rottenbach

**08:30 – 12:00** Activated sludge process design

*Prof. Dr. N. Matsché, TU Wien (AT)*

**13:00 – 15:30** Primary and secondary settling tanks and sludge mass balance

*Prof. Dr.-Ing. F.W. Günthert, Uni-Bw München (DE)*

**15:30 – 18:00** Sludge treatment, sludge reuse and phosphorus recycling

*Prof. Dr.-Ing. N. Dichtl, TU Braunschweig (DE)*

### Wednesday, 05<sup>th</sup> of July 2017 - Rottenbach

**08:30 – 11:30** Membrane technology

*Prof. Dr.-Ing. F.-B. Frechen, Uni-Kassel (DE)*

**12:30 – 14:00** Microbial fuel cells for wastewater treatment – perspectives and limitations

*Prof. Dr.-Ing. M. Wichern, Ruhruni Bochum (DE)*

*Prof. Dr.-Ing. R. Hilliges, Hochschule Augsburg (DE)*

*14:00 WWTP Excursion*

*18:00 Transfer to Vienna*

### Thursday, 06<sup>th</sup> of July 2017 - Vienna

**09:00 – 10:00** Energy consumption and production on wastewater treatment plants

*Prof. Dr.-Ing. J. Krampe, TU Wien (AT)*

**10:00 – 11:00** The WWTP of the future – A partner of the energy industry?

*Prof. Dr.-Ing. C. Schaum, Uni-Bw München (DE)*

**11:00 – 12:00** Introduction to Powerstep EC Project

<http://www.powerstep.eu/>

*B. Lesjean, Veolia Germany (DE)*

**13:00 – 17:15** Presentation Powerstep Part I:

- C-extraction for energy recovery into biogas
- N-removal in main stream
- N-management in side stream

*17:30 Guided city tour Vienna*

### Friday, 07<sup>th</sup> of July 2017 - Vienna

**9:00 – 11:00** Presentation Powerstep Part II:

- Biogas valorisation and energy management
- Full plant concept integration

**11:00 – 11:30** Closing remarks on Powerstep

*Dr. C. Loderer, KW Berlin (DE)*

*12:30 Closing Ceremony + Third Man Tour*