



Lecturers

Prof. Dr.-Ing. Thomas Grischek is professor of Water Sciences at the Department of Civil Engineering, HTW Dresden. He has 28 years of experience in RBF and MAR. He was involved in several national and international research projects including the EU projects SAPH PANI and AquaNES. He has supported feasibility studies on RBF in India, Egypt, Thailand and Vietnam.

Dr.-Ing. Cornelius Sandhu is lecturer in Environmental Engineering at the HTW Dresden. He is working on site assessment for RBF and coordinating the Cooperation Centre for Riverbank Filtration in India.

Dr. Catalin Stefan is leading the MAR Junior Research Group INOWAS at TU Dresden. He has done a web-based global inventory of MAR systems. Dr. Stefan is co-chair of the IAH Commission on MAR.

Dr. Hilmar Börnick is head of the laboratory at the Institute for Water Chemistry, TU Dresden. He has been involved in RBF projects looking at water quality issues, post-treatment and the behaviour of organic micropollutants.

Dipl.-Ing. Fabian Musche is head of the laboratory at the Division of Water Sciences, HTW Dresden and expert in MAR field work and construction of flood-proof RBF wells.

M.Sc. Gustavo Covatti and M.Sc. Thi Ngoc Anh Hoang are researchers at the Division of Water Sciences and working on RBF feasibility in Vietnam.



How to apply

Please apply by 30.04.2020 by sending your CV and the application form (see MARISS website) via email to:

mariss@htw-dresden.de

www.htw-dresden.de/mariss

You will receive the decision about your acceptance by 15.05.2020 at the latest. In case your application is not accepted, we encourage you to apply to one of the upcoming summer schools in 2021, 2022 and 2023.

The Summer School is organized by the Division of Water Sciences, HTW Dresden, as part of the Project Future.East funded by DAAD.

Accommodation & Travel

The accommodation is arranged at our International Guest House at a cost of around 27 €/night. The German Academic Exchange Service (DAAD) will partly cover the accommodation and the travel expenses for international participants. There is no additional participation fee.

You may also book your own accommodation in one of the nearby hotels, e.g. Ibis Budget Hotel, located in the city centre, opposite the Old Town and the Elbe River and only 10 minutes walk to the MARISS venue. The cost is around 59 €/night including breakfast. Those wishing to stay beyond the end of the summer school to explore the beauty of Dresden and Saxony are requested to arrange their own accommodation. Participants must arrange their own arrival and departure. Dresden can be reached by plane (Dresden Int. Airport), by train or long-distance buses (Dresden Main Station).

Contact

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INTERNATIONAL SUMMER SCHOOL MANAGED AQUIFER RECHARGE



ACHIEVE MORE PRACTICALLY

Course Information

The two-week course offers M.Sc./Ph.D./professionals the opportunity to study basic, advanced and applied aspects of Managed Aquifer Recharge (MAR) and Riverbank Filtration (RBF).

The course focuses on sharing and exchanging knowledge and new ideas in the field of MAR and RBF. The course consists of expert lectures, MAR computer modelling practice, laboratory experiments and technical excursions supplemented by participant presentations and informal discussion sessions.

The Summer School will be held in English. Student participants have the option of receiving 5 ECTS-Credits.

The number of participants is limited to 20.



DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

Programme 1st week

Monday, 24.08.2020, 9 am – 5 pm

- // Registration & Welcome
- // Participant introductions and expectations
- // MAR and RBF introduction
- // Hydraulic aspects incl. clogging issues
- // Design of MAR/RBF schemes

Tuesday, 25.08.2020, 9 am – 5 pm

- // Worldwide application of MAR/RBF
- // INOWAS DSS Portal
- // Short presentations from participants
- // Energy efficiency and siphon systems
- // Laboratory practical on clogging

Wednesday, 26.08.2020, 9 am – 5 pm

Technical excursion to MAR/RBF sites in and around Dresden and Summer School BBQ



Thursday, 27.08.2020, 9 am – 5 pm

- // Water quality aspects I
- // Attenuation processes
- // Removal of pathogens, organic matter and organic micropollutants (OMPs)
- // Short presentations from participants

Friday, 28.08.2020, 9 am – 5 pm

- // Water quality aspects II
- // Behaviour of Fe, Mn, NH₄
- // Pre- and post-treatment
- // Interactive online quiz on MAR/RBF
- // Laboratory practical on analytical field tests

Saturday, 29.08.2020, 9 am – 4 pm

Hiking tour in the Saxonian Switzerland National Park or independent travel to e.g. Berlin or Prague, sightseeing

Programme 2nd week

Monday, 31.08.2020, 9 am – 5 pm

- // Design of abstraction and infiltration wells
- // Well operation and maintenance
- // Numerical modelling of MAR/RBF systems I
- // RBF modelling exercise in computer lab I
- // Impact of flow gradient, well location etc.



Tuesday, 01.09.2020, 9 am – 5 pm

- // Tools for RBF design
- // Numerical modelling of MAR/RBF systems II
- // RBF modelling exercise in computer lab II
- // Impact of aquifer parameters & boundary conditions
- // Group project on RBF site design

Wednesday, 02.09.2020, 8 am – 6 pm

Technical excursion to MAR/RBF sites in Saxony
Summer School Dinner

Thursday, 03.09.2020, 9 am – 5 pm

- // Water quality aspects III
- // SOMA tool to predict the behaviour of OMPs
- // Monitoring of MAR/RBF schemes
- // Laboratory practical on data logging or experiments to simulate RBF processes

Friday, 04.09.2020, 9 am – 5 pm

- // Regulatory, environmental and health aspects
- // Risk assessment
- // Group project on coupling RBF and artificial recharge
- // Individual online quiz on MAR/RBF
- // Optional: Written exam for student participants
- // Course evaluation and feedback
- // Farewell