

SPOTLIGHT



Singapore Water Academy caught up with Simon Gehrmann at the recent IFAT conference in Germany. IFAT is the world’s leading trade fair for environmental technology.

Quotes: *“If there is one thing I have learned in recent years, it is the fact that most of the water issues can only be solved in an interdisciplinary way. I am personally convinced that the interface between technology and nature will be the decisive element for sustainable and resilient urban structures in the future.”*

PUB: Tell us about your Doctorate in Dec 2017 in the study of water sensitive urban design in tropical Asia in the context of designing a zero Water City.

(Photo Credit: Simon Gehrmann)

S.G.: The basis of this doctorate is the interdisciplinary work for several years on infrastructural projects in China, in which I was able to acquire a very technical knowledge, which I linked with an architectural perspective. Its focus is the integrated management of important water and material flows in the interaction with technology and nature, in order to open up new potentials to create a highly liveable environment, while at the same time taking into account resiliency and flood protection.

PUB: Tell us about your current projects after you obtained your Doctorate.

S.G.: One of these projects, ‘resource’ was recently approved by the German Ministry of Education and Research (BMBF), and deals with the linkage between technical infrastructure and ecosystems. It furthermore addresses the management system, behind the green and grey elements, by using artificial intelligence and advanced data analysis.

In addition to this project, we further applied for a research project ‘Smart Water Vietnam’, together with local real estate developers and the local University of Ha Noi (NUCE). In the Focus is a pilot project, which also closes the water cycle on a decentralized Community level by the extensive use of green infrastructure, which is supported and designed along with technological elements to enable the potential between nature and technology. Recycled Water, and collected Storm water becomes the visible and touchable interface for the residents, as it becomes integrated part of its design. As we have relative close cooperation’s with the South China University of Technology, some findings of my dissertation were also used in the joint project ‘waterSOURCE’, which deals with the traditional land use of the Pearl River Delta and questions on how technological elements can be used at strategically relevant



points in the existing natural water cycles to sustainably protect this kind of cultural heritage, within the pressure from the water degradation.

I am personally convinced that the interface between technology and nature will be the decisive element for sustainable and resilient urban structures in the future.

Besides the research projects, it is something incredibly pleasant to discuss and further develop concepts and ideas with our students, which is one of the most important and beautiful tasks of my work as a lecturer at TU Darmstadt. Within this framework, I would like to share my knowledge and experiences with them, to bring them closer to the challenges of the real world. The international student competition "Designing Resilience in Asia", which is organized annually by the National University of Singapore, as part of a long-term research cooperation between several international universities, is one of the examples, which can benefit most from this research.

PUB: How do you stay up-to-date in the water industry, what tips can you recommend for younger water professionals to-be?

S.G.: One of the most important things, that helps me throughout my research is, the close contact to my friends and my network, which evolved during the last years. I try to attend the leading conferences whenever it is possible and I try to catch up with my friends from the water industry, whenever I am nearby, or they are in Germany.

Other sources of information include the subscription of some carefully chosen, important newsletters, and as well as the use of online resources. It can include the Membership in social media groups, where relevant information's are shared and/or the active contribution to some specific online forums, where professionals are discussing relevant topics. To conclude, I feel that personal discussions about relevant topics are the basis for successful interdisciplinary research, and the personal connection can never be replaced by new media.

PUB: What did you like about SgWA's course you attended, 'Singapore Water Management Series: Sustainable Urban Stormwater Management' (17-21 July 2017)?

S.G.: The selection of the lecturers in Singapore focused not only on engineered water technologies, it also covered social, financial and landscape design aspects. The training concentrated on the theoretical basics as well as on applied practice, which made the whole event very lively and balanced. As the only attending classical architect, the course was an extreme enrichment for me. Numerous exciting and interesting discussions, some of which continued at the airport, and in the airplane to Europe have contributed to the fact that I have once again recognized how complex the topic "water" is and how important it is to look beyond one's own discipline to other disciplines, to achieve the common real goals.

I would like to emphasize, that it is important to create a platform, where professionals can meet and discuss water related topics from any discipline and share their knowledge with others. As Singapore has a lot of innovation and is one of leading countries in the context of water research, it is a very good place to meet, and I'm sure that I will attend the Singapore's water academy, as well as the Singapore International Water Week again in future.