

Curriculum Vitae



PERSONAL DETAILS

Univ.-Prof. Dr.-Ing. Jörg Krampe
TU Wien
Institute for Water Quality and Resource Management
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EDUCATION

07/2001	PhD at the Faculty of Civil and Environmental Engineering of Stuttgart University, Germany, with the PhD-thesis: "The sequencing batch membrane bioreactor process"
05/1997	Degree (Dipl.-Ing.) in Civil Engineering with focus on Environmental Engineering at the University of Hannover, Germany

EMPLOYMENT HISTORY

since 08/2013	Professor for Water Quality at the TU Wien, Austria
08/2009 – 09/2018	Adjunct Associate Professor, School of Civil, Environmental and Mining Engineering, University of Adelaide
11/2008 – 07/2013	Principal Wastewater Treatment Engineer, SA Water Corporation, Australia
04/2004	Head of the Department for Wastewater Technology at the Institute for Sanitary Engineering (ISWA) of the University of Stuttgart, Germany
04/2000	Deputy Head of the Department for Wastewater Technology at the ISWA
11/1997	Researcher at the ISWA / Department for Wastewater Technology

FURTHER ACTIVITIES

- Dean of Academic Affairs Environmental Engineering
- Member of the IWA Austrian National Committee board of directors (Vorstand)
- Member of the Curriculum committee for Civil and Environmental Engineering, TU Wien
- Deputy Chairman of the German Experts Association for Environmental Technology and Infrastructure, DEX
- DWA AG KA 8.4 - Water reuse for agricultural and urban purposes in Germany
- Member of the ÖWAV board of directors (Vorstand)
- Member of the ÖWAV steering committee wastewater technology and water quality (Leitungsausschuss Abwassertechnik und Gewässerschutz)
- Supervisor of the ÖWAV Group for large WWTPs (Groß-KAN)

¹⁾ ÖWAV: Abbreviation for "Austrian Association for Water and Waste"

RESEARCH SPECIALTIES

Advanced wastewater treatment for disinfection and elimination of organic trace compounds with focus on micro- and ultrafiltration at membrane bioreactors or tertiary treatment for disinfection; biological wastewater treatment in activated sludge plants and trickling filters; control strategies and energy optimisation of WWTPs; energy production at WWTPs; aeration technologies; nutrient recovery from wastewater

RESEARCH PUBLICATIONS IN JOURNALS (SINCE 2018)

- 2023** Knežević, K., Daza-Serna, L., Mach-Aigner, A.R., Mach, R.L., Friedl, A., Krampe, J., & Kreuzinger, N. (2022). „Investigation of ion-exchange membranes and erythritol concentration for the desalination of erythritol culture broth by electrodialysis”, *Chemical Engineering and Processing - Process Intensification*, 192, 1–13, (2023), doi.org/ 10.1016/j.cep.2023.109494
- 2023** Peer, S., Vybornova, A., Tauber, J., Saracevic, E., Krampe, J., Zessner, M., & Zoboli, O., “To analyze or to throw away? On the stability of excitation-emission matrices for different water systems”, *Chemosphere*, 333, Article 138853, (2023), doi.org/10.1016/j.chemosphere.2023.138853
- 2023** Tauber, J., Möstl, D., Vierheilig, J., Saracevic, E., Svardal, K., & Krampe, J., “Biological Methanation in an Anaerobic Biofilm Reactor—Trace Element and Mineral Requirements for Stable Operation”, *Processes*, 11(4), Article 1013, (2023), doi.org/10.3390/pr11041013
- 2023** Reif, D., Weisz, L., Kobsik, K., Schaar, H. P., Saracevic, E., Krampe, J., & Kreuzinger, N., “Adsorption/precipitation prototype agent for simultaneous removal of phosphorus and organic micropollutants from wastewater”, *Journal of Environmental Chemical Engineering*, 11(3), Article 110117, (2023), doi.org/10.1016/j.jece.2023.110117
- 2022** Pistocchi, A., Andersen, H. R., Bertanza, G., Brander, A., CHOUBERT, J.-M., Cimbritz, M., Drewes, J. E., Koehler, C., Krampe, J., Launay, M., Nielsen, P. H., Obermaier, N., Stanev, S., & Thornberg, D. E., „Treatment of micropollutants in wastewater: Balancing effectiveness, costs and implications”, *Science of the Total Environment*, 850, 1–13, (2022), doi.org/10.1016/j.scitotenv.2022.157593
- 2022** Peer, S., Vybornova, A., Saracevic, Z., Krampe, J., Zessner, M., & Zoboli, O., “Enhanced statistical evaluation of fluorescence properties to identify dissolved organic matter dynamics during river high-flow events”, *Science of the Total Environment*, 851(1), 1–10, (2022), doi.org/10.1016/j.scitotenv.2022.158016
- 2022** Knežević, K., Rastädter, K., Quehenberger, J., Spadiut, O., Krampe, J., & Kreuzinger, N., “Circular production – Evaluation of membrane technologies for nutrient recycling from a microbial fermentation effluent” *Journal of Cleaner Production*, 377, 1–13, (2022), doi.org/10.1016/j.jclepro.2022.134436
- 2022** Kittlaus, S., Clara, M., van Gils, J., Gabriel, O., Broer, M. B., Hochedlinger, G., Trautvetter, H., Hepp, G., Krampe, J., Zessner, M., & Zoboli, O., “Coupling a pathway-oriented approach with tailor-made monitoring as key to well-performing regionalized modelling of PFAS emissions and river concentrations” *Science of the Total Environment*, 849, 1–10, (2022), doi.org/10.1016/j.scitotenv.2022.157764
- 2022** Amann, A., Weber, N., Krampe, J., Rechberger, H., Peer, S., Zessner, M., & Zoboli, O., “Systematic data-driven exploration of Austrian wastewater and sludge treatment - implications for phosphorus governance, costs and environment”, *Science of the Total Environment*, 846, Article 157401, (2022) doi.org/10.1016/j.scitotenv.2022.157401

- 2022** Reif, D., Zoboli, O., Wolfram, G., Amann, A., Saracevic, E., Riedler, P., Hainz, R., Hintermaier, S., Krampe, J., & Zessner, M., „Pollutant source or sink? Adsorption and mobilization of PFOS and PFOA from sediments in a large shallow lake with extended reed belt”, *Journal of Environmental Management*, 320, Article 115871, (2022) doi.org/10.1016/j.jenvman.2022.115871
- 2022** Baumgartner, T., Jahn, L., Parravicini, V., Svardal, K., & Krampe, J., “Efficiency of Sidestream Nitrification for Modern Two-Stage Activated Sludge Plants”, *International Journal of Environmental Research and Public Health*, 19(19), 1–11, (2022), doi.org/10.3390/ijerph191912871
- 2022** Knežević, K., Saracevic, E., Krampe, J., & Kreuzinger, N., “Comparison of ion removal from waste fermentation effluent by nanofiltration, electro dialysis and ion exchange for a subsequent sulfuric acid recovery”, *Journal of Environmental Chemical Engineering*, 10(5), 1–12, (2022), doi.org/10.1016/j.jece.2022.108423
- 2022** Slipko, K. A., Reif, D., Schaar, H. P., Saracevic, E., Klinger, A., Wallmann, L., Krampe, J., Wögerbauer, M., Hufnagl, P., & Kreuzinger, N., “Advanced wastewater treatment with ozonation and granular activated carbon filtration: Inactivation of antibiotic resistance targets in a long-term pilot study”, *Journal of Hazardous Materials*, 438, 1–13, (2022), doi.org/10.1016/j.jhazmat.2022.129396
- 2022** Radu, L.-E., Masseron, A., Amman, F., Schedl, A., Agerer, B., Endler, L., Penz, T., Bock, C., Bergthaler, A., Vierheilig, J., Hufnagl, P., Korschineck, I., Krampe, J., & Kreuzinger, N., „Emergence of SARS-CoV-2 Alpha lineage and its correlation with quantitative wastewater-based epidemiology data”, *Water Research*, 215, 1–9, (2022), doi.org/10.1016/j.watres.2022.118257
- 2022** Knezevic, K., Reif, D., Harasek, M., Krampe, J., & Kreuzinger, N., “Assessment of Graphical Methods for Determination of the Limiting Current Density in Complex Electro dialysis-Feed Solutions”, *Membranes*, 12(2), 1–25, (2022), doi.org/10.3390/membranes12020241
- 2022** Daza-Serna, L., Knezevic, K., Kreuzinger, N., Mach-Aigner, A., Mach, R., Krampe, J., & Friedl, A., „Recovery of Salts from Synthetic Erythritol Culture Broth via Electro dialysis: An Alternative Strategy from the Bin to the Loop”, *Sustainability*, 14(2), 1–18., (2022), doi.org/10.3390/su14020734
- 2021** Phan-Thanh, L., Schaar, H. P., Reif, D., Weilguni, S., Saracevic, E., Krampe, J., Behnisch, P. A., & Kreuzinger, N., “Long-Term Toxicological Monitoring of a Multibarrier Advanced Wastewater Treatment Plant Comprising Ozonation and Granular Activated Carbon with In Vitro Bioassays”, *Water*, 13, 1–16, (2021) doi.org/10.3390/w13223245
- 2021** Amann, A., Weber, N., Krampe, J., Rechberger, H., Zoboli, O., Zesner, M., "Operation and Performance of Austrian Wastewater and Sewage Sludge Treatment as a Basis for Resource Optimization", *Water*, 13, 1-15, (2021), doi.org/10.3390/w13212998
- 2021** Kittlaus, S., Clara, M., Gabriel, O., Hochedlinger, G., Humer, M., Humer, F., Kulcsar, S., Scheffknecht, C., Trautvetter, H., Zoboli, O., Krampe, J., Zessner, M., "Österreichweite Modellierung von Spurenstoffemissionen auf Ebene von Flusseinzugsgebieten", *Korrespondenz Abwasser*, Nr. 3, (2021), doi.org/10.3242/kae2021.03.003
- 2021** Tauber, J., Flesch, B., Parravicini, V., Svardal, K., Krampe, J., "Influence of road salt thawing peaks on the inflow composition and activated sludge properties in municipal wastewater treatment", *Water Science and Technology*, (2021), doi.org/10.2166/wst.2021.045
- 2021** Wallmann, L., Krampe, J., Lahnsteiner, J., Radu, E., van Rensburg, P., Slipko, K., Wögerbauer, M., Kreuzinger, N., "Fate and persistence of antibiotic-resistant bacteria and genes through a multi-barrier treatment facility for direct potable reuse", *Journal of Water Reuse and Desalination*, (2021), doi.org/10.2166/wrd.2021.097

- 2020** Radu, E., Woegerbauer, M., Rab, G., Oismüller, M., Strauss, P., Hufnagl, P., Gottsberger, R., Krampe, J., Weyermaier, K., Kreuzinger, N., "Resilience of agricultural soils to antibiotic resistance genes introduced by agricultural management practices", *Science of The Total Environment*, (2020), Vol. 756, doi.org/10.1016/j.scitotenv.2020.143699
- 2020** Valkova, T., Parravicini, V., Saracevic, E., Tauber, J., Svoldal, K., Krampe, J., "A method to estimate the direct nitrous oxide emissions of municipal wastewater treatment plants based on the degree of nitrogen removal", *Journal of Environmental Management*, (2020), Vol. 279, doi.org/10.1016/j.jenvman.2020.111563
- 2020** Slipko, K., Marano, R., Cytryn, E., Merkus, V., Wögerbauer, M., Krampe, J., Jurkevitch, E., Kreuzinger, N., "Effects of subinhibitory quinolone concentrations on functionality, microbial community composition, and abundance of antibiotic resistant bacteria and qnrS in activated sludge", *Journal of Environmental Chemical Engineering* (2020), Vol. 9, Issue 1, doi.org.10.1016/j.jece.2020.104783
- 2020** Zoboli, O., Hepp, G., Krampe, J., Zessner, M., "BaHSYM: Parsimonious Bayesian hierarchical model to predict river sediment yields", *Environmental Modelling & Software*, (2020), doi.org/10.1016/j.envsoft.2020.104738
- 2020** Clos, I., Krampe, J., Alvarez-Gaitan, J.P., Saint, C.P., Short, M.D., "Energy Benchmarking as a Tool for Energy-Efficient Wastewater Treatment: Reviewing International Applications", *Water Conservation Science and Engineering*, (2020), doi.org/10.1007/s41101-020-00086-6
- 2020** Jahn, J., Baumgartner, T., Krampe, J., Svoldal, K., "Effect of NH₃ and organic loading on the inhibition of mesophilic high-solid digestion", *Journal of Chemical Technology and Biotechnology*, 95 (2020), 3; S. 702 – 709, doi.org/10.1002/jctb.6252
- 2019** Jahn, L., Saracevic, E., Svoldal, K., Krampe, J., "Anaerobic biodegradation and dewaterability of aerobic granular sludge", *Journal of Chemical Technology and Biotechnology*, 94 (2019), 9; S. 2908 – 2916, doi.org/10.1002/jctb.6094
- 2019** Slipko, K., Reif, D., Wögerbauer, M., Hufnagl, P., Krampe, J., Kreuzinger, N., "Removal of extracellular free DNA and antibiotic resistance genes from water and wastewater by membranes ranging from microfiltration to reverse osmosis", *Water Research*, 164 (2019), paper # 114916, doi.org/10.1016/j.watres.2019.114916
- 2019** Tauber, J., Parravicini, V., Svoldal, K., Krampe, J., "Quantifying methane emissions from anaerobic digesters", *Water Science and Technology*, 80 (2019), 9; S. 1654 – 1661, doi.org/10.2166/wst.2019.415
- 2019** Zessner, M., Zoboli, O., Reif, D., Amann, A. Sigmund, E., Kum, G., Saracevic, Z., Saracevic, E., Kittlaus, S., Krampe, J., Wolfram, G., "Belastung des Neusiedler Sees mit anthropogenen Spurenstoffen: Überlegungen zu Herkunft und Verhalten", *Österreichische Wasser- und Abfallwirtschaft*, 71 (2019), 11-12; S. 522 – 536, doi.org/10.1007/s00506-019-00623-1
- 2019** Jahn, L., Svoldal, K., Krampe, J., "Nitrous oxide emissions from aerobic granular sludge", *Water Science and Technology*, 80 (2019), 7; S. 1304 – 1314, doi.org/10.2166/wst.2019.378
- 2019** Jahn, L., Svoldal, K., Krampe, J., "Accidental aerobic granules - data evaluation of a full-scale SBR plant", *Desalination and Water Treatment*, 164 (2019), S. 11 – 17, doi.org/10.5004/dwt.2019.24366
- 2019** Pointl, M., Winkelbauer, A., Krampe, J., Fuchs-Hanusch, D., "Aspekte der IKT-Sicherheit in der österreichischen Siedlungswasserwirtschaft", *Österreichische Wasser- und Abfallwirtschaft*, 71(2019), S. 374- 384, doi.org/10.1007/s00506-019-0584-y
- 2019** Ganora, D., Hospido, A., Husemann, J., Krampe, J., Loderer, C., Longo, S., Moragas Bouyat, L., Obermaier, N., Piraccini, E., Stanev, S., Váci, L., Pistocchi, A.,

“Opportunities to improve energy use in urban wastewater treatment: a European scale analysis”, *Environmental Research Letters*, Apr 2019, Vol. 14, Nummer 4, doi.org/10.1088/1748-9326/ab0b54

- 2019** Stadler, P., Blöschl, G., Nemeth, L., Oismüller, M., Kumpan, M., Krampe, J., Farnleitner, A.H., Zessner, M., “Event-transport of beta-d-glucuronidase in an agricultural headwater stream: Assessment of seasonal patterns by on-line enzymatic activity measurements and environmental isotopes”, *Science of the Total Environment*, Apr 2019, Vol. 662, pp. 236-245, doi.org/10.1016/j.scitotenv.2019.01.143
- 2019** Fuiko, R., Saracevic, E., Koenka, I.J., Hauser, P.C., Krampe, J., “Capillary electrophoresis for continuous nitrogen quantification in wastewater treatment processes”, *Talanta*, Apr 2019, Vol. 195, pp. 366-371, doi.org/10.1016/j.talanta.2018.11.056
- 2019** Zoboli, O., Clara, M., Gabriel, O., Scheffknecht, C., Humer, M., Brielmann, H., Kulcsar, S., Trautvetter, H., Kittlaus, S., Amann, A., Saracevic, E., Krampe, J., Zessner, M., “Occurrence and levels of micropollutants across environmental and engineered compartments in Austria”, *Journal of Environmental Management*, Feb 2019, Vol. 232, pp. 636-653, doi.org/10.1016/j.jenvman.2018.10.074
- 2019** Jahn, L., Svoldal, K., Krampe, J., “Comparison of aerobic granulation in SBR and continuous-flow plants”, *Journal of Environmental Management*, Feb 2019, Vol. 231, pp. 953-961, doi.org/10.1016/j.jenvman.2018.10.101
- 2018** Phattarapattamawong, S., Kaiser, A.M., Saracevic, E., Schaar, H.P., Krampe, J., “Optimization of ozonation and peroxone process for simultaneous control of micropollutants and bromate in wastewater”, *Wat. Sci. Tech.*, May 2018, Vol. 2017 (Bonus issue 2), pp. 404-411, doi: 10.2166/wst.2018.170
- 2018** Füreder, K., Svoldal, K., Krampe, J., Kroiss, H., “Rheology and friction loss of raw and digested sewage sludge with high TSS concentrations: a case study”, *Wat. Sci. Tech.*, April 2018, Vol. 77 (7), pp. 276-286, doi: 10.2166/wst.2018.111
- 2018** Füreder, K., Svoldal, K., Frey, W., Kroiss, H., Krampe, J., “Energy consumption of agitators in activated sludge tanks – actual state and optimization potential”, *Wat. Sci. Tech.*, Feb 2018, Vol. 77 (3), pp. 800-808, doi: 10.2166/wst.2017.596