

Sino-Singapore International Joint Research Institute (SSIJRI) – Research Positions (2) in Earthquake and Flood Risk Assessments

The Institute of Catastrophe Risk Management (ICRM) at Nanyang Technological University (NTU) in Singapore invites applications for two (2) post-doctoral research positions to assist the work on the research project “Evaluation of Natural Catastrophe Impact on the Pearl River Delta (PRD) Region” funded by the SSIJRI. Prof PAN Tso-Chien of ICRM/NTU is the principal investigator of the project which has both academic and industry collaborators from the South China University of Technology (SCUT) in Guangzhou and the China Reinsurance Group (China Re) in Beijing, respectively.

The PRD region has a high density in both population and wealth which are heavily exposed to frequent natural hazards of floods and windstorms (including storm surge) as well as earthquakes at a lesser extent, based on a 2014 Swiss Re study. The potentially high impact of these frequent natural catastrophes on PRD’s thriving economy and dense population calls for serious and immediate attention. This project aims to assess the potential impact of natural disasters in the PRD region. The research scope includes risk assessment of natural disasters (floods, storms, and earthquakes) on the concentrated wealth and infrastructure in the PRD region based on data collection and numerical modelling. This will provide better understanding of future natural disaster risk in the PRD region for policymakers and planners.

The positions will be primarily based at the Sino-Singapore Guangzhou Knowledge City in Guangzhou, P.R. China. The salary will be paid in local currency (i.e. RMB). Successful candidates will have the opportunity to collaborate with world-class professors and experienced postdocs at NTU in Singapore, SCUT in Guangzhou, and China Re in Beijing. A letter from NTU will be issued to those who have successfully completed their contracts to prove that the research work conducted for this project is in line with the anticipated post-doctoral quality of NTU in Singapore.

Main Responsibilities

The responsibilities of the positions generally include working and interacting with colleagues at ICRM/NTU, SCUT and the industry collaborators on the project. In particular:

1. Post-doctoral Research Fellow (1) – Earthquake Risk Assessment:
 - Literature review, and liaison with ICRM/NTU and SCUT to collect and analyse earthquake hazard data;
 - Collect and analyse population and property exposure data for earthquake risk in the PRD region;
 - Cooperation and communication with ICRM/NTU, SCUT and China Re on project documentation and report writing.

2. Post-doctoral Research Fellow (1) – Flood Risk Assessment:

- Liaison with local hydrology and hydraulics institutes in Guangdong Province to collect and analyse flood hazard data (including literature review);
- Collect and analyse population and property exposure data for flood risk in the PRD region;
- Cooperation and communication with ICRM/NTU, SCUT and China Re on project documentation and report writing.

Required Experience and Skills

The candidates are expected to have a PhD degree in Civil Engineering, Geology, Hydrology, Hydraulics or relevant disciplines from a leading university in recent years. The successful candidates are expected to be highly motivated and able to work with a team as well as to execute the project activities independently. Excellent organizational and problem-solving skills are required. Good verbal and written communication skills in both English and Chinese are an advantage.

The two posts will be for a fixed term of 12 months in the first instance. Interested candidates should send a letter of interest together with a full CV and relevant materials on educational and working experience to Prof PAN Tso-Chien (ExecDir-ICRM@ntu.edu.sg).

14 May 2020, Singapore