Name	**Peter Fröhle**
Position	Professor
Affiliation	Institute of River and Coastal Engineering Hamburg University of Technology (TUHH)
Higher education	• **2000** Dr. degree, University of Rostock, Germany, Faculty of Civil Engineering, Institute of Hydraulic Engineering (2000) • **1991** Diploma in Civil Engineering, University of Hannover, Germany
Academic career	• **Since 2017** Adjunct Professor, Department of Hydraulic and Ocean Engineering, National Cheng-Kung University, Tainan, Taiwan, R.O.C. • **Since 2012** Full Professor of Hydraulic Engineering, TUHH Head of Institute of River and Coastal Engineering, TUHH • **2009 – 2011** Visiting Associate Professor, College of Ocean, Hohai University Nanjing • **2007, 2007, 2009** Adjunct Associate Professor, Department of Hydraulic and Ocean Engineering, National Cheng-Kung University, Tainan, Taiwan, R.O.C. • **2000 – 2012** Senior Researcher, University of Rostock (since 2003 Head of Coastal Engineering Group) • **1994 - 2000** Researcher, University of Rostock • **1991 – 1994** Researcher, University of Hannover, Franzius-Insitute
Teaching activities	**B.Sc. – Courses** **Hydromechanics** – Bachelor Civil and Environmental Engineering, TUHH **Hydrology** – Bachelor Civil and Environmental Engineering, TUHH **Hydraulic Engineering** – Bachelor Civil and Environmental Engineering, TUHH **Hydraulics** – Bachelor Civil and Environmental Engineering, TUHH **M.Sc. - Courses** **Basics of Coastal Engineering** – Master Civil Engineering, TUHH **Coastal Protection** – Master Civil Engineering, TUHH **Port Engineering** – Master Civil Engineering, TUHH **Modelling in Coastal and Hydraulic Engineering**, – Master Civil Engineering, TUHH **Applied Surface Hydrology** – Master Water and Environment and Master Environmental Engineering, TUHH **Interaction Water – Environment** – Master Water and Environment and Master Environmental Engineering, TUHH **Modelling of Currents in Rivers and Estuaries** – Master Water and Environment and Master Environmental Engineering, TUHH **Nature Oriented Hydraulic Engineering / Integrated Flood Protection** – Master Water and Environment and Master Environmental Engineering, TUHH **Coastal Protection** – National Cheng-Kung University Tainan, Taiwan **Engineering in the Coastal Zone / Modelling of Coastal Processes** – Master Programme POMOR, St. Petersburg State University and Hamburg University

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Research and development projects during the past 5 years	Ongoing Research Projects • **2017 – 2019** EasyGSH-DB Determination of application oriented Synoptical Reference Data of Geomorphology, Sedimentology and Hydrodynamic of the German Bight, BMVI – MFUND, Kooperation mit BAW, BSH, Smile-Consult, Küste und Raum • **2017** HalligModell – Hydrodynamic-numerical modelling of flooding and drainage of Holm Islands in the North Sea, LKN SH • **2016 - 2017** Port of Chittagong – Data analysis and hydrodynamic-numerical simulation of water levels, currents and waves and the resulting sediment transport for the planned Container Terminal Chittagong • **2016 – 2017** Hydrological model Schleswig-Holstein – Development of a hydrological mode for rivers and water courses in Schleswig-Holstein, LLUR • **2016 – 2019** EcoDike-Maintenance - Development of risk based maintenance strategies for green sea dikes, BMBF • **2015 – 2019** FAIR - - Flood infrastructure Asset management and Investment in Renovation, adaptation and maintenance, EU – Interreg VB – North Sea Region Programme • **2016 – 2018** KAREL – Adaptation of the storm-water drainage system of Elmshorn and surrounding low lying areas to climate change related effects, BMUB – German Adaptation Strategy • **2015 - 2018** AMSEL Ostsee – Analyses of high resolution water level data and determination of the temporal development of mean and extreme water levels in the southern and south-western Baltic Sea, BMBF / KFKI • **2015 – 2018** Early Dike - BMBF-Verbundprojekt Sensor- and risk based early warning system for coastal dikes, Part Project WP2 (TUHH): Development of a Wave Load Simulator for an early warning system for coastal dikes, BMBF • **2015 – 2017** UrbMod – Modelling the Urban System, Forschungsförderung FHH • **2015 – 2018** StucK - Long term drainage management of tide-influenced coastal urban areas with consideration of climate change, BMBF • **2014 – 2017** Morpho-Weser Event driven development of the morpho-dynamics in the Weser Estuary – Investigations of the dynamics of cohesive sediments in the Weser Estuary between the Blexer Bogen and Nordenham, BAW, Hamburg • **Ongoing** KALYPSO – Development of a simulation environment for numerical analyses of hydrological, hydraulic and hydrodynamic processes, Eigenforschung • **2014 – 2017** PEARL, Preparing for Extreme And Rare Events in Coastal Regions EU-FP7 ENV.2013.6.4-3, Coasts at threat in Europe: tsunamis and climate-related risks – FP7-ENV-2013 **+ other projects already finished (www.tuhh.de/wb)**

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Activities in scientific organizations and associations during the past 5 years	• **Since 2017** BWK - Bund der Ingenieure für Wasserwirtschaft, Abfallwirtschaft und Kulturbau - (BWK) e.V. / Association of engineers for water management, waste management and land improvement – Working Group 3.2 “Mobile Flood Protection” (Chairman) • **Since 2016** Member PIANC Working Group 185 SITE SELECTION AND PLANNING FOR A NEW PORTS AND SPECIALIZED MARINE TERMINALS ON GREENFIELD SITES - TECHNICAL GUIDELINES • **2015 – 2015** EUCC – Germany, Member of Board • **2007 - 2014** Member PIANC CoCom Working Group 2 Best Practices for shoreline stabilization methods (PIANC Report “Best Practices for …”) • **Since 2004** Member National Working Group Pleasure Boat Navigation of Hafenbautechnischen Gesellschaft (HTG) • **Since 2000** Member National Working Group „Coastal Protection Works“ / Ausschuss Küstensschutzwerke der Hafenbautechnischen Gesellschaft und der Deutschen Gesellschaft für Geotechnik (Mitglied seit 2002) • **Since 2000** Member National Working Group „Methods and techniques of field investigations in Coastal Engineering“ / Mitglied im Ausschuß für Verfahren und Meßtechnik im Küsteningenieurwesen der Hafenbautechnischen Gesellschaft (HTG)
Significant publications during the past 5 years	Selected publications (reviewed and not reviewed) • Hellmers, S.; Fröhle, P.: Integrating Local Scale Drainage Measures in Meso Scale Catchment Modelling Water 9, no. 2: 71. • Kunstmann, H.; Fröhle, P.; Hattermann, F.F.; Marx, A.; Smiatek, G.; Wanger, C.: Kap. 16: Wasserhaushalt In: Guy P. Brasseur, Daniela Jacob, Susanne Schuck-Zöller (Hrsg), Klimawandel in Deutschland, Springer Verlag, Berlin, Heidelberg, Open Access, DOI 10.1007/978-3-662-50397-3 URL: http://link.springer.com/book/10.1007%2F978-3-662-50397-3 • Shaikh, S. et al: An operational hydrodynamic-numerical model of the Elbe estuary with Telemac-2D based on predicted water levels In Proceedings of the 12th International Conference on Hydroscience & Engineering: Hydro-Science and Engineering for Environmental Resilience, Tainan, Taiwan, 6–10 November 2016. • Dreier, N., Fröhle, P.: Operational wave now-and forecast in the German bight as a basis for the assessment of wave-induced hydrodynamic loads on coastal dikes. 8th Chinese-German Joint Symposium on Hydraulic and Ocean Engineering, 18 – 24 September 2016, Qingdao, P.R. China • Hellmers, S., Manojlovic, N., Palmaricciotti, G., Fröhle, P.: Modelling decentralised systems for urban drainage and flood mitigation. Journal of Applied Water Engineering and Research, 2016 DOI: 10.1080/23249676.2015.1128368. • Nehlsen, E.; Fröhle, P.,: Morphological development of tidal tributaries in relation to turbidity and sediment concentration of the main estuary river In: Wieprecht, Silke, Haun, Stefan, Karolin Weber, Markus Noack und Kristina Terheiden (Hg.): River Sedimentation. Proceedings of the 13th International Symposium on River Sedimentation. ISRS 2016. Stuttgart, 19.-22.09.2016: CRC Press

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	• Dreier, N.; Fröhle, P.: EFFECTS OF REGIONAL CLIMATE CHANGE ON THE LONGSHORE SEDIMENT TRANSPORT AT THE GERMAN BALTIC SEA COAST. Proceedings of the 36th IAHR World Congress 28 June – 3 July, 2015, The Hague, the Netherlands • Dreier, N.; Schlamkow, C.; Fröhle, P.; Salecker, D. und Xu, Z.: ASSESSMENT OF CHANGES OF EXTREME WAVE CONDITIONS AT THE GERMAN BALTIC SEA COAST ON THE BASIS OF FUTURE CLIMATE CHANGE SCENARIOS, Journal of Marine Science and Technology, Vol. 23, No. 6, pp. 839-845 (2015), DOI: 10.6119/JMST-015-0609-3 • Hellmers, S., Manojlovic, N., Palmaricciotti, G., Kurzbach, S., and Fröhle, P.: Multiple linked sustainable drainage systems in hydrological modelling for urban drainage and flood risk management. Journal of Flood Risk Management, DOI: 10.1111/jfr3.12146. • Tadesse, Y.B. und Fröhle, P.: AN INTEGRATED APPROACH TO SIMULATE FLOODING DUE TO RIVER DIKE BREACH, Proceedings of the 11th International Conference on Hydroinformatics(HIC 2014), 17 – 21 August 2014, The City College of New York, New York City, USA. • Dreier, N., Fröhle, P., Salecker, D., Schlamkow, C. and Xu, Z., The use of a regional climate- and wave model for the assessment of changes of the future wave climate in the western Baltic Sea, Proceedings of the 34th International Conference on Coastal Engineering. Seoul, Korea, 15-20 June 2014. DOI: http://dx.doi.org/10.9753/icce.v34.management.28 • Hellmers, S.; Manojlović, N.; Palmaricciotti, G., Fröhle, P.: Modelling sustainable drainage and decentralised flood mitigation techniques, 13th International Conference on Urban Drainage, ICUD 2014, Sarawak, Malaysia