The University of Texas Rio Grande Valley

The Geomorphology Laboratory at the University of Texas Rio Grande Valley (UTRGV), led by Dr. Tian Y. Dong, is looking for a postdoctoral researcher to join us for Spring 2024 or Fall 2024 to work on a collaborative project funded by the U.S. Geological Survey.

What is the project about:

- Detecting geomorphic change in the lower Rio Grande Valley using airborne LiDAR datasets collected in 2011 and 2022
- Interpreting geomorphic changes to address applied questions about the US-Mexico border and the Rio Grande
- Using the high-resolution LiDAR dataset and numerical models to address broader questions in geomorphology and hydrology
- Performing fieldwork on the lower Rio Grande, taking advantage of the unique location of UTRGV directly adjacent to the banks of the river

Who are the team members:

- Dr. Tian Y. Dong, UTRGV, primary mentor and project PI
- Dr. Timothy Goudge, UT Austin, collaborator
- Dr. Joel Sankey and David Dean, USGS Grand Canyon Monitoring and Research Center in Flagstaff, AZ, collaborators

What do we offer:

- 2-year appointment with a starting salary of $58,675, with a 3% annual raise, reaching $62,248 for the last 8 months of the appointment, and full benefits, including health insurance and retirement plan contributions (The Rio Grande Valley enjoys a vigorous and growing economy with a high standard of living and one of the country's lowest living costs)
- Support to travel to UT Austin and the USGS office in Flagstaff, AZ, to work directly with project collaborators
- Support to attend AGU annually
- Support to purchase research equipment (e.g., laptop)
- Flexibility to work remotely if desired and if this fits with the final plan for postdoctoral research

What skills are required for this position:

- A Ph.D. in Earth or Planetary Sciences or related disciplines at the time of appointment
- Experience in working with LiDAR change detection and -derived DEM.

What skills are desirable but not required for this position:

- Experience in using landscape evolution, flow routing, sediment transport, and hydrological models
- Drone survey and data processing experience
- Field experience in geomorphological and hydrological surveys
- Experience in mentoring undergraduate and graduate students

Interested candidates should send the following to **tian.dong@utrgv.edu** by **December 1st**:

- Academic CV
- A statement (max. 2 pages) about past research experience and interest in the project
- Names and emails of three references

SCHOOL OF EARTH, ENVIRONMENTAL, AND MARINE SCIENCES
COLLEGE OF SCIENCES, UNIVERSITY OF TEXAS RIO GRANDE VALLEY
EDINBURGH, TX 78539

The University of Texas Rio Grande Valley

The Geomorphology Laboratory at the University of Texas Rio Grande Valley (UTRGV), led by Dr. Tian Y. Dong, is looking for **four master's students** in [Ocean, Coastal, and Earth Science] or [Agricultural, Environmental, and Sustainability Sciences] to join us for Spring 2024 or Fall 2024. [We] use field and remotely sensed observations, numerical models, and theories to study surface processes in environments such as rivers, deltas, aeolian, and coastal systems and the associated development of sedimentary records on Earth, Mars, and Beyond.

What and where are we working:

- A project funded by the Department of Energy to study water, sediment, and nutrient accumulation between abandoned channels of the Rio Grande Delta
- Locally about the Rio Grande, Bahía Grande, and other landforms in South Texas
- Proglacial rivers and deltas in Greenland
- River channel belts on Earth and Mars
- Broadly defined projects in Earth and planetary surface processes

What tools do we use:

- Drones with RGB, LiDAR and Multispectral cameras; RTK GPS
- High-performance desktops
- Laser diffraction particle size analyzer
- Acoustic instruments like single-beam sonar and ADCP

What do we offer:

- 12-month salary of $15,000 for two subsequent academic years (the Rio Grande Valley enjoys a vigorous and growing economy with a high standard of living and one of the country's lowest living costs)
- Support with tuition and fees, research supplies (e.g., laptop), and attending conferences
- Opportunities to participate in research projects outside your own

What skills should you have:

- Background in Earth or Planetary Sciences or related disciplines
- Proficiency in Math, Physics, and Statistics

What skills should you have to be a stronger candidate:

- Proficiency in a coding language (e.g., Python, R, or MATLAB)
- Proficiency in GIS software (e.g., ArcGIS Pro) and a vector graphics editor (e.g., Illustrator)
- Drone survey and data processing experience
- Field experience in geomorphological and hydrological surveys

Important dates and information:

- The admission deadline is **rolling**, and apply [here]
- A GRE score is **not** required
- Interested candidates should send the following to **tian.dong@utrgv.edu**:
    - academic CV
    - a brief statement (maximum two pages) of research interests and experience and academic and personal goals

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