

Department of Civil Engineering

Advertisement Number: CE/PG/2023-24/MSR-1

08.09.23

Application closing time and date:

10 am on 26.09.23

Applications are invited for a **Masters by Research (MSR) position supported through project in the area of Environmental Engineering** in Walk-In mode. The MSR thesis work would be supported by a sponsored project entitled, “**Pollution monitoring, Emissions control, and Remediation methods to safeguard Irrigation Schemes using treated wastewater in a Changing climate for peri-urban agriculture – PERISCOPE**”. The post is purely temporary on contractual basis until the completion of the MSR degree.

Project Description and Nature of Work:

Wastewater re-use for irrigation is a critical climate adaptation measure in areas where there is increasing stress on freshwater supplies for drinking. In India, Kanpur city, situated on the banks of river Ganges, is an industrial town famous for tanneries and leather products. The sewerage from the households and the tannery effluent goes into an effluent treatment plant (ETP). The ETP facility discharges treated effluent into an irrigation channel that feeds the agricultural fields in nearby villages. This kind of wastewater reuse for irrigation is a critical climate adaptation measure. However, the farmers have reported low yields, health, and odor problems related to sustained use of this irrigation water.

This project aims to facilitate downstream wastewater usage by addressing the issue of monitoring, control and remediation of legacy pollution. Capacity building will focus on sampling protocols and soil/(ground)water characterization, laboratory testing to select site specific remediation technologies for contaminated soil and (ground)water and use of sensors to monitor the quality of surface and ground water.

This project work involves extensive field sampling and coordination with various stakeholders. The applicant will be assisting the team in fieldwork, conducting bench- and pilot-scale experiments, and handling of the sophisticated analytical instruments. The applicant will be responsible for assisting the research team and technical staff, in reporting and ensuring quality of measurements and handling of large data sets evolved during such monitoring and analysis.

Essential Qualification: B. Tech. in Environmental or Civil or Chemical Engineering or other related field with GATE. Qualification. Alternatively, B.Sc. with M.Sc. in Environmental sciences or closely related field with GATE or NET qualification. **Maths as a subject at least up to Class XII.**

Desirable Experience: Experience on working with wastewater and contaminated soils, handling of the sophisticated analytical instruments (UV-Vis spectrophotometer, IC, ICP-MS, IC-ICPMS, Microwave Digester, TOC Analyzer).

Duration: Up to the completion of MSR degree per institute norms.

Salary Range: Equivalent to MTech stipend (12,400 p.m.) in the first year and as per the Institute R&D norms for full-time students on project in the second year.

How to Apply: Interested applicants should fill the google form, link of which is provided below latest by **10 am on September 26, 2023**. They must also upload the documents asked in the prescribed format as specified in the form.

Application received through e-mail will not be entertained. Only the applicants shortlisted for the interview will be informed by email.

Google Form Link:

https://docs.google.com/forms/d/e/1FAIpQLScmrI8IWJre3bMNXYue6GzX9dgKTS9BXxPMPb7_gW0Rfk566A/viewform?usp=sf_link

(the link has a feature where candidates will upload two pdf files: (i) Curriculum vitae and (ii) a cover letter justifying his/her candidature for the position in not more than 300 words.)

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