#### IASPEI Commission for Rapid Interdisciplinary Investigation of Significant Earthquakes

### **Newsletters**

#### Vol.1 no.1 November 14,2025

# Commission on the Rapid Interdisciplinary Investigation of Significant Earthquakes (RI2SE) was established

During IAGA-IASPEI Joint Scientific Assembly 2025, the participants endorsed the following IASPEI resolution:

#### Resolution 3

## RESOLUTION ON THE ESTABLISHMENT OF A COMMISSION FOR RAPID INTERDISCIPLINARY INVESTIGATION OF SIGNIFICANT EARTHQUAKES

**RECOGNISING** the devastating impacts of significant earthquakes worldwide, such as the 2023 Türkiye-Syria earthquakes that resulted in nearly 60,000 fatalities, and other recent deadly events;

**ACKNOWLEDGING** the critical importance of rapid, coordinated, and interdisciplinary scientific response in the immediate aftermath of major earthquakes to capture perishable data and transient phenomena essential for understanding rupture dynamics, fault properties, and secondary hazards;

**IASPEI** Proposes to establish the IASPEI Commission on the Rapid Interdisciplinary Investigation of Significant Earthquakes (RI<sup>2</sup>SE) as a platform to integrate expertise from earthquake and engineering seismology, geodesy, geology, geo-electromagnetics, geochemistry, hydrology, and social sciences.

--From IASPEI newsletter

# New IASPEI Commission on Rapid Interdisciplinary Investigation of Significant Earthquakes (RI<sup>2</sup>SE) Call for Participation and Suggestions

At the joint IAGA-IASPEI meeting held in Portugal in September 2025, a group of scholars put forward a proposal to the IASPEI Executive Committee recommending the establishment of a new commission dedicated to the rapid interdisciplinary study of significant earthquakes. This proposal has since garnered broad support and is now under formal consideration.

The proposed commission, to be known as the IASPEI (preparatory) Commission on the Rapid Interdisciplinary Investigation of Significant Earthquakes (PrepComm RI²SE), aims to integrate expertise across earthquake seismology, engineering seismology, geodesy, geology, geochemistry, geoelectromagnetics, and social sciences. Its primary goal is to coordinate rapid international scientific responses immediately following significant earthquakes, leveraging the growing capabilities of global seismic and satellite observation networks.

By facilitating timely, cross-disciplinary data collection and analysis, the commission seeks to improve understanding of earthquake rupture processes, fault zone characteristics, and secondary hazards such as landslides and liquefaction. It will also help strengthen physical models of earthquake sources and crustal deformation, while enhancing the overall integration of scientific knowledge into disaster response and resilience strategies.

The initiative builds on recent experiences from significant events including the 2023 Türkiye earthquakes and the 2025 earthquakes in Dingri (Xizang, China) and Myanmar, highlighting the urgent need for coordinated, interdisciplinary post-earthquake investigations.

We welcome feedback and suggestions from the international community regarding the structure, objectives, and activities of the proposed commission. Those interested in contributing ideas or learning more are encouraged to get in touch with:

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--From IASPEI newsletter

### IASPEI Commission on Rapid Interdisciplinary Investigation of Significant Earthquakes (RI<sup>2</sup>SE)): Feasibility Report will be published

The present Feasibility Report has only a historical value, since in the IASPEI Assembly in Lisbon, the resolution of establishing the Commission on Rapid Interdisciplinary Investigation of Significant Earthquakes (Comm. RI<sup>2</sup>SE) had been formally adopted. However, such a historical document records a historic event in both the history of IASPEI and the history of Chinese seismology.

It has been well known that, comparing to observation, laboratory experiment, in-situ experiment, theoretical modeling, and numerical simulation, interdisciplinary investigation of earthquakes, rapidly organized after the occurrence of the seismic event, plays a unique role in understanding earthquakes. There are quite a few phenomenology of earthquakes, as seen in the field, shortly after the earthquake, has not been well included in the established system of the knowledge of earthquake science. To much extent, this is the underlying reason of the difficulty of earthquake forecast. Importantly, since now IASPEI has had a global platform to exchange and coordinate the interdisciplinary investigation of earthquakes.

Generation by generation, Chinese scientists participated in and supported the activities of IASPEI. In 1996, after 8 years preparation, the Seismological Society of China (SSC) proposed the formation of the Asian Seismological Commission (ASC), a regional commission after the European Seismological Commission (ESC). Prof. Zhu Chuanzhen has witnessed and made almost all the progresses and was honored the ASC founding president award in 2008.

Chinese scientists have a long tradition of the scientific investigation of earthquakes. The successes in earthquake forecast study and practice, including the prediction of the 1975 Haicheng earthquake, was originated from the series scientific investigations after some destructive earthquakes since the 1966 Xingtai earthquake. The investigation has been, and has to be, interdisciplinary, since earthquake phenomenology never recognizes disciplinary boundaries. Since this century, China experienced several destructive earthquakes, the scientific investigation of these earthquakes contributed much to the development of Chinese earthquake science. Having the long experience in the scientific investigation of earthquakes, Chinese scientists proposed and discussed the feasibility of an IASPEI Commission, which is well recorded in the present Feasibility Report. The ad hoc Working Group on Feasibility Investigation, adopted by the IASPEI bureau, with Prof. Li Ying as the group leader, did a pretty good job.

Worth mentioning is that the leaders of the China Earthquake Administration (CEA) have an international perspective and deep insight in earthquake science. The founding of ASC was endorsed deterministically by Administrator Prof. Chen Zhangli (1996-2001), and the present commission on the scientific investigation of earthquakes was from the stimulating discussion with Administrator Prof. Wang Kun (2023-present).

As the past president and vice president of IASPEI, both from China, we sincerely congratulate the publication of this Feasibility Report, and hope that the Commission, under the leadership of Prof. Li Ying, would be keeping playing a contributive role in both IASPEI and earthquake science in China. The abbreviation of the commission, 'Comm. RI²SE', sounds like 'comrades', implying that the functioning of the Commission need the international wisdom and joint action from all of us.

Wu Zhongliang
Past president of IASPEI (2007-2011)
IUGG Fellow (2015-)
Li Li
Vice president of IASPEI (2023-2027)

#### 24 years ago today

On November 14, 2001, China experienced the first earthquake of magnitude 8 or above in the 21st century—the M8.1 Kunlun Pass West earthquake. After the earthquake, the China Earthquake Administration organized a joint earthquake investigation team, involving more than a hundred people

from over a dozen units, to conduct a comprehensive, multidisciplinary survey of the earthquake. The members of the earthquake scientific investigation team risked their lives, overcoming unimaginable difficulties such as oxygen deprivation, extreme cold, and threats from wild animals, to obtain kinematic parameters of the surface rupture zone of the M8.1 Kunlun Pass West earthquake, as well as essential basic data on current crustal movements. The findings from the earthquake scientific investigation enhanced the understanding of earthquake rupture mechanisms and provided indispensable fundamental data and scientific evidence for how major national projects on the Qinghai-Xizang(Tibet) Plateau can avoid and mitigate potentially active faults, effectively reducing earthquake hazards.

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