IASPEI Newsletter

June 2021

IN THIS ISSUE

Foreword

Dear Readers,

We start the Newsletter with the latest information about the 3rd IAGA-IASPEI Joint Scientific Assembly, which is joined by the 13th Assembly of our Asian regional commission.

Then, we have the pleasure to present the awardee of the IASPEI Medal 2021.

The following pages in the Newsletter contain the latest news regarding the General Assembly of the African Seismological commission and information about an initiative to collect information about our common inheritance: the worldwide distributed analog seismograms.

With great sadness I must inform you that five of our colleagues passed away. We remember them with obituaries.

Please do not forget to send me information or corrections about international conferences and workshops with IASPEI related topics. This list can only be complete and correct when I receive information about such events and can update the Meetings Calendar of future Newsletters.

Stay healthy,

Johannes Schweitzer
Secretary General

3rd IAGA – IASPEI Joint Scientific Assembly Hyderabad, India
also
13th General Assembly Asian Seismological Commission (ASC)

Planning Status

After 1969 in Madrid, Spain, and 2001 in Hanoi, Vietnam, IASPEI will join again the International Association of Geomagnetism and Aeronomy (IAGA) for a common, now virtual, Scientific Assembly in Hyderabad, India, in August 2021.

Due to the COVID-19 pandemic, the Asian Seismological Commission (ASC) could not meet in 2020 and decided to combine their meeting with the Joint Scientific Assembly of IAGA and IASPEI.

Now, the latest details of the program are getting fixed, and we remind everybody that the Early Bird deadline to register for the Assembly is 30 June 2021. This is in particular important for the authors of oral and poster presentations. If the presenting author is not registered, the abstract will be removed from the program.

Please follow the newest announcements on the conference website http://www.iaga-iaspei-india2021.in/.

The 2019 IASPEI Medal goes to Barbara Romanowicz

In 2013, IASPEI began to award a Medal for "sustaining IASPEI goals and activities and for scientific merits in the field of seismology and physics of the Earth's interior". The IASPEI Bureau is proud to announce that it has unanimously selected, together with the IASPEI Executive Committee, as recipient of the 2021 IASPEI Medal **Barbara Romanowicz**, for her outstanding career contributions to seismology and IASPEI.

Barbara Romanowicz, IASPEI Medal 2021

Laudatio

Over a career of more than 40 years, Barbara Romanowicz has made tremendous contributions to the science and practice of seismology. Her more than 250 publications span almost all areas of seismology, perhaps best known for her global tomography contributions, which (in part) have resulted in over 20 contributions to high impact journals like Nature and Science.

Barbara Romanowicz's contributions to seismology start in the late 1970s. Her training is in "pure" mathematics so she has contributed to the theoretical development of seismology starting with free oscillations of the Earth. Barbara made various contributions to mode coupling in the late 1980s and early 1990s including how along branch coupling results in sensitivity to odd-order structure. In the mid-1990s, she developed several models with a coupling technique that used 2-dimensional body-wave kernels. Later, she developed hybrid free-oscillation / spectral-element codes and finally, models using full waveform inversion employing spectral element techniques. The images generated by these techniques have been enormously impactful – including channel flow in the upper mantle, and evidence for interesting structures at the base of the mantle related to surface mantle hot spots.

Part of this work involves the role of seismic anisotropy particularly in the lithosphere, the base of the mantle, and the inner core. Barbara's research has resulted in anisotropic models of the upper mantle (both radial and azimuthal) and of anisotropic structures in the D" area of the Earth. Much of this work revolves around the central problem of defining the base of the lithosphere and the depth extent of continental roots, which her work shows to be related to changes in anisotropy. Her work on the inner core has spanned most of her career including both the use of free-oscillation splitting and body waves to look at its anisotropy and basic structure. She is also a co-author of a paper detailing the observation

of PKJKP (the holy grail of seismology) though such papers will always be controversial!

Barbara has been central to several very important efforts in graduate education. In particular, she is the ”mother” of the CIDER (Cooperative Institute for Dynamic Earth Research) program which has brought self-selected graduate students and postdocs together to, initially, look at deep Earth issues in seismology, mineral physics, geodynamics, geochemistry, etc., but now has been much broadened.

Barbara’s devotion to multidisciplinary aspects of 3D structure in the Earth has also meant that she has also used mineral physics information to constrain inversions for both anisotropic and isotropic and anelastic structure. Furthermore, she has also worked with geodynamicists to see how flow in the mantle interacts with the seismological results. These efforts are very important in reducing the range of possible models.

Another theme of Barbara’s research has been related to attenuation tomography (dating back to 1990). Barbara, early on, recognized that attenuation in the Earth is extremely important as a distinguisher between chemical and thermal effects and her models have dramatically improved over time from both the theoretical and observational point of view. Recent results have used waveform modeling to address this area which has been a difficult topic in seismology. Barbara is clearly a leader in this difficult field.

An example of the breadth of Barbara’s vision is the development of ocean bottom observatories. Any global tomographer will tell you about the issues with the distribution of stations, particularly in the ocean-dominated southern hemisphere, and just how important the development of ocean observatories is. This work started in France but has been more recently related to collaborations with MBARI (Monterey Bay Aquarium Research Institute), where there has been a deployment of an ocean bottom broad band seismometer for several years. There are several papers on this including correcting for infragravity wave noise using differential pressure sensors. This is clearly an on-going focus of Barbara’s research.

To be clear, the above analysis does not begin to cover all that Barbara has worked on. She has published on the Earth’s ”hum”, on ambient noise tomography, on the inversion of receiver functions, on the interpretation of SKS splitting, on the imaging of small scale scatterers in the mantle (using various seismic phases), anisotropic attenuation in the inner core, on scaling relationships for earthquakes (mainly large strike slip ocean earthquakes), and on the structure of ULVZs (Ultra Low Velocity Zones) in the lower mantle. Indeed, it is hard to find a seismological subject that she has not significantly contributed to.

Barbara is as interested in the fundamentals of getting good seismic data as she is in learning about the latest weird structure in the mantle. Early in her career, she was the creative force behind GEOSCOPE, the French Global Network of broad band seismic stations. This network established many high-quality stations, most importantly in Africa and the Indian Ocean, so contributing hugely to global coverage. Barbara was very much involved with the foundation and development of the FDSN (Federation of Digital Seismograph Networks) as well as of ORFEUS (Observatories & Research Facilities for European Seismology). Without her work here it is unlikely that open data sharing and standards between networks would be so common and that we can all share seismic data so easily. Later, when Barbara moved to Berkeley, the BDSN (Berkeley Digital Seismic Network) saw huge improvements in both instrumentation and analysis procedures. There are papers on instrument calibration, data access, station installation guidelines, local magnitudes, and the rapid determination of earthquake parameters in northern and central California.

Clearly, Barbara has more hours in the day than we mere mortals and in recognition of these important contributions of Barbara Romanowicz to all aspects of seismology, theoretically, instrumentally, and

organizationally it is with great pleasure that she is awarded the 2021 IASPEI Medal.

Guy Masters and the IASPEI Bureau

3rd General Assembly African Seismological Commission (AfSC) Kasane, Botswana

Postponed

The third General Assembly of the AfSC had been postponed from 2020 to September 2021. Since the Covid-19 pandemic is still going on, the Assembly had to be postponed again. Now, the AfSC General Assembly is planned for 2022. Please stay informed by checking the AfSC website https://www.afsc-web.org.za.

Identifying Metadata Elements for Legacy Seismic Data

In September 2019, a workshop was held in Albuquerque, New Mexico, where interested parties discussed many aspects of legacy seismic data. A primary outcome of this workshop was the identification of important metadata needed to assist in the discovery and use of legacy seismic data. The workshop report can be found at https://eartharxiv.org/repository/view/418/.

Workshop participants began with a set of metadata elements that had been used in a variety of data rescue projects around the world. Participants reviewed these elements and gave their opinion as to whether or not each element should be included in any metadata standard developed for legacy data. Workshop participants also suggested additional elements that should be included.

A second survey is now ready to solicit input from the broad international seismological community. We are asking you to provide your perspective as to which elements should be Required, Recommended, Optional, or Not Included in metadata for legacy seismic data. Our goal is to identify elements that will enable broad reuse of data across a broad federated system of data repositories that wish to make their holdings available to the international seismological community.

It is important to identify enough metadata to make the data Finable, Accessible, Interoperable, and Reusable (FAIR) without creating too much work for the curators of the existing legacy data collections. Curators of legacy data collections will be responsible for providing all the Required metadata and the Recommended metadata, if available. The amount of effort will be related to the number of elements that should be considered as you categorize the various elements.

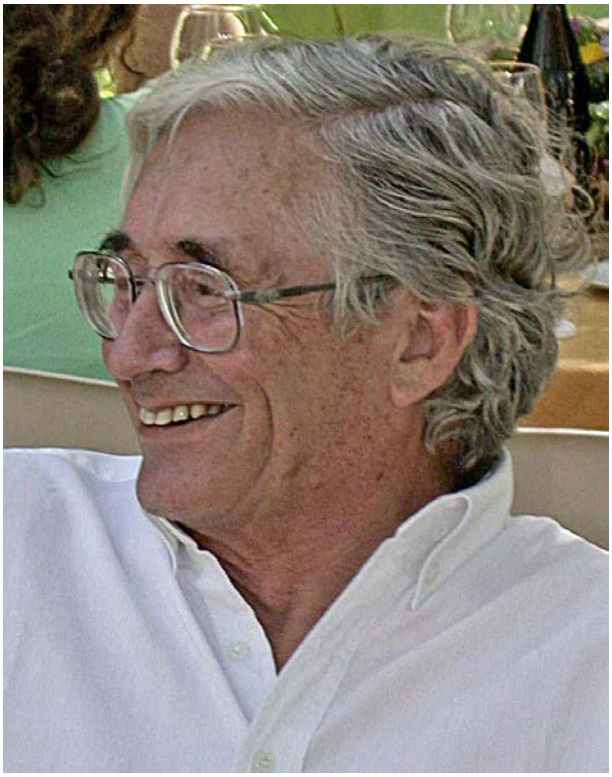
To participate in this survey please scan the QR Code

or enter the URL https://www.surveymonkey.com/r/LegacySeismicData in your browser.

Tim Ahern, IRIS emeritus and Lorraine Hwang, U.C. Davis

Obituaries

Edgar Kausel (1934 – 2021)



On January 13, 2021, at the age of 86, Dr. Edgar Kausel, a renowned Chilean seismologist, passed away after a long illness. Dr. Kausel was born on June 22, 1934, in Santiago, Chile.

After witnessing the consequences of the 1960 May giant earthquake in southern Chile, he decided to specialize in seismology after obtaining his first degree in mining engineering at the University of Chile.

He did so at Lamont-Doherty Geological Observatory (now Lamont–Doherty Earth Observatory) at Columbia University, one of the world's leading research centers developing fundamental knowledge about the origin, evolution, and future of the natural world.

His doctoral thesis on "Regionalization of the Lithosphere and Asthenosphere of the Pacific Ocean" allowed him to analyze the thickness of the lithosphere as a function of distance and age from the East Pacific rise through the study of surface waves. Upon returning to Chile, he was part of the initial group of full-time professional scientists at the Faculty of Mathematical and Physical Sciences of the University of Chile. Dr. Kausel's additional contributions include studies of Chilean seismotectonics and earthquake hazard, induced seismicity in mines, and large Chilean earthquake rupture processes. As a professor, Dr. Kausel taught Geophysical Prospecting, Introduction to Earth Sciences, Physics of the Earth, General Seismology, and Theoretical Seismology and advised dozens of engineering and master students.

Professor Kausel served as Director of the Department of Geophysics of the Faculty of Mathematical and Physical Sciences of the University of Chile for several periods between 1965 and 1999, and Vice Dean of the same faculty between 1981 and 1983. Particularly, Dr. Kausel was instrumental during the nineteen seventies and early eighties in maintaining geophysical activities in Chile due to the scientists' diaspora from the University of Chile.

Due to his achievements, he became a full member of the Chilean Academy of Sciences and the Third World Academy of Sciences. In 2004 he received the Gold Medal from the Chilean Institute of Engineers, and in 2006 he was distinguished with the National Prize for Applied and Technological Sciences. Among the different positions he held during his career, he was a member of the IASPEI Executive Committee from 1979 to 1987.

In addition to his talents as a scientist, Edgar Kausel excelled as a gifted athlete in high school; he held the national school record for three-stroke relay swimming, in which he contributed with freestyle. At less than 18 years of age, in 1952, he was part of the team that made the first sporting ascent of "Las Tortolas", a 6323-m high Andes mountain. He stood out as an offensive right-wing amateur football player, particularly because of his fast pace.

Dr. Edgar Kausel is survived by his wife Inés, daughters Jacqueline, María Inés, son, Edgar Jr., and grandchildren Samuel, Margarita, Victoria, Agustina, and Sofia.

Sergio Barrientos, Centro Sismológico Nacional de la Universidad de Chile, Santiago, Chile

Karl Fuchs (1932 – 2021)

Prof. Dr. Karl Fuchs passed away on 22nd March 2021 after a short illness. He was a world-wide leading geophysicist who was responsible for many international and interdisciplinary research initiatives.

Karl Fuchs was born on 21st January 1932 in Stettin. After World War II his family fled to Germany where he went to school near Hamburg. He studied geophysics in Hamburg, London and Clausthal where he finished in 1957. In the same year he married his wife Cornelia (to many known as Corry) and took over a position in the oil exploration industry. He worked for Prakla Seismos G.m.b.H. (Hannover) as leader of geophysical field crews in Brazil and Algeria. After two years he returned to Clausthal for a PhD. He completed his dissertation on 'Investigations on the wave propagation in wedge shaped media' in 1963 and held postdoc positions in Clausthal, Saint Louis and Dallas before he became affiliated with the University of Karlsruhe in October 1965 where he stayed for the rest of his life. In Karlsruhe Karl Fuchs was responsible for the branch Applied Geophysics, deep seismic sounding and numerical wave propagation. In 1968 he submitted his habilitation on 'The reflexion of spherical waves at inhomogeneous transition zones with arbitrary depth distribution of the elastic moduli and the density'. In 1971 he became chair of General Geophysics.

The establishment of the reflectivity method to compute synthetic seismograms was a major achievement of Karl Fuchs. He combined this theoretical and computational work with its application to deep seismic sounding and became a leading scientist in the studies of the lithospheric structure and upper mantle in the 1960s – 1980s. Seismology was accompanied by his interest in petrophysical interpretations of seismic models. He initiated numerous projects on long-range seismic profiles in international collaboration leading to new interdisciplinary cross-national partnerships. In the 1980s and 1990s his focus shifted to the understanding of the stress field of the lithosphere (World Stress Map) and earthquake hazard projects. Karl Fuchs initiated and led several (inter-)national research programs including the Collaborative Research Centre 'Stress and Stress Release in the Lithosphere', EUROPROBE and the International Lithosphere Program (ILP).

Karl Fuchs was co-editor of Journal of Geophysics, president and honorary member of the German Geophysical Society, president of ILP, vice president of the European Union of Geosciences, fellow of the American Geophysical Union (AGU), American Association for the Advancement of Science, and the Geological Society of London, honorary fellow of the Royal Astronomical Society, member of Academia Europaea, professor honoris causa of the University of Bucharest, member of the Heidelberg Academy of Science and vice-chairman of EUROPROBE. In 2002 Karl Fuchs received the prestigious Karl-Heinrich-Heitfeld-Price of the German GeoUnion Alfred-Wegener-Stiftung.

In Karlsruhe Karl Fuchs was a very committed mentor for this employees and PhD students, many of them now being also professors or in leading industry positions.

Joachim Ritter and Friedemann Wenzel, Geophysikalisches Institut (GPI) des Karlsruher Institut für Technology (KIT), Karlsruhe, Germany

Vladislav Babuška (1937 – 2021)

On Tuesday of the Holy Week, 30 March 2021, our colleague Vladislav Babuška passed away. Vladislav, born 12 April 1937, spent more than 50 years in the seismology department of the Institute of Geophysics. He was a leading personality highly recognized in both domestic and international community in the field of research of deep Earth structure, petrophysics and seismology. During his career he had accomplished extraordinary results in solving a wide range of scientific problems and has directly influenced corresponding research and shaped the present views on creation and development of the system of continental lithosphere and asthenosphere. His pioneering role in the study of seismic anisotropy, from laboratory experiments of elastic anisotropy of rock samples through seismic anisotropy of the Earth's crustal and mantle structures on continental and global scales, is recognized world-wide. Along with his co-workers, he developed the concept of three-dimensional oriented elastic anisotropy of the Earth's crust and upper mantle. In many published works he convincingly proved the principal role of seismic anisotropy in modelling geodynamic systems. Thanks to the efforts of Vladislav and his co-workers, this idea, although initially overlooked and considered by many a marginal and useless complication of the convenient concept of isotropic Earth, became one of the methodological pillars of the study of structure and dynamics of the Earth's lithosphere.

Vladislav was a highly visible personality also in the scientific diplomacy. As a top scientific and organizational authority who understood the need for multidisciplinary approach in Earth sciences, he served as Secretary of the UNESCO International Geoscience Programme (IGCP) in Paris in 1992-1998. At home he had served as the Chair of the Czech National Committee for Geology, and several terms as a member of the Scientific Board of the Institute of Geophysics and of the Institute of Geology.

Vladislav was very friendly, always willing to help either by advice, or by deed. He knew how to enjoy life – from art through good food and wine. As a big admirer of France, he loved above all the good wine from Burgundy. Dear Vladislav, we will miss you a lot.

Jan Šílený, Institute of Geophysics, Czech Academy of Sciences, Prague, Czechia

Mitiyasu Ohnaka (1940 – 2021)

On 5 May 2021, the geophysicist and seismologist Dr. Mitiyasu Ohnaka died in Yokohama, Kanagawa Prefecture, Japan at the age of 80. Dr. Mitiyasu Ohnaka was born on 11 September 1940 in Yokohama, Kanagawa Prefecture. He graduated from the University of Tokyo in 1966, and earned a Master's degree in 1968 and a PhD degree from the same university in 1975. From 1970, he worked at the Earthquake Research Institute, the University of Tokyo as Research associate, in the fields of rock physics, experimental seismology, and the physics of earthquakes. He was promoted to associate professor in 1980 and then to full professor in 1990. He was the director of the Earthquake Prediction Research Center during 1997 – 2001. He held various positions such as Honorary Professor at University College London and invited lecturer or visiting scholar at many worldwide institutions, including the Kavli Institute for Theoretical Physics at the University of California, Santa Barbara. After his retirement in 2001, he continued to work for understanding of earthquake physics as professor emeritus, publishing papers in leading geophysical journals. He also worked widely in Japan, supervising researchers and students, and delivering undergraduate and postgraduate lectures, at institutions from the University of Tokyo to Yamagata University and more. To advance international activities of the earthquake physics community, he served as a member of Executive Committee of the International Association Seismology and Physics of the Earth's Interior (IASPEI) during 1991 to 1995, and he chaired the Sub-Commission on Modeling the Earthquake Source from 1991 to 2001 in IASPEI.

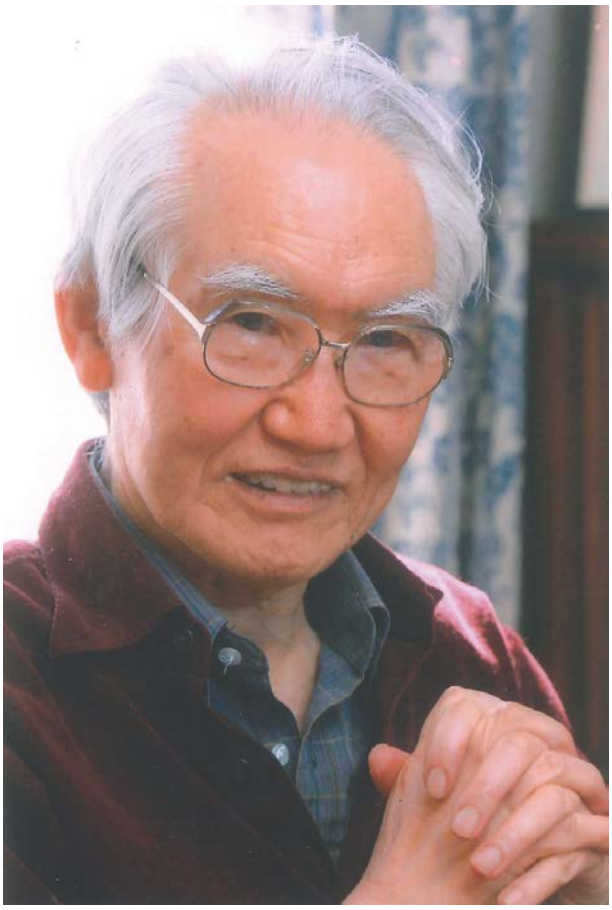
He wrote the book “The Physics of Rock Failure and Earthquakes” published by Cambridge University Press in 2013. This book covers the fundamentals of rock failure physics, earthquake generation processes, physical scale-dependence, and large-earthquake generation cycles and their seismic activity and is designed for researchers and professional practitioners in earthquake seismology and rock failure physics, and also in adjacent fields such as geology and earthquake engineering. It is also a valuable reference for graduate students in earthquake physics, rock physics, and earthquake seismology.

He conducted a series of laboratory experiments with high-resolution measurements to understand earthquake generation processes from slow nucleation to the dynamic rupture propagation. He greatly contributed to the understanding of how a rupture develops spontaneously at accelerating speeds, finally reaching a steady high-speed close to elastic-wave velocities. He proposed a model in which local dynamic unstable ruptures that occur during the source nucleation process correspond to foreshock sequences immediately before the occurrence of the mainshock rupture. He focused on the formulation of laboratory-derived physical constitutive laws, which governs the behavior of earthquake ruptures and provides the basis of earthquake physics. He also investigated how the constitutive law for rock failure at local strong areas on faults is affected by seismogenic crustal conditions of effective

normal stress, pore fluid pressure, and temperature. He continued to put a lot of efforts to reveal scale-dependent physical quantities inherent in the rupture over a broad scale range, focusing on a dominant wavelength representing the non-uniformity of the geometric shape of the fault. To explore the earthquake physics in nature, he performed comparative study of the experimental results and observed seismic phenomenon. We miss his relentless positive energy and enthusiasm to make progress of studies on earthquake physics.

Aitaro Kato, Earthquake Research Institute, The University of Tokyo, Tokyo, Japan

Kiyoo Mogi (1929 – 2021)



On June 6, 2021, Kiyoo Mogi, Professor Emeritus of the University of Tokyo, AGU and JpGU fellow, passed away at the age of 91 in Chiba, Japan.

Born in Yamagata, Japan, Kiyoo Mogi received BSc (1953) and PhD (1962) in geophysics from the University of Tokyo. His first academic appointment was Research Associate at the Earthquake Research Institute (ERI) of the University of Tokyo in 1954, where he advanced to Associate Professor (1965) and Professor (1969). He was the director of ERI for 1988 – 1990. After retirement from ERI in 1990, he was a Professor of Earth Science at Nihon University until 2003.

While Kiyoo Mogi is well-known as the world pioneer of experimental seismology, his academic career started with volcano physics. His elastic model (1958) describing the crustal deformation from a spherical magma pressure, known as the 'Mogi model,' is still the first-choice analysis. Also, he was the one who introduced telemetry for geophysical monitoring of volcanos.

Since the early 1960s, Kiyoo Mogi vigorously made laboratory rock-fracture experiments. He has revealed the spontaneous concentration of microfractures onto the plane of upcoming macroscopic failure (1968), which has set a course for the physics-based approach to earthquake preparation processes. It may be appropriate here to raise a less known experiment (1981). During the final stage of the constant-load failure test, the b-value decreased beautifully in an accelerating way. This result cannot be ascribed to the negative dependence on stress, which has become something like an official interpretation of b-value these days, however.

Kiyoo Mogi was also a pioneer in highlighting the essential role of inhomogeneity of crustal materials and structures, which started with a charming experiment comparing microfractures in specimens of different degrees of inhomogeneity, from resin to pumice (1962). Along this line, he proposed many ideas to interpret natural seismicity, including foreshocks, aftershocks, swarms, and the frequency-size distribution (ca. 1962 – 1990).

While he was such a meticulous experimentalist devising elaborate details that culminated in the world-first true-triaxial rock fracture apparatus (ca. 1967 – 1981), he was sometimes agile and dynamic. On June 25, 1980, nighttime, an earthquake swarm started east off the Izu Peninsula. He immediately persuaded Japan Coast Guard to give him a ship, men, and a hydrophone. The ship kept circling above the swarm from the evening of June 28 through the morning of June 30, during which an M6.7 earthquake occurred right below the ship, giving them over a thousand high-frequency (50–300Hz) events delineating the fault (1983).

Kiyoo Mogi's superb intuition also led him to notice several characteristic patterns (ca. 1968 – 1989) of natural seismicity related to the cycle of large earthquakes, including seismic gap, temporal clustering, migration, and quiescence shortly preceding large earthquakes (Mogi doughnut). Suitably for the nature and prominence of his science, Kiyoo Mogi played a pivotal role in the history of earthquake prediction research in Japan. Analyzing the long-term triangulation survey, he found substantial strain accumulation in the Tokai region (1970), which the government later designated as the Tokai high-risk area for intense real-time monitoring. Furthermore, he later (1985) found a remarkable accelerating ground tilt during a few days before the 1944 M 8.2 Tonankai earthquake, by thoughtful analysis of old campaign leveling-survey data at the eastern edge of the focal area, when the 10-km section was surveyed many times from 7 days before through 2 days after the earthquake (The timing of the survey was just a miracle). Since Tonankai and Tokai are neighboring segments of the Nankai trough, Kiyoo Mogi did not hide his realistic expectation of capturing a similarly conspicuous short-term precursor for the feared Tokai earthquake.

Kiyoo Mogi took responsibility. He served as Chairman of Coordinating Committee for Earthquake Prediction (1991 – 2001) and Chairman of Earthquake Assessment Committee for Tokai earthquake (1991 – 96). The latter was a grave responsibility in Japan because, for 1979 – 2017, the prime minister was supposed, by law, to order shutdowns when the Committee judges the observed anomaly is the short-term precursor of the Tokai earthquake. While seeing a realistic possibility of short-term prediction, Kiyoo Mogi, a humble student of inhomogeneities and complexities, also deemed that scientific assessment would be grey in most cases. He insisted that the government allow the Committee to issue a grey conclusion as a soft advisory, which does not force economically damaging shutdowns. Kiyoo Mogi resigned from the Committee in March 1996, openly in protest.

Frequently seen on TV news, he was the most well-recognized seismologist to Japanese citizens. After 1996, he wrote at least seven books for them and one book for rock mechanicians (2007). Mogi sensei's deep insight and strong originality will keep inspiring all of us.

Masao Nakatani, Earthquake Research Institute of the University of Tokyo

Meetings Calendar

We report below titles, dates, places and websites of the forthcoming meetings relevant to the interests of IASPEI scientists. If you are aware of events not listed below or changes regarding these events, please inform the Secretary General.

2021

CTBT Science and Technology (SnT) 2021
June 21 to July 2, 2021, Vienna, Austria and virtual
URL: https://events.ctbto.org/snt/snt2021

Summer School on "Core-Mantle Interactions through time"
June 28 to July 23, 2021, Les Houches, France
URL: https://coremantlehouches.github.io

Goldschmidt 2021
July 4 – 9, 2021, Lyon, France, virtual
URL: https://2021.goldschmidt.info/goldschmidt/2021/meetingapp.cgi

AOGS2021 18th Annual Meeting
August 1 – 6, 2021, virtual
URL: https://www.asiaoceania.org/aogs2021

3rd Joint IAGA-IASPEI Scientific Assembly together with ASC, 13th General Assembly
August 21 – 27, 2021, Hyderabad, India, virtual
URL: http://www.iaga-iaspei-india2021.in/

AfSC 3rd General Assembly
September 6 – 10, 2021, Kasane, Botswana
URL: http://afsc3ga2020.co.bw/site/
Postponed

ESC 37th General Assembly
September 19 – 24, 2021, virtual, Greece
URL: https://www.erasmus.gr/microsites/1193

XXth General Assembly of Wegener
October 25 – 29, 2021, Marrakech, Morocco
URL: https://wegener2021.sciencesconf.org
Postponed

AGU Fall Meeting
December 13 – 17, 2021, New Orleans, USA
URL: https://www.agu.org/Fall-meeting

2022

AfSC 3rd General Assembly
To be decided
URL: http://afsc3ga2020.co.bw/site/

Čermák7 – 7th International Meeting on Heat Flow and the Geothermal Field
To be decided
URL: https://ihfc-iugg.org/meetings

LACSC 4th General Assembly
To be decided

EGU General Assembly 2022
April 3 – 8, 2022, Vienna, Austria

3rd European Conference on Earthquake Engineering and Seismology
September 4 – 9, 2022, Bucharest, Rumania
URL: https://3ecees.ro/

XXth General Assembly of Wegener
Autumn, 2022, Marrakech, Morocco
URL: https://wegener2021.sciencesconf.org

AGU Fall Meeting
December 12 – 16, 2022, Chicago, USA
URL: https://www.agu.org/Fall-meeting-2022

2023

EGU General Assembly 2023
April 23 – 28, 2023, Vienna, Austria

IUGG 28th General Assembly
July 2023, Berlin, Germany
URL: https://www.iugg2023berlin.org/

AGU Fall Meeting
December 11 – 15, 2023, San Francisco, USA

2024

EGU General Assembly 2024
April 14 – 19, 2024, Vienna, Austria

AGU Fall Meeting
December 2024, Washington, USA

2025

AGU Fall Meeting
December 2025, New Orleans, USA

2026

AGU Fall Meeting
December 2026, San Francisco, USA

General Information about IASPEI

The **I**nternational **A**ssociation of **S**eismology and **P**hysics of the **E**arth's **I**nterior [IASPEI] is one of the eight Associations of the **I**nternational **U**nion of **G**eodesy and **G**eophysics [IUGG].

The other IUGG Associations are:

Int'l Association of Cryospheric Sciences [IACS]
Int'l Association of Geodesy [IAG]
Int'l Association of Geomagnetism and Aeronomy [IAGA]
Int'l Association of Hydrological Sciences [IAHS]
Int'l Association of Meteorology and Atmospheric Sciences [IAMAS]
Int'l Association for the Physical Sciences of the Oceans [IAPSO]
Int'l Association of Volcanology and Chemistry of the Earth's Interior [IAVCEI]

Scientific Assemblies

IASPEI holds an Ordinary General Assembly every four years in conjunction with each Ordinary General Assembly of IUGG. Between the General Assemblies, IASPEI holds a Scientific Assembly, sometimes meeting with one of the other Associations of IUGG.

Participation in IASPEI Activities

Since July 2015, all scientists participating in IASPEI activities are counted as members of IASPEI (see http://www.iaspei.org/statutes.html). IASPEI welcomes all scientists throughout the world to join in seismological research.

IASPEI is subdivided into several Commissions, many of which have working groups for the study of particular subjects in their general areas of interest. On occasion, these internal IASPEI groups issue their own newsletters or circulars and many maintain their own websites. At the IASPEI Assemblies, the groups organize specialist symposia, invite scholarly reviews and receive contributed papers that present up-to-the-minute results of current research. The IASPEI web site gives, or provides links to, information on the range of IASPEI activities.

The IASPEI Website

IASPEI can be found on the web at:
http://www.iaspei.org/

Contacting IASPEI

The Secretary-General is the main point of contact for all matters concerning IASPEI.

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