**Announcement of Training Event A**
on statistics and models for environmental data and molecular risk characterization
**September 12-16, 2016, Dresden, Germany**

Technische Universitaet of Dresden (TUD) and Karlsruhe Institute of Technology (KIT) organize a Training Event on "statistics and models for environmental data and molecular risk characterization" in the framework of ANSWER/H2020-MSCA-ITN-2015/675530 project, which will be held in Dresden, Germany on September 12-16, 2016. This event will be hosted by Prof. Thomas Berendonk at the Technische Universitaet Dresden (TUD). Ten (10) Early-Stage Researchers (ESRs) will participate in this event.

The aim of the TE-A is to provide ANSWER ESRs with professional and personal development opportunities beyond what they are generally exposed to in the course of their PhD training. More specifically, this Training Event consists of two Specialized scientific training Courses (SCs) on "statistics and models for environmental data" (SC2) and on the "molecular risk characterization" (SC3). The main objectives of SC2 are the learning about the advantage of script-based data processing, the understanding of the nature of mechanistic models and the application of selected statistical methods in practice. In addition, the goals of SC3 are to give to the audience an overview of antibiotic resistance, horizontal gene transfer and potential risk for the environment and to familiarize them with the used methods, as well as their advantages and disadvantages. Moreover, during TE-A a course on "writing and publishing research" will be given, in order to build up and enhance ESRs' English speaking and writing skills, and demonstrate the process of journal publication.

By creating an exceptional and interdisciplinary meeting, ANSWER TE-A is expected to provide the trainees with an up-to-date platform from where they gained knowledge on the latest trends in antibiotic resistance, molecular risk characterization and statistical methods used for environmental data. This will be a highly stimulating learning experience which is of a long-lasting value to the participants' future careers.


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# Training Event A topics

Through TE-A the following aspects were tackled:

**Specialized Course 2 (SC2):**

- Introduction to the statistics software "R", an environment for statistical computing
- Statistical testing
- Linear regression
- Fitting ordinary differential equation based models of bacteria growth

**Specialized Course 3 (SC3)**:

- Antibiotic resistance (AR)
- Antibiotic resistance genes (ARG) and bacteria in WWTPs
- Horizontal gene transfer mechanisms
- Risks of release to the environment
- Methods for detection AR and ARG
- Seminar/discussion on relevant publications and methods used dynamics of antibiotic resistance in crop production systems/Uptake of trace elements by crops.
- Biotic/abiotic factors stimulating horizontal gene transfer in aquatic microbiomes

In addition to studying, the students will have the opportunity to enjoy an interesting **one-day guided tour to AVBS (Abwasserverband Braunschweig - project partner) WWTP in Braunschweig** and **explore the city of Dresden** in their free time.

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