**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**

**Department of Civil Engineering**

Applications are invited for two posts of **Project Post-doctoral fellow** for a Shakti Foundation sponsored project "Development of air quality modeling decision support tools for policy-makers". If you are passionate about air quality and challenges of the research area, then we would love to hear from you.

**Essential Qualifications**

* Ph.D. in Civil Engineering/Computer Science/Electrical Engineering/Atmospheric Science or related field
* Significant background in data analysis
* High proficiency in programming (python/any other programming language)

**Desirable qualifications**

Good publication record in top notch conferences and journals. Strong knowledge of atmospheric chemistry and physics, especially as related to sources and behavior of ambient particulate matter. Experience with some or all of the following skills: chemical transport modeling of air pollution, atmospheric measurements and related data analysis, statistical and regression modeling, working in an interdisciplinary environment. As the work will be divided between two Post-doctoral Fellows, it is not necessary for a single candidate to demonstrate all of the listed qualifications.

**Nature of Work**

The goal of the project is to develop and evaluate reduced-complexity models of air pollution for use by Indian decision-makers. The primary products will be source-receptor matrices that relate emissions of particulate matter and its precursors to downwind concentrations and damage metrics, i.e. health damages per tonne of emitted pollutant, for emissions as a function of species and location. Key steps of the work will be the compilation of available air pollution measurements, including quality control and assurance; deployment and evaluation of a state-of-the-art chemical transport model for India; deriving the reduced-complexity models from the chemical transport model; and evaluation of the reduced-complexity models. In the later stages, the work will involve outreach and training to disseminate the tools for use by policy-makers. The work is a collaborative project with Prof. Peter Adams of Carnegie Mellon University.

**Duration of Appointment**

* Available funding is for one year, but we anticipate a two-year project. Appointment will initially be for one year. Renewal will be subject to the performance of the candidate.
* The post is purely temporary and on contractual basis.

The department reserves the right to fix suitable criteria for short listing of eligible candidates satisfying qualifications and experience. The selection will be based on online interview. Short-listed candidates will be informed with an email about the date of interview.

He/she will get the opportunity to work in a conducive environment and can avail the hostel/family

accommodation facility at IITK.

*Interested candidates should contact Profs. Sachchida Tripathi and Peter Adams (petera@andrew.cmu.edu) to indicate interest.*

The Selection will be based on Zoom/Skype online interview. Shortlisted candidates will be informed the date of interview by email.