

## SUPER – Stuttgart University Program for Experiencing Research Project Information

### Institute's Information

Name of Institute    Research Facility for Subsurface Remediation (VEGAS), University of Stuttgart

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### Duration of Project/Number of Students

June/July                       x          

June/July/August              x          

Number of Students             1          

**Name of Project**     Monitored Bioaugmentation, Bioelectrochemical Remediation and Electro-Nano-Bioremediation

**Beneficial Skills & Knowledge**    Experience in experimental/practical work as well as data evaluation

### Description of Work

Within the project, we investigate technical innovations in the field of in-situ bioremediation of the subsurface. In particular, three technologies are upscaled and further developed: Monitored Bioaugmentation (MBR), Electronanobioremediation (ENB), Bioelectrochemical Remediation. Further details on the individual technologies can be found on the project website (<https://eiclar.eu/>). For all three technologies, individual small-scale (1/0.3/0.3 m) to large-scale (L/W/H = 6/1/1 m) experiments are running at VEGAS. The experiments are operated in close collaboration with numerous European project partners. . The goal of this internship is to maintain the successful operation of the running experiments together with our team, consisting of a PhD student and our technician. This includes monitoring of the experiments, modifying experimental setup (involving handling of tools), taking liquid and solid samples in order to asses physico-chemical and biological parameters, performing analyses in the lab (groundwater parameters and contaminant concentrations), calibrating sensors, gas chromatographs and other technical equipment, and evaluating and visualizing data. The tasks are very diverse and can be adapted to individual preferences to some extent.

