



National Research Center for Integrated Natural Disaster Management CONICYT/FONDAP/15110017

## Postdoctoral opportunities

The **National Research Center for Integrated Natural Disasters Management (CIGIDEN)** started its operation in 2013 and is located at the **Pontificia Universidad Católica de Chile**, Santiago, Chile. The Center is a cross-disciplinary research initiative aimed to mitigate the tremendous and complex impact of natural disasters in the society, considering the physical infrastructure, the human stock, and the economic development. The Center takes advantage of Chile as one of the most active natural seismic and geo-hazard laboratories in the world.

To encourage the research work, CIGIDEN is offering four Postdoctoral research opportunities in the global area of *Vulnerability and Risk Assessment of Physical and Social Systems*. One of them focuses on **Agent-Based Modelling**. The researchers are expected to have experience and skills in one or more of the following topics:

- a) Agent based modeling (ABM) and study of the agent-structure interaction
- b) Characterization of the response of agents to extreme loading conditions
- c) Evaluation of the fragility of physical and social systems
- d) ABM applied to evacuation of structures under extreme loading conditions
- e) ABM in modeling human behavior and human-to-human interactions
- f) ABM of transportation systems, economics, or complex systems
- g) ABM modeling applied to disaster management

Tasks to be accomplished include: (i) perform simulations and multiple model runs of the spatial ABM of infrastructure subjected to extreme loading conditions (e.g., earthquakes) and consequential disasters (tsunami, fires, etc.); (ii) mine, analyze, synthesize and geo-reference large-scale model output data; and (iii) collect, develop, and extend methods for statistical analysis and visualization of distributed data from spatial ABMs of this and other complex socio-physical systems.

The candidate will be appointed at CIGIDEN, and there will be close cooperation with the School of Psychology and the Institute of Sociology. CIGIDEN is located within the School of Engineering at the Pontificia Universidad Católica de Chile, San Joaquín Campus, Vicuña Mackenna 4860, Santiago.

For additional information about the Center please visit <http://www.cigiden.cl> or contact Felipe Rivera ([fnrivera@uc.cl](mailto:fnrivera@uc.cl)- +56 2 23541805).

Interested researchers should send their CV's and statement of purpose by email to [contacto@cigiden.cl](mailto:contacto@cigiden.cl) with Subject Line "Postdoctoral Position CIGIDEN, Line 3" Cc: [fnrivera@uc.cl](mailto:fnrivera@uc.cl). The call is open until June 30th, and the starting date should ideally be during the first semester of 2014. Late applications may be considered until the position is filled, and special conditions may apply for the starting date. The duration of the position is for a minimum of 12 months and a maximum of 36 months. Contract conditions, including salary, will be market conditions for researchers in Chile and provided upon personal request.