

Curriculum Vitae



Prof. Dr.-Ing. Jürgen Wiese

University of Applied Sciences Magdeburg-Stendal
Department of Water, Environment, Construction and Safety
Professor for Urban Water Management – Wastewater

Breitscheidstraße 2
39114 Magdeburg
Saxony-Anhalt, Germany

Phone: +49-391-8864-373
Mobile: +49-151-62461999
E-Mail: juergen.wiese@hs-magdeburg.de

Employment History

since 2016	Professor „Urban Water Management – Wastewater“, University of Applied Sciences Magdeburg-Stendal
2008-2015	Managing Director , GKU Gesellschaft für kommunale Umwelttechnik mbH (www.gku-fulda.de), Fulda. GKU is an affiliated firm of the RhönEnergie Fulda-Group (www.re-fd.de), a public multi-utility company. GKU is specialized on planning, construction, operation and optimization of wastewater treatment plants and sewer systems.
2013-2015	Managing Director , Biothan GmbH (www.biothan.de), Fulda. Biothan is an affiliated firm of the RhönEnergie Fulda-Group, a public multi-utility company. Biothan is operating a large biogas plant for organic municipal waste with a biomethane production and a post-composting area.
2004-2008	Head of Research and Development , EnerCess GmbH and ASA – Anlagen und Sondermaschinen Automation GmbH, two companies, which were specialized on planning, construction, automation and optimization of agricultural and industrial biogas plants.
1997-2004	Research Assistant , Institute of Urban Water Management, Technical University of Kaiserslautern Germany

Education

2014	Habilitation / postdoctoral qualification , Helmut-Schmidt University, University of the Federal Armed Forces, Hamburg, Germany
2004	Ph.D. thesis (Dr.-Ing.) , Technical University of Kaiserslautern, Germany
1997	Diploma in civil engineering (Dipl.-Ing.) , Technical University of Kaiserslautern, Germany

Professional interests

- Wastewater Treatment
- Sewage Sludge Treatment
- Biogas Technologies (organic waste, renewable energy crops)
- Energy efficiency (e. g., wastewater treatment plants, water treatment plants)
- Real-Time Control and Decision Support
- Artificial Intelligence (especially Case-Based Reasoning)
- Integrated Simulation and Optimization of WWTP and Combined Sewer Systems

Publications (Selection)

Books

- J. Wiese and M. Bischoff [2013]: *Instrumentation, Control and Automation on Biogas Plants*, Book Series “Biogas Engineering and Application”, Volume 3, China Agricultural University Press, editors: R. Dong and B. Raninger, ISBN 978-7-5655-0751-9, PR of China
- M. Bischoff, J. Wiese and B. Raninger [2013]: *Views on the communication and cooperation needs in biogas sector between Germany and China*, Book Series “Biogas Engineering and Application”, Volume 3, China Agricultural University Press, editors: R. Dong and B. Raninger, ISBN 978-7-5655-0751-9, PR of China

Internationale Peer-Reviewed Journals

- J. Wiese and R. König [2009]: *From a black-box to a glass-box system – The attempt towards a plant-wide automation concept for full-scale biogas plants*. Water Science & Technology (WST), Vol. 60, No. 2, pp. 321–327, IWA Publishing, UK
- D. Muschalla, M. Schütze, K. Schroeder, M. Bach, F. Blumensaat, K. Klepischewski, M. Pabst, A. Pressl, N. Schindler, J. Wiese, and G. Gruber [2009]: *The HSG Guideline Document for Modelling*. Water Science & Technology (WST), Vol. 60, No. 8, pp. 2065–2075, IWA Publishing, UK
- J. Wiese and O. Kujawski [2008]: *Operational results of an agricultural biogas plant equipped with modern instrumentation and automation*. Water Science & Technology (WST), Vol. 57, No. 6, pp. 803-808, IWA Publishing, UK
- J. Wiese and M. Häck [2006]: *Instrumentation, control and automation for full-scale manure-based biogas systems*. Water Science & Technology (WST), Vol. 54, No. 9, pp. 1-8, IWA Publishing, UK
- J. Wiese, J. Simon and H. Steinmetz [2006]: *A process-dependent real-time controller for sequencing batch reactor plants – Results of full-scale operation*. Water Science & Technology (WST), Vol. 53, No. 4-5, pp. 143-150, IWA Publishing, UK
- M. Häck and J. Wiese [2006]: *Trends in instrumentation, control and automation and the consequences on urban water systems*. Water Science & Technology (WST), Vol. 54, No. 11-12, pp. 265-272, IWA Publishing, UK
- H. Steinmetz and J. Wiese [2006]: *Instrumentation, control and automation for full-scale sequencing batch reactor plants*. Water Practice & Technology (WPT), wpt.2006.076, IWA Publishing, UK
- J. Simon, J. Wiese and H. Steinmetz [2006]: *A comparison of continuous flow and sequencing batch reactor plants concerning integrated operation of sewer systems and wastewater treatment plants*. Water Science & Technology (WST), Vol. 54, No. 11-12, pp. 241-248, IWA Publishing, UK
- J. Wiese, J. Simon, and T.G. Schmitt [2005]: *Integrated Real-Time Control for a Sequencing Batch Reactor Plant and a Combined Sewer System*. Water Science & Technology (WST), Vol. 52, No. 5, pp. 179-186, IWA Publishing, UK
- J. Wiese, A. Stahl, and J. Hansen [2005]: *Applying and Optimizing Case-Based Reasoning for Wastewater Treatment Systems*. AI Communications - The European Journal on Artificial Intelligence, Vol. 18, No. 4, pp. 269 – 279
- G. Langergraber, L. Rieger, S. Winkler, J. Alex, J. Wiese, C. Owerdieck, M. Ahnert, J. Simon, and M. Maurer [2004]: *Proposal of general guidelines for high quality simulation studies of wastewater treatment plant*. Water Science & Technology (WST), Vol. 50, No. 7, pp. 131-138, IWA Publishing, UK
- H. Steinmetz, J. Wiese and T.G. Schmitt [2002]: *Efficiency of SBR technology in municipal wastewater treatment plants*. Water Science & Technology (WST), Vol. 46, No 4-5, pp. 293-299, IWA Publishing, UK

International Conferences (Full-Paper)

- J. Wiese and R. König [2009]: *From a black-box to a glass-box system – The attempt towards a plant-wide automation concept for full-scale biogas plants*. 10th IWA Conference in Instrumentation, Control and Automation 2009, Proceedings, Cairns, Australia
- D. Muschalla, M. Schütze, K. Schroeder, M. Bach, F. Blumensaat, K. Kelpiszewski, M. Pabst, A. Pressl, N. Schindler, J. Wiese, and G. Gruber [2008]: *The HSG Guideline Document for Modelling Integrated Urban Wastewater Systems*. Proceedings, 11th International Conference on Urban Drainage, Edinburgh, Scotland, UK
- J. Wiese, O. Kujawski, R. König, K. Dickmann and H. Andree [2008]: *Applying Instrumentation, Control and Automation for Biogas Plants – Results of Full-scale Applications*. Proceedings, World Bioenergy Congress, Sweden
- J. Wiese, O. Kujawski, R. König and K. Dickmann [2008]: *Instrumentation, Control and Automation for Biogas Plants – Three Full-Scale Examples*. Proceedings, IWA-Congress „Anaerobic Digestion of biosolids and energy crops“, Tunisia
- J. Wiese and O. Kujawski [2007]: *Operational results of an agricultural biogas plant equipped with modern instrumentation and automation*. 24. September 2007, Session “2A - Bioenergy“, 11th IWA Specialist conference on anaerobic digestion “Bio-energy for our future - Renewable Energy from Waste“, Brisbane, Australia
- O. Kujawski, J. Wiese, R. König und M. Häck [2007]: *Instrumentation, control and automation for agricultural and co-digestion biogas plants – yesterday, today and tomorrow*. 26. September 2007, Session “9A - Instrumentation, Control and Automation“, 11th IWA specialist conference on anaerobic digestion “Bio-energy for our future - Renewable Energy from Waste“, Brisbane, Australia
- J. Wiese and M. Häck [2006]: *Instrumentation, control and automation for full-scale manure-based biogas systems*. 5th IWA World Water Congress – Beijing 2006, Proceedings, Paper-No. 594339, Beijing, Peoples Republic of China
- M. Häck and J. Wiese [2006]: *Trends in the field of instrumentation, control and automation and consequences on urban water systems*. 5th IWA World Water Congress – Beijing 2006, Proceedings, Paper-No. 594327, Beijing, Peoples Republic of China
- H. Steinmetz and J. Wiese [2006]: *Instrumentation, control and automation for full-scale sequencing batch reactor plants*. 5th IWA World Water Congress – Beijing 2006, Proceedings, Paper-No. 595007, Beijing, Peoples Republic of China
- J. Simon, J. Wiese and H. Steinmetz [2006]: *A comparison of continuous flow and sequencing batch reactor plants concerning integrated operation of sewer systems and wastewater treatment plants*. 5th IWA World Water Congress – Beijing 2006, Proceedings, Paper-No. 605572, Beijing, Peoples Republic of China
- J. Wiese, J. Simon and A. Welker [2005]: *Results of full-scale tests of an integrated real-time control strategy for sequencing batch reactor plants*. Proceedings, 10th International Conference on Urban Storm Drainage, Copenhagen, Denmark
- J. Wiese, J. Simon and H. Steinmetz [2005]: *A process-dependent real-time controller for sequencing batch reactor plants – Results of full-scale operation*. Proceedings, 2nd International Conference on Instrumentation, Control and Automation, Busan, South Korea
- H. Steinmetz, J. Wiese, J. Ehret and A. Ebert [2005]: *Information visualisation on mobile devices – An efficient information management for wastewater facilities*. Proceedings, 2nd International Conference on Instrumentation, Control and Automation, Busan, South Korea
- J. Simon, J. Wiese and J. Hansen [2004]: *Integrated Approaches for Combined Sewer Systems and Wastewater Treatment Plants – Simulation vs. Reality*. 4th International Conference on Urban Drainage Modelling, Proceedings, pp. 365 – 372, Dresden, Germany
- J. Wiese, J. Simon and T.G. Schmitt [2004]: *Integrated Real-Time Control for a Sequencing Batch Reactor Plant and a Combined Sewer System*. 4th International Conference on Urban Drainage Modelling, Proceedings, pp. 325 – 333, Dresden, Germany

- J. Wiese, A. Stahl and J. Hansen [2004]: *Possible Applications for Case-Based Reasoning in the field of Wastewater Treatment*. 4th ECAI workshop on Binding Environmental Sciences and Artificial Intelligence (BESAI2004), 16th European Conference on Artificial Intelligence (ECAI2004), Proceedings, Valencia, Spain
- G. Langergraber, L. Rieger, S. Winkler, J. Alex, J. Wiese, C. Owerdieck, M. Ahnert, J. Simon and M. Maurer [2003]: *Proposal of general guidelines for high quality simulation studies of wastewater treatment plants*. Proceedings, 9th IWA Conference, Prag, Czech Republic
- J. Wiese, K. Klepizewski, J. Hansen and T.G. Schmitt [2002]: *An integrated approach for a combined sewer system and a sequencing batch reactor plant*. Proceedings, 9th International Conference on Urban Storm Drainage, Portland, USA
- H. Steinmetz, J. Wiese and T.G. Schmitt [2001]: *Efficiency of SBR Technology in municipal wastewater treatment plants*. Proceedings, 2nd World Water Congress, Berlin, Germany
- J. Wiese, J. Hansen and T.G. Schmitt [2001]: *Integrated operation of sewer system and SBR*. Proceedings, World Water Environmental Resources Congress, Urban Drainage Modelling Symposium, Orlando, USA
- T. G. Schmitt, J. Wiese, U. Leinweber and A. Welker [1999]: *Effects of source control measures in urban storm water management of combined sewer systems*. Proceedings, pp. 1350-1357, 8th International Conference on Urban Storm Drainage, Sydney, Australia
- J. Wiese and T.G. Schmitt [1999]: *An evaluation of the pollutant discharge of an entire river catchment area caused by the stormwater runoff*. Proceedings, pp. 1335-1341, 8th International Conference on Urban Storm Drainage, Sydney, Australia

International Conferences (Poster-Paper)

- J. Wiese and R. König [2009]: *From Challenges to Opportunities – Intensive use of instrumentation, control and automation on full-scale biogas plants*. 10th IWA Conference in Instrumentation, Control and Automation 2009, Cairns, Australia
- J. Wiese and J. Simon [2006]: *Dynamic simulation of an existing WWTP and a combined sewer system - Description of the modelling procedure*. Proceedings, 7th International Conference on Urban Drainage Modelling, Melbourne, Australia
- J. Wiese, A. Stahl and H. Steinmetz [2006]: *Application of case-based reasoning to predict sludge settling process and endogenous denitrification*. 5th IWA World Water Congress – Beijing 2006, Proceedings, Paper-No. 594270, Beijing, Peoples Republic of China
- J. Simon, J. Wiese and H. Steinmetz [2005]: *Results of field tests and possible applications for in-situ sludge volume sensors*. Proceedings, 2nd International Conference on Instrumentation, Control and Automation, Busan, South Korea

Oral presentations

- Plant-wide Instrumentation, Control and Automation for Full-scale Biogas Plants*, Track 8-3: Next Generation Biofuel Technologies and Products, BIT's 2nd New Energy Forum 2012, Guangzhou, PR of China
- High performance biogas plants and related technologies*, Biogas Workshop "Framework for Biogas Business Development in China", 2010, Zhejiang World Trade Center (Hangzhou), Hangzhou, PR of China
- From a black-box to a glass-box system – The attempt towards a plant-wide automation concept for full-scale biogas plants*. 10th IWA Conference in Instrumentation, Control and Automation 2009, Cairns, Australia
- Operational results of an agricultural biogas plant equipped with modern instrumentation and automation*, 11th IWA Specialist conference on anaerobic digestion "Bio-energy for our future - Renewable Energy from Waste", 2007, Brisbane, Australia
- Instrumentation, control and automation for full-scale manure-based biogas systems*, 5th IWA World Water Congress 2006, Beijing, PR of China

A process-dependent real-time controller for sequencing batch reactor plants – Results of full-scale operation. 2nd International Conference on Instrumentation, Control and Automation, 2005, Busan, South Korea

Results of full-scale tests of an integrated real-time control strategy for sequencing batch reactor plants. 10th International Conference on Urban Storm Drainage, 2005, Copenhagen, Denmark

Integrated Real-Time Control for a Sequencing Batch Reactor Plant and a Combined Sewer System. 2004, 4th International Conference on Urban Drainage Modelling, Dresden, FRG

Possible Applications for Case-Based Reasoning in the field of Wastewater Treatment. 4th Workshop on Binding Environmental Sciences and Artificial Intelligence (BESAI2004), 16th European Conference on Artificial Intelligence (ECAI2004), Valencia, Spain

Integrierte Simulation von Kanalnetz und Kläranlage am Beispiel der SBR-Kläranlage Messel. CRTE-Tagung „Modelle in der Wassergütewirtschaft, Instrumente zur Planung und Optimierung – Seminarreihe ‚Regionale Wasserwirtschaft in Theorie und Praxis‘“, 2003, Diekirch, Luxembourg

An integrated approach for a combined sewer system and a sequencing batch reactor plant. 9th International Conference on Urban Storm Drainage, 2002, Portland, USA

An evaluation of the pollutant discharge of an entire river catchment area caused by the stormwater runoff. 8th International Conference on Urban Storm Drainage, 1999, Sydney, Australia