INSTITUTO
DE INGENIERÍA
UNAM

Researcher position in Hydrogeology specializing in Sustainable management and comprehensive use of groundwater

The Instituto de Ingeniería of the Universidad Nacional Autónoma de México (II UNAM) invites outstanding researchers to contribute to cutting-edge solutions for global water challenges. Being the leading research center in various engineering fields in Mexico and one of the largest and most recognized in Ibero-America, with a strong tradition of excellence, interdisciplinary collaboration, and societal impact, II UNAM offers a dynamic environment to advance innovative research in groundwater sustainability. We seek talented scientists committed to excellence, innovation, and the training of future generations of engineers and researchers, specializing in **Sustainable management and comprehensive use of groundwater**. The selected candidate will contribute to innovative knowledge generation and its application to real-world engineering water resource challenges.

Responsibilities include:

- Conducting cutting-edge research in groundwater flow and solute transport modeling.
- Designing and leading field studies on groundwater availability, aquifer recharge, and water quality in the saturated zone.
- Applying advanced numerical models, artificial intelligence (AI), and Internet of Thins (IoT) tools for hydrogeological purposes.
- Publishing in high-impact, peer-review scientific journals and presenting at international conferences.
- Leading interdisciplinary projects on surface-groundwater interactions, its nexus to human activities (agriculture, mining and water-intensive industries, among others) and climate change impacts on groundwater systems.
- Securing external research funding.
- Teaching at undergraduate and graduate levels and supervising theses.
- Engaging with government, industry, and communities to address water security challenges.
- Developing strategies & solutions for aquifer conservation and remediation in water-scarce regions.
- Coordinating hydrogeological monitoring and modeling projects.

Eligibility Requirements:

1. Ph.D. in Hydrogeology, Geohydrology, Engineering, or related field, with emphasis on numerical simulation of flow and transport processes.
2. Age under 37 (male) or 39 (female) at the time of appointment.
3. Minimum of four years of research experience, including at least two years of postdoctoral work.
4. Proven scientific productivity (Q1 or Q2 indexed journal publications).
5. Experience in applied hydrogeology and sustainable groundwater management.

6. Demonstrated teaching and student mentoring skills.
7. Expertise in advanced numerical modeling, AI, and IoT for hydrogeological applications.
8. Proficiency in technical English; foreign applicants (non-native speakers) must commit to achieving Spanish proficiency within two years.
9. Strong teamwork and communication skills.
10. Desirable experience applying AI and machine learning tools in hydrogeology.
11. Commitment to developing an academic career at II UNAM.

Application Documents (PDF format):

1. Cover letter outlining motivation for the position.
2. Detailed CV with supporting documentation.
3. One-page résumé.
4. Copy of Ph.D. diploma and thesis title page.
5. 10-year research and academic plan (goals and expected outcomes).
6. List of five (5) most relevant publications (with supporting documentation).
7. Copy of an official document indicating place and date of birth.
8. Three academic reference letters with contact information.
9. Research proposal (max. 25 pages) for a pilot project on managed aquifer recharge under climate change scenarios, including design, modeling, cost estimation, and execution timeline.
10. Evidence of experience with modeling and data analysis tools in hydrogeology.

This information must be sent to Dra. Norma Patricia Lopez-Acosta, Academic Secretary of II UNAM (nlopeza@iingen.unam.mx; SAcademica@iingen.unam.mx), no later than ***May 26th, 2025***. The most qualified candidates will be notified and may be invited for an interview, where they will present their research project proposal. For further information on the Institute of Engineering and UNAM, please visit (www.iingen.unam.mx) and (www.unam.mx), respectively.

"POR MI RAZA HABLARÁ EL ESPÍRITU"
Ciudad Universitaria, Mexico City, May 12th, 2025
THE DIRECTOR

DRA. ROSA MARÍA RAMÍREZ ZAMORA

***Note**: This invitation corresponds to a fixed-term position for one year, renewable based on performance. Consequently, the decision of the Evaluation Committee of the Institute of Engineering is final regarding the selected candidate for the position.