

PhD Position in Foundation Underpinning using Bio-Cementation Techniques

Host Institution: Shandong University, College of Civil Engineering and Water Conservancy

Location: Jinan, Shandong, China

Supervisor: Dr. Abdelali Dadda and Pr. Wang Ji-peng

Funding: NSFC Research Fund for International Young Scientists

Salary: CSC scholarship + additional funding from the NSFC project

Start Date: Expected September 1, 2025

Project Overview:

We are seeking a motivated and talented PhD candidate to join our research team for an exciting project focused on **foundation underpinning using bio-cementation techniques**. This project aims to extend the lifespan of old and historic structures by exploring innovative methods such as **Microbially Induced Calcium Precipitation (MICP)** and **Enzyme-Induced Calcium Precipitation (EICP)**.

Funded by the National Natural Science Foundation of China (NSFC), the project involves research on bio-cementation for soil stabilization, with a focus on weak soils, cost-effective solutions using low-cost materials, and the development of novel underpinning techniques.

Key Responsibilities:

- Conduct independent research on bio-cementation methods for foundation stabilization.
 - Perform laboratory experiments, data analysis, and interpretation related to MICP/EICP techniques.
 - Collaborate with an interdisciplinary research team to develop practical solutions for soil reinforcement.
 - Publish research findings in high-impact journals and present at international conferences.
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Qualifications:

- A Master's degree (or equivalent) in **Civil Engineering, Geotechnical Engineering, Environmental Engineering**, or related fields.
 - Strong background in **soil mechanics** or relevant experimental methods.
 - Experience in laboratory work and numerical modeling, particularly in soil mechanics.
 - Excellent written and oral communication skills in **English**.
 - Motivation to work in a multidisciplinary research environment and collaborate with international teams.
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Salary:

54,000 ~ 66,000 CNY per year, depending on performance and contribution to the institute. **On-campus accommodation** will be provided for free (30 m² flat).

Additionally, Jinan offers a low cost of living—students can live comfortably on around **1,500 CNY per month**. Transportation, food, and goods are half the price compared to the cheapest European countries, and the services and accommodation are of high quality at low cost.

Benefits:

- Full PhD funding for 3-4 years.
 - Opportunities to secure additional funding through provincial and national grants.
 - Access to state-of-the-art research facilities at Shandong University.
 - Support for career development, including conference attendance and publication opportunities.
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How to Apply:

Interested candidates are invited to submit the following documents:

1. A cover letter detailing your research interests and motivation.
2. A CV highlighting academic qualifications and research experience.
3. Contact information for at least two academic referees.
4. Any relevant publications (optional).

Application Deadline: December 31, 2024

Please send your application as a single PDF file to **abdelali.dadda@sdu.edu.cn**. For more information about this position or the project, please use the same email address.