

Provisional Charter of the International Working Group on Rotational Seismology

1. Name: International Working Group on Rotational Seismology (IWGoRS)

2. Purposes: To promote investigations of all aspects of rotational motions in seismology and their implications for many fields, such as, earthquake engineering, geodesy, strong-motion seismology, tectonics, etc., and to share experience, data, software, and results in an open Web-based environment (<http://www.rotational-seismology.org>). In addition, to disseminate information on all matters pertaining to rotational motions through publications and by holding meetings and workshops, and to interact with professional bodies in engineering and science.

3. Sponsorship: We will seek support from funding agencies and professional societies. Initially, we will organize several task forces within the proposed Working Group to demonstrate that there is general, worldwide interest in rotational seismology. Eventually, the IWGoRS or its successor may be proposed formally, e. g., to the International Association of Seismology and Physics of the Earth's Interior (IASPEI).

We will explore funding of a rotational seismology workshop from the United States (e. g., U.S. Geological Survey, and National Science Foundation) and the European Union among others.

4. Organizational Structure: We propose an informal initial structure. There will be two “co-organizers” — Heiner Igel (University of Munich, Germany) and William H. K. “Willie” Lee (U. S. Geological Survey, Menlo Park, California), and a group of “active members”. An active member either leads and/or actively participates with a specific task force. Anyone who is interested but will not actively participate may become an “associate member” to be placed on our e-mail list.

5. Task Forces: At the start, we propose to establish several task forces. Anyone interested is encouraged to lead and organize one of these task forces. Task forces are intended to solve a problem or achieve a well defined goal. A task-force leader in turn organizes and coordinates his/her task force.

Initial Task Forces:

(1) *AGU Special Session on rotational seismology in December, 2006:* Heiner Igel, William H. K. Lee, and Maria Todorovska organized this AGU Special Session. In addition, Willie Lee organized the inauguration luncheon for the working group at the same time.

(2) *Testing and verification of rotational instruments:* (Chair, Robert Nigbor; Assistant Chair, John R. Evans; and Bob Hutt). Testing and verification of multiple rotational sensors in Bob Nigbor's in-door and out-door facilities in September-November, 2006. To be followed by additional work as improved or additional testing systems become available, probably at the USGS's Albuquerque Seismological Laboratory (ASL).

(3) *Field laboratory for observing rotational motions, particularly in the near field:* (Chair, Bor-Shouh Huang). B.-S. Huang, W. H. K. Lee, C. C. Liu, C. F. Wu, and Y. M. Wu are

planning extensive near-field measurements with rotational and other sensors at two free-field sites in Taiwan. They intend to develop these sites into an international field laboratory for rotational seismology with enough local support that anyone interested in making observations or analyzing the data collected will be welcome to participate.

(4) *Workshop on rotational seismology in 2007*: Maria Todorovska, Mehmet Çelebi, and Willie Lee are organizing an International Workshop on Rotational Seismology. The objective is to bring together investigators with different backgrounds and experiences to share their ideas and knowledge on the topic, and to develop a research plan on rotational seismology. Their first task is to find some funding from US Geological Survey and US National Science Foundation.

(5) *Website for rotational seismology*: Heiner Igel has secured a Website for the IWGoRS at <http://www.rotational-seismology.org/>. The Webmaster is Robert Barsch (barsch@geophysik.uni-muenchen.de).

Some Suggested Future Task Forces:

- (1) *Data processing and software* (Chair, Joachim Wassermann)
- (2) *Topics in engineering applications and strong ground motion* (Chair, Mihailo Trifunac)
- (3) *Theoretical investigations* (Chairs, Alain Cochard and Eugeneiusz “Eugene” Majewski)
- (4) *Weak-motion Rotational sensors* (Chair, Ulrich Schreiber)
- (5) *Broadband observations of rotational motions* (Chairs, Heiner Igel and Frank Vernon)