

## Scientific and Technical Program

### Sunday, 9 September 2007

15:00	19:00	Registration
18:00	20:00	Meet and Greet

### Monday, 10 September 2007

09:00	09:30	<b>Opening Ceremony</b>	Prof. Franz Rammerstorfer, Vice Rector of TU Vienna Prof. Harro Bode, Chairman of the Scientific Committee Prof. Helmut Kroiss, President of the Conference
09:30	11:00	<b>Session 1: Case studies I</b>	<b>Session Chair: Harro Bode</b>
09:30	10:00	<b>M. Papp</b> , S. Zelinka (A)	Wastewater Treatment and Sludge Disposal in Vienna
10:00	10:30	<b>J. Wanner</b> , M. Kos, L. Novák (CZ)	Intensification of Prague Central WWTP – Ten years of practical experiences with in-situ bioaugmentation nitrification method
10:30	11:00	<b>J.W. Loiacono</b> , C-F.H. Ho, N.V. Sierra, D. Jolis, D. Parker, F. Smith (USA)	San Francisco's Vision for the Future: An Integrated Urban Wastewater Management Plan
11:00	11:30	Coffee Break	
11:30	13:00	<b>Session 2: Case studies II</b>	<b>Session Chair: Michel Gousailles</b>
11:30	12:00	<b>A.F. van Nieuwenhuijzen</b> , M. Havekes, B.A. Reitsma, P. de Jong (NL)	Wastewater Treatment Plant Amsterdam West: New, Large, High-Tech and Sustainable
12:00	12:30	E. Choi, <b>Z. Yun</b> , K.S. Min (KOR)	The invisible BNR plant provides high quality effluent and recreational area for densely populated urban area
12:30	13:00	J.R. Campos, M.A.P. Reali, <b>R. Rossetto</b> , J. Sampaio (BR)	A Wastewater Treatment Plant Composed of UASB Reactors, Activated Sludge with DAF and UV Disinfection, in Series
13:00	14:00	Lunch Break	
14:00	15:30	<b>Session 3: Case studies III</b>	<b>Session Chair: Timothy Shea</b>
14:00	14:30	<b>N. Jardin</b> , L. Rath, A. Schönfeld, T. Grünebaum (D)	Cost-effective upgrading of a biological wastewater treatment plant by using lamella separators with bypass operation
14:30	15:00	<b>G. Wandl</b> , H. Schaar, M. Papp, K. Svardal (A)	The first two years of full scale operation of the two-stage Main Wastewater Treatment Plant of Vienna
15:00	15:30	<b>H.K. Winkler</b> , W. Widmann (A)	The Sulaibiya Wastewater Treatment and Reclamation Project
15:30	16:00	Coffee Break	
16:00	17:30	<b>Session 4: Aeration and mixing</b>	<b>Session Chair: Masahiro Maeda</b>
16:00	16:20	<b>M. Wagner</b> , P. Looock, T. Guenkel (D)	Design and Operational Aspects of Modern Fine Bubble Aeration Systems
16:20	16:30	<b>W. Frey</b> (A)	The role of diffuser arrangement and mixing for efficiency optimisation of fine bubble aeration systems
16:30	17:00	<b>S. Gillot</b> , A. Héduit (F)	Prediction of alpha factor values for fine pore aeration systems
17:00	17:30	<b>D. Rosso</b> , L.E. Larson, M.K. Stenstrom (USA)	Aeration of large-scale municipal wastewater treatment plants: state of the art
17:30	18:30	<b>Meeting of the IWA Specialist Group</b>	<b>Chair: Harro Bode</b>

**Tuesday, 11 September 2007**

<b>08:30</b>	<b>09:00</b>	<b>Keynote I: Sudhir Murthy</b>	<b>The role of wastewater treatment plants for the nutrient management in the Chesapeake Bay</b>
<b>09:00</b>	<b>10:30</b>	<b>Session 5: Nutrient removal I</b>	<b>Session Chair: Norbert Matsché</b>
09:00	09:30	<b>K.-H. Rosenwinkel</b> , M. Beier, L.-C. Phan, P. Hartwig (D)	Conventional and Advanced Technologies for Biological Nitrogen Removal in Europe
09:30	10:00	<b>K.R. Pagilla</b> , K. Czerwionka, M. Urgun-Demirtas, J. Makinia (USA)	Nitrogen Speciation in Wastewater Treatment Plant Influent and Effluents - the US and Polish Case Studies
10:00	10:30	<b>B. Böhm</b> (D)	Modifying an Existing Settlement Tank into an Activated Sludge Denitrification Reactor
<b>09:00</b>	<b>10:30</b>	<b>Workshop 1: Cost Management Tools</b>	<b>Session Chair: Michael Beckereit</b>
10:30	11:00	Coffee Break	
<b>11:00</b>	<b>12:30</b>	<b>Session 6: Nutrient removal II</b>	<b>Session Chair: Harald Kainz</b>
11:00	11:30	<b>K. Jönsson</b> , A. Pottier, I. Dimitrova, U. Nyberg (S)	Utilising laboratory experiments as a first step to introduce primary sludge hydrolysis in full-scale
11:30	12:00	M. Swinarski, <b>J. Makinia</b> , K. Czerwionka, W. Fordonski (PL)	Improving Denitrification Efficiency at the "Wschod" WWTP in Gdansk (Poland) - Effects of Different Carbon Sources
12:00	12:30	<b>S.M. Scherrenberg</b> , R. Neef, H.W.H. Menkveld, J.H.J.M. van der Graaf (NL)	Dual media filtration competitive with continuous sand filtration for phosphorous and nitrogen removal
<b>11:00</b>	<b>12:30</b>	<b>Workshop 2: Human Resources Management</b>	<b>Session Chair: Roelof Kruize</b>
12:30	13:30	Lunch Break	
<b>13:30</b>	<b>17:30</b>	<b>Excursion to WWTP Vienna</b>	
<b>19:30</b>	<b>22:00</b>	<b>"Heurigen" (optional)</b>	

**Wednesday, 12 September 2007**

<b>08:30</b>	<b>09:00</b>	<b>Keynote II: László Somlyódy</b>	<b>Economic aspects of municipal wastewater treatment in the Danube region</b>
<b>09:00</b>	<b>11:00</b>	<b>Session 7: Design and planning</b>	<b>Session Chair: Johannes Pinnekamp</b>
09:00	09:30	<b>D. Dominguez</b> , B. Truffer, W. Gujer (CH)	WWTPs for the future - Assessing the required flexibility
09:30	10:00	<b>S. Winkler</b> , M. Gasser, W. Schättle, D. Kremmel, P. Kletzmayer, N. Matsché (A)	Upgrading of WWTPs for nutrient removal under optimal use of existing structures
10:00	10:30	<b>L. Høiby</b> , J. Clauson-Kaas, H. Wenzel, H.F. Larsen, B.N. Jacobsen, O. Dalgaard (DK)	Sustainability assessment of advanced wastewater treatment technologies
10:30	11:00	<b>E.P. Jordão</b> , I. Volschan Jr., P.A. Sobrinho (BR)	Secondary WWTP Preceded By UASB Reactors - An Excellent Brazilian Experience
<b>09:00</b>	<b>11:00</b>	<b>Workshop 3: Safety Management</b>	<b>Session Chair: Miklos Papp</b>

11:00	11:30	Coffee Break	
<b>11:30</b>	<b>13:00</b>	<b>Session 8: Costs and economics</b>	<b>Session Chair: Norbert Jardin</b>
11:30	12:00	S. Lindtner, <b>H. Schaar</b> , H. Kroiss (A)	Benchmarking of large municipal wastewater treatment plants > 100,000 PE in Austria
12:00	12:30	<b>A. Kraft</b> , F. Obenaus (D)	Energy management - A key factor of economic plant operation
12:30	13:00	<b>T. Partaj</b> , M. Papp, J. Weiss (A)	The Main Wastewater Treatment Plant of Vienna: Favourable Operation Conditions as Consequence out of Well Designed Tender Procedures
<b>11:30</b>	<b>13:00</b>	<b>Workshop 4: Public Relations &amp; Cooperation with Authorities</b>	<b>Session Chairs: Per Manhem und Jon Loiacono</b>
13:00	14:00	Lunch Break	
<b>14:00</b>	<b>15:30</b>	<b>Final poster session &amp; announcement and short presentation of winning posters</b>	<b>Session Chair: Harro Bode</b>
15:30	16:00	Coffee Break	
<b>16:00</b>	<b>17:30</b>	<b>Session 9: Operating experiences I</b>	<b>Session Chair: Wah Yuen Long</b>
16:00	16:30	<b>D. Braun</b> , W. Gujer (CH)	Reactive tracers reveal hydraulic and control instabilities in full-scale activated sludge plant
16:30	17:00	<b>S. Morling</b> (S)	Plant performance of an Sequencing Batch Reactor in Poland, operated with high Chromium load, reaching advanced nutrient removal
17:00	17:30	<b>B. Teichgräber</b> , P. Jagemann (D)	Biological Nutrient Removal - Requirements and Reality in Two Case Studies
<b>19:30</b>	<b>23:30</b>	<b>Gala Conference Dinner / Vienna City Hall</b>	

### Thursday, 13 September 2007

<b>08:30</b>	<b>09:00</b>	<b>Keynote III: Georges Ekama</b>	<b>New developments in modelling wastewater treatment processes – Using Stoichiometry to build a plant wide mass balance based steady state WWTP model</b>
<b>09:00</b>	<b>10:30</b>	<b>Session 10: Modelling</b>	<b>Session Chair: Mogens Henze</b>
09:00	09:30	<b>K.A. Third</b> , A.R. Shaw, L. Ng (AUS)	Application of the Good Modelling Practice Unified Protocol to a plant wide process model for Beenyup WWTP design upgrade
09:30	10:00	L. Koncsos, <b>Z. Melicz</b> (H)	Use of a mathematical optimisation procedure for model calibration and enhancement of nitrogen removal in high-load systems
10:00	10:30	G. Sin, D.J.W. De Pauw, <b>S. Weijers</b> , P.A. Vanrolleghem (B)	Developing a framework for continuous use of models in daily management and operation of WWTPs: A life cycle approach
10:30	11:00	Coffee Break	

<b>11:00</b>	<b>13:00</b>	<b>Session 11: Settling and separation</b>	<b>Session Chair: Thomas Grünebaum</b>
11:00	11:30	<b>J.L. Barnard</b> , T.E. Kunetz, J.P. Sobanski (USA)	65-year old final clarifier performance rivals that of modern designs
11:30	12:00	<b>M. Patziger</b> , H. Kainz, M. Hunze, J. Józsa (A)	Analysing Sludge Balance in Activated Sludge Systems with a Novel Mass Transport Model
12:00	12:15	<b>K. Ramalingam</b> , J. Fillos, S. Xanthos, M. Gong, A. Deur, K. Beckmann (USA)	Development and Validation of a 3-Dimensional Computational Fluid Dynamics(CFD) Model for Rectangular Settling Tanks in New York City Water Pollution Control Plants
12:15	12:30	<b>P.G. Piekema</b> , J. Krijgsman (NL)	Optimisation of final clarifiers using the dynamic model FAST2D
12:30	13:00	<b>D.S. Parker</b> , R.P. Merlo, J.A. Jimenez, E.J. Wahlberg (USA)	Analyzing Wet Weather Flow Management Using State of the Art Tools
13:00	14:00	Lunch Break	
<b>14:00</b>	<b>15:30</b>	<b>Session 12: Sludge Management</b>	<b>Session Chair: Peter Balmér</b>
14:00	14:30	<b>V. Parravicini</b> , K. Svardal, H. Kroiss (A)	Post-aeration of anaerobically digested sewage sludge for advanced COD and nitrogen removal: results and cost-benefit analysis at large-scale
14:30	15:00	<b>G. Bowden</b> , B. Bodniewicz, B. Stinson, A. Deur, K. Beckmann (USA)	Optimization and Performance of a Side-Stream Centrate/Rejection Water Treatment System Integrated with a Secondary Step-Feed Process
15:00	15:30	<b>D.J.I. Gustavsson</b> , I. Dimitrova, U. Nyberg, J. la Cour Jansen (S)	Fast upstart of a full-scale SBR for treatment of sludge digester liquor and operation with stable nitrite accumulation
<b>14:00</b>	<b>15:30</b>	<b>IWA Task group "Good Modelling Practice" Workshop</b>	<b>Chair: Leiv Rieger, location will be announced.</b>
15:30	16:00	Coffee Break	
<b>16:00</b>	<b>17:00</b>	<b>Session 13: Operating experiences II</b>	<b>Session Chair: Kees de Korte</b>
16:00	16:30	<b>V. Erbe</b> , G. Kolisch, F. Schmidt (D)	A Decade of Kohlfurth WWTP Upgrade under Operation - Highlights and Drawbacks
16:30	17:00	<b>G.T. Daigger</b> , A. Hodgkinson, D. Evans (USA)	A Sustainable Near-Potable Quality Water Reclamation Plant for Municipal and Industrial Wastewater
<b>17:00</b>	<b>17:30</b>	<b>Closing Ceremony</b>	
<b>17:30</b>	<b>19:00</b>	<b>"Gulaschausklang"</b>	

## Reserve papers (poster)

1	<b>A. Jobbagy</b> , G. Tardy, G. Palkó, A. Benákova, O. Krhutková, J. Wanner (H)	Savings with upgraded performance through improved activated sludge denitrification in the combined activated sludge- biofilter system of the Southpest Wastewater Treatment Plant
2	D. Brocard, M. Garcia, T. Kunetz, J. Sobanski, A. Waratuke, <b>T. Weber</b> (USA)	Physical Model Study of Chicago's New Calumet Influent Pumping Station
3	<b>I. Keresztényi</b> , G. Kicsi, C. Dobolyi, G. Isaák (H)	Enhanced biological treatment of a residual oil processing plant wastewater by a membrane-bioreactor for effluent quality improvement in a Hungarian refinery
4	<b>D. di Trapani</b> , G. Mannina, M. Torregrossa, G. Viviani (I)	Hybrid moving bed biofilm reactors: a pilot plant experiment
5	<b>T. Palmgren</b> , A.M. Sundin (S)	Running an efficient Wastewater Treatment plant in Sweden
6	<b>N. Schwarzenbeck</b> , E. Bomball, W. Pfeiffer (D)	Can a wastewater treatment plant be a powerplant? - a case study

## Posters

7	Y. Ubukata, A. Ibe (Japan)	Amino acid uptake and phosphate release by anaerobic/aerobic activated sludge used in treating municipal sewage
8	J.Sandino, J. Sizcka, T. Sigmund, R. Onderko (USA)	Bio Chemically Enhanced Clarification for the Management of Wet-Weather Flows in Large WWTPs
9	M.K. Nielsen, I. Damgaard, G.B. Nielsen, M. Dâverhög, A. Fransson (Denmark)	Biological Nutrient Removal by a combining plugflow and fully mixed reactors in Dynamic Plugflow, the DP-process
10	D. von Felde (Germany)	Cofeimentation in Wastewater Treatment Plants
11	I.A. Espírito Santo, E.M.G.P. Fernandes, M.M. Araújo, E.C. Ferreira (Portugal)	Cost Minimization of a WWTP Using an Augmented Lagrangian Pattern Search Based Solver
12	Ying-zi Lin, Yin Jun, Zhao Ke, Zhang Li-guo, Liu Zhi-sheng, Wang He-li (China)	Design and operation of A/O process in Changchun municipal wastewater treatment plant
13	S.L. Kuang, C.H. Guo, V. Ivanov (Singapore)	Design of BiolronTech Process for Phosphorous Removal from Return Liquor of Municipal Wastewater Treatment Plant
14	A. Kumar, R. Bhargava, P. Kumar (India)	Design of Multistage Activated Sludge-Biofilm Reactors
15	T.G. Shea, P. Burrowes (USA)	Discretionary versus Non-Discretionary Wastewater Treatment Projects - What's Being Left Behind?
16	Mi Hwa Kim, Tae-Joo Park (Korea)	Economic Benefits by Implementing a Fixed-Biofilm BNR Process for Retrofitting the Existed Municipal Wastewater Treatment Plants in Korea
17	P. Zima, J. Makinia, M. Swinarski, K. Czerwionka (Poland)	Effects of Dispersion on Predicting Longitudinal Concentration Profiles in Actual Flow Activated Sludge Reactors
18	J. Mikosz, Z. Mucha, S.M. Rybicki (Poland)	Evaluating the performance of aeration system with computer simulation: a case study
19	G. Insel, G. Sin, D.S. Lee, D.J.W. de Pauw, S. Weijers, P.A. Vanrolleghem (Turkey)	Evaluation of prediction performance of ASM2d for an intermittently aerated carousel type EBPR plant after three years its calibration
20	K. Press-Kristensen, E. Lindblom, J.E. Schmidt, M. Henze (Denmark)	Examining the biodegradation of endocrine disrupting bisphenol A and nonylphenol in WWTPs
21	A.G.N. van Bentem, P.F.T. Schyns, H.F. van der Roest (Netherlands)	Full-scale experiences at the Varsseveld MBR

## Posters

22	G. Langergraber, J. Alex, N. Weissenbacher, D. Woerner, M. Ahnert, T. Frehmann, N. Halft, I. Hobus, M. Plattes, V. Spering, S. Winkler (Austria)	Generation of diurnal variation for influent data for dynamic simulation
23	B. Mrowiec, J. Suschka (Poland)	Generation of Aromatic Hydrocarbons (BTX's) in Anaerobic Processes and the Impact on Treated Sewage Quality
24	M. Ahnert, F. Blumensaat, G. Langergraber, J. Alex, D. Woerner, T. Frehmann, N. Halft, I. Hobus, M. Plattes, V. Spering, S. Winkler (Germany)	Goodness-of-fit measures for numerical modelling in urban water management - a summary to support practical applications
25	M.T. Garrett, jr. (USA)	How to avoid a solids washout in an activated sludge plant
26	J. Ribes, J. Serralta, A. Seco, J. Ferrer, R. Lloret, I. Bernácer, J.J. Morenilla (Spain)	Implementation of a supervisory fuzzy logic based control system in the Denia WWTP
27	Kurt Ingerle (Austria)	Large Biocos Wastewater Treatment Plants
28	O. Jamjun, R. Dring, T. Conway, G. Shimp, K. Pagilla (USA)	Master planning to improve operational performance at the Stickney water reclamation plant
29	A. Schmid (Germany)	Mechanical Aeration System by "Supercavitation"
30	P. Phothislangka, M.A. Schoen, B. Wett (Austria)	Mechanisms and impacts of heat pretreatment of sewage sludge for increased biogas production
31	D. Petruzzelli, G. Boghetich, M. Petrella, A. Petrella, E. Ranieri, V. Petruzzelli (Italy)	Modelling carbon and nitrogen removal at a large wastewater treatment plant
32	R. Rustum, A.J. Adeloye (UK)	Modelling Activated Sludge Process Using Adaptive Network- Based Fuzzy Inference System (ANFIS)
33	V. Spering, N. Schlösser, S. Märker, K.-H. Rosenwinkel (Germany)	Modelling biocinetics of Microthrix Parvicella as module for the ASM3
34	G. Mininni, C. Di Iaconi, G. Mascolo, A. Pollice (Italy)	New perspectives for up-grading wastewater treatment plants to meet the standards of Water Framework Directive and Directives on wastes
35	M. Urgun-Demirtas, K.R. Pagilla, T.E. Kuntz, J.P. Sobanski, K.P. Law (USA)	Nutrient removal process selection for planning and design of large wastewater treatment plant upgrade needs
36	F. Michelet, T.F. Chan, F. Rogalla (UK)	Optimising the Solids and Energy Balance of Biofilm Reactors
37	O. Caliskaner, G. Tchobanoglous (USA)	Optimization of Compressible Medium Filter for Secondary Effluent Filtration
38	J. Alex, M. Wichern, V. Spering, N. Halft, M. Ahnert, T. Frehmann, I. Hobus, G. Langergraber, M. Plattes, S. Winkler, D. Woerner (Germany)	A method to use dynamic simulation in compliance to stationary design rules to refine WWTP planning
39	C. Sahlmann, J.A. Libra, R. Gnirss (Germany)	Reducing Aeration Costs using a Control Strategy Based on Nitrification Rates
40	J. Pedersen, H.A.R. Thomsen, T. Önerth, B.N. Jacobsen, T. Guildal (Denmark)	Reducing costs and increasing hydraulic capacity by means of advanced control and ATS (Aeration Tank Settling)
41	F.J. Fernández, J. Villaseñor, L. Rodríguez (Spain)	Reduction of aeration costs by tuning a multipoint on/off controller
42	A. Mattsson, B.-M. Wilén, L. Björnsdotter, D. Lumley, P. Balmér (Sweden)	Saving external carbon source for post-denitrification by deoxygenation of trickling filter effluent
43	S.M. Rybicki, M. Cimochoicz-Rybicka, J. Mikosz (Poland)	Selected impact of enhanced phosphorus removal on wastewater sludge processing
44	L. Plonka, K. Miksch (Poland)	Short-term wastewater flow prediction by means of artificial neural network for better WWTP control



## Posters

45	B. Petrik, J. Heywood (USA)	The Mangere WTP UV Disinfection Facility, Auckland New Zealand - Implementation of a World-Class Installation
46	G. Demoulin, K. Wutscher (Austria)	The World's Largest SBR in Malaysia
47	G.V. Crawford, S. Blair, R. Lewis (Canada)	Three Years of Operation of Large Membrane Bioreactors at Traverse City
48	S.M. Rybicki, E. Płaza (Poland)	Wastewater treatment in Poland - present situation and trends
49	G.P. Villioti, N. Tzouvaras, G. Stefanakou (Greece)	Psytalia Wastewater Treatment Plant: Wastewater primary treatment assessment over a ten year long period
50	R.J. Santos, A.A. Martins, M.M. Dias (Portugal)	Analysis of Mixing Influence in Activated Sludge Simulation
51	B. Kiss, V. Bakos, A. Szabó, A. Jobbágy (Hungary)	Comparative experimental studies for upgrading the Northpest Wastewater Treatment Plant
52	Mi-Hwa Kim, Ha-Jin Kim, So-Jung Park, Young-Gi Kim, Tae-Joo Park (Korea)	Evaluation of Optimum Conditions on Physiochemical Preliminary Treatment of Korean Foodwaste for Co-Digestion with Organic Wastes
53	Z. Kazmierczak, L. Plonka, J. Surmacz-Gorska (Poland)	Wastewater Composition and Flow Rate Changes in Years 2000 - 2005 as a Factor Influencing WWTPs' Performance in the Wielkopolska Region
54	G. Mannina, G. Viviani (Italy)	Upgrading of an existing WWTP with Hybrid Moving Bed Biofilm Reactor Systems
55	E. Saracevic, F. Bertrán de Lis, N. Matsché (Austria)	Hydrogen sulfide in pressure sewers - Evaluation of combat strategies
56	A.I. Shchetinin, M.A. Yesin, B.Y. Malbiev (Ukraine)	Upgrading of Chernogolovka wastewater treatment Plant (WWTP)
57	C.A. Zaror, C. Segura, H. Mansilla, M. A. Mondaca, P. González (Chile)	Detoxification of Waste Water Contaminated with Imidacloprid using Homogeneous and Heterogeneous Photo-Fenton Processes