

# **Annuaire UGGI**

## **2009**

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# **IUGG Yearbook**

## **2009**

**Union Géodésique et Géophysique Internationale  
International Union of Geodesy and Geophysics**

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# IUGG Yearbook 2009

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# I. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS

## UNION GÉODÉSIQUE ET GÉOPHYSIQUE INTERNATIONALE

### HISTORIQUE

L'Union Géodésique et Géophysique Internationale (UGGI) est un organisme international non gouvernemental à but non lucratif fondé à Bruxelles le 28 juillet 1919. L'UGGI se consacre à l'étude scientifique de la Terre et à l'utilisation au profit de la société des connaissances acquises grâce à cette étude. L'UGGI est l'une des trois Unions scientifiques ayant participé en 1931 à l'Assemblée constitutive du Conseil International des Recherches, connu aujourd'hui sous le nom de Conseil international pour la science (CIUS). Le CIUS est un forum planétaire des scientifiques. Il leur permet d'échanger des idées et des informations, et de définir des méthodes et procédures normalisées dans tous les domaines de recherche. L'UGGI, l'une des 30 Unions scientifiques actuellement réunies dans le CIUS, fournit son savoir-faire concernant les études terrestres effectuées par les chercheurs dans ses Associations internationales et Commissions inter-associations.

Les neuf premiers pays membres de l'UGGI étaient l'Australie, la Belgique, le Canada, la France, l'Italie, le Japon, le Portugal, le Royaume-Uni et les États-Unis. En 1925, l'UGGI comptait 31 pays membres. En 2008, elle compte 65 entités adhérentes.

Au début, l'Union chapeautait six sections : Géodésie, Séismologie, Météorologie, Magnétisme et électricité terrestre, Océanographie physique et Volcanologie. Une septième section, « Hydrologie Scientifique », fut créée en 1922. Le terme « Section » fut remplacé par celui d'« Association » lors de la cinquième Assemblée générale tenue à Lisbonne, en 1933. Une huitième Association sur les Sciences Cryosphériques fut créée lors de l'Assemblée Générale de 2007 à Pérougia, Italie.

Les langues officielles de l'UGGI sont l'anglais et le français.

### BACKGROUND

The International Union of Geodesy and Geophysics (IUGG) is an international, non-governmental, non-profit organization established in Brussels on July 28, 1919. IUGG is dedicated to the scientific study of the Earth and the application of knowledge gained by such studies to benefit society. IUGG was one of the first three Scientific Unions established during the Constitutive Assembly of the International Research Council, the predecessor of the International Council of Scientific Unions (ICSU) created in 1931. ICSU provides a global forum for scientists to exchange ideas and information and to develop standard methods and procedures for all fields of research. IUGG, one of the 30 scientific Unions presently grouped within ICSU, brings expertise on Earth studies from researchers in its International Associations and Inter-Association Commissions.

The first nine member countries of IUGG were Australia, Belgium, Canada, France, Italy, Japan, Portugal, the United Kingdom, and the United States. By 1925, there were 31 Member Countries, and in 2008, IUGG had 65 adhering bodies.

The original Union encompassed six Sections: Geodesy, Seismology, Meteorology, Magnetism and Terrestrial Electricity, Physical Oceanography, and Volcanology. A seventh section "Scientific Hydrology" was created in 1922. The term "Section" was replaced by "Association" at the 5th General Assembly held in Lisbon in 1933. An eighth Association of Cryospheric Sciences was added at the 2007 General Assembly held in Perugia, Italy.

The official languages of IUGG are English and French.

## **OBJECTIFS ET ACTIVITÉS DE L'UGGI**

L'UGGI est une organisation purement scientifique, qui a été fondée afin de promouvoir et de coordonner les études sur les propriétés physiques, chimiques et mathématiques de la Terre et sur son environnement spatial. Ces études concernent la forme de la Terre; la nature de ses champs gravitationnel et magnétique; la dynamique de la Terre en tant qu'entité et de celle de ses composants; la structure interne, la composition et la tectonique de la Terre; la formation des magmas; la volcanologie et la genèse des roches; le cycle hydrologique, dont la neige et la glace; la physique et la chimie des océans; l'atmosphère, l'ionosphère, la magnétosphère et les relations Soleil-Terre; ainsi que les problèmes analogues propres à la Lune et aux autres planètes. Les activités de l'UGGI comprennent l'observation de la Terre par satellite et par d'autres techniques de mise en place d'instruments à haute altitude.

## **Programmes de recherche interdisciplinaire**

L'UGGI a inauguré et activement soutenu les efforts de collaboration qui ont permis de mettre en œuvre des programmes de recherche interdisciplinaire internationaux de grande valeur, dont l'Année géophysique internationale (1957-1958), le Projet du manteau supérieur (1964-1970), le Projet géodynamique (1972-1979), le Programme international de recherche atmosphérique (1967-1980), le Programme international d'étude de la lithosphère, le Programme mondial de recherches climatiques, et le Programme Géosphère-Biosphère. Ces programmes ont servi de modèle de coopération internationale et interdisciplinaire. L'une des contributions majeures de l'UGGI a été la création, par l'entremise du CIUS, du système de la Banque de données mondiale et la Fédération des services des données astronomiques et géophysiques, qui a fourni aux chercheurs du monde entier l'information recueillie dans le cadre de ces grands programmes et de la mettre à la disposition des chercheurs du monde entier. L'UGGI soutien l'Année Internationale de la Terre (2007-2009) et l'Année Polaire International (2007-2008) et a initié et soutien l'Année Électronique Géophysique (2007-2008) et l'Année Héliophysique Internationale (2007-2008).

## **Recherche internationale en coopération**

L'UGGI collabore avec l'UNESCO à l'étude des catastrophes naturelles, des océans, et de l'hydrologie. Elle attache aussi une grande importance aux problèmes scientifiques des pays en voie de développement, en parrainant des activités liées aux besoins scientifiques du tiers monde. L'UGGI est un partenaire d'autres Unions Scientifiques du CIUS, par le biais des Commissions inter-unions, et ses activités correspondent avec celles de sept autres Unions du CIUS (GéoUnions): l'Union Géographique Internationale (UGI), l'Union Internationale des Sciences Géologiques (UISG), l'Union Internationale de la Science du Sol (UISS), la Société Internationale de Photogrammétrie et de Télédétection (SIPT), l'Union Astronomique Internationale (IAU), l'Union Radio-Scientifique Internationale (URSI), et l'Union Internationale pour l'Étude du Quaternaire (INQUA).

## **OBJECTIVES AND ACTIVITIES OF IUGG**

IUGG is a purely scientific organisation established to promote and co-ordinate studies of physical, chemical, and mathematical properties of the Earth and its environment in space. These studies include the shape of the Earth; the nature of its gravitational and magnetic fields; the dynamics of the Earth as a whole and of its component parts; the Earth's internal structure, composition, and tectonics; the generation of magmas; volcanism and rock formation; the hydrological cycle including snow and ice; the physics and chemistry of the oceans; the atmosphere, ionosphere, magnetosphere and solar-terrestrial relations; and analogous problems associated with the Moon and other planets. IUGG activities embrace studies of the Earth by artificial satellites and other techniques for deploying instruments at high altitude.

## **Interdisciplinary Research Programmes**

IUGG has initiated and vigorously supported collaborative efforts that have led to highly productive world-wide interdisciplinary research programmes, such as the International Geophysical Year (1957-58), the Upper Mantle Project (1964-70), the Geodynamics Project (1972-79), the Global Atmospheric Research Programme (1967-80), the International Lithosphere Programme, the World Climate Research Programme, and the Geosphere-Biosphere Programme. These programmes have set a model for international, interdisciplinary co-operation. One major contribution has been the creation, through ICSU, of the World Data Centre system and the Federation of the Astronomical and Geophysical Data Services, from which the data gathered during these major programmes are available to research workers everywhere. IUGG supports the International Year of the Planet Earth (2007-2009) and the International Polar Year (2007-2008) and has initiated and supports the Electronic Geophysical Year (2007-2008) and the International Heliophysical Year (2007-2008).

## **Worldwide Co-operative Research**

IUGG co-operates with UNESCO in the study of natural catastrophes, oceans, and hydrology. It also gives particular emphasis to the scientific problems of Developing Countries by sponsoring activities relevant to the scientific needs of the Third World. IUGG is a partner with other ICSU Scientific Unions in inter-Union Commissions, and coordinates its activities with seven other ICSU Unions (GeoUnions): International Geographical Union (IGU), the International Union of Geological Sciences (IUGS), the International Union of Soil Sciences (IUSS), the International Society of Photogrammetry and Remote Sensing (ISPRS), the International Astronomical Union (IAU), the International Union of Radio Science (URSI), and the International Union for Quaternary Research (INQUA).

## **STRUCTURE**

De par leur nature même, les études géodésiques et géophysiques requièrent une importante coopération internationale, de même qu'une coordination efficace. L'UGGI, heureusement, compte 65 entités adhérentes (Tableau 1). Les entités adhérentes sont répartis dans le monde entier, comme le montre le Tableau 2.

### **Comités nationaux**

La grande majorité des entités adhérentes participent aux activités de l'UGGI à travers leur Comité National de l'UGGI, mis en place par l'Académie nationale ou une autre institution officielle du pays adhérant à l'Union (il existe d'autres méthodes d'adhésion). Chaque Comité national de l'UGGI est représenté aux Assemblées Générales de l'UGGI par un délégué nommé par l'entité adhérente.

### **Assemblées générales**

Les Assemblées générales de l'UGGI ont lieu tous les quatre ans. La prochaine Assemblée générale de l'UGGI sera la XXV<sup>e</sup> et se tiendra à Melbourne, en Australie, du 27 juin au 8 juillet 2011 (<http://www.iugg2011.com>). L'UGGI tient des Assemblées Générales depuis 1922. Depuis 1963, elles ont lieu tous les quatre ans. Le Tableau n°3 indique les années et les localisations des Assemblées générales de l'UGGI.

Au cours de ces Assemblées générales, on adopte les politiques régissant l'UGGI et on définit et coordonne les programmes nécessitant une participation internationale. De plus, on élaboré les plans d'exécution de ces programmes de recherche. Les résultats scientifiques des programmes en cours font l'objet de discussions lors d'un grand nombre de symposiums, de réunions de commissions, de groupes de travail ou de rencontres réunissant les scientifiques assistant aux Assemblées.

### **Le Conseil, le Bureau et les Comités de l'UGGI**

L'UGGI est dirigée par le Conseil de l'UGGI, lequel est régi par les statuts et le règlement intérieur de l'Union. Le Conseil de l'UGGI est composé des délégués accrédités des entités adhérentes. Le Conseil de l'UGGI se réunit lors de l'Assemblée Générale de l'UGGI, où il est procédé à l'élection des membres du Bureau de l'UGGI et du Comité des finances de l'UGGI. Les membres du Conseil de l'UGGI qui ont assisté à la XXIV Assemblée Générale, en 2007, seront présentés à la page 12.

Le Bureau de l'UGGI traite des affaires administratives entre les rencontres du Conseil. Ses membres, élus par le Conseil, sont au nombre de sept – quatre responsables (Président, Vice-président, Secrétaire général et Trésorier) et trois membres associés. Le Bureau se réunit chaque année.

## **STRUCTURE**

By their very nature, geodetic and geophysical studies require a high degree of international co-operation as well as effective central co-ordination. IUGG is fortunate in having 65 Member Adhering Bodies (Table 1). The Members are distributed throughout the world as shown in Table 2.

### **National Committees**

The great majority of Member Adhering Bodies participate through IUGG National Committees set up by the national academy or another body in their country that adheres to the Union (other methods of adherence do occur). Each IUGG National Committee is represented at the IUGG General Assemblies by a Delegate appointed by its Adhering Body.

### **General Assemblies**

IUGG General Assemblies are held every four years. The next XXV IUGG General Assembly will be held in Melbourne, Australia, from 27 June to 8 July 2011 (<http://www.iugg2011.com>). IUGG General Assemblies have been held since 1922. Since 1963, they are held every four years. Table 3 lists the years and locations of IUGG General Assemblies.

During these General Assemblies, policies governing IUGG are adopted, research programmes requiring international participation are formulated and coordinated. In addition, plans are drawn for the execution of research programmes. The scientific results of programmes in progress are discussed at the numerous Symposia, Commission and Working Group meetings, and other gatherings of scientists that are convened during these assemblies.

### **The IUGG Council, Bureau, and Committees**

IUGG's affairs are directed by the IUGG Council governed by the Statutes and By-laws of the Union. The IUGG Council is composed of one credentialed delegate from each Adhering Body. The IUGG Council meets during the IUGG General Assembly and elects the IUGG Bureau and the IUGG Finance Committee. The IUGG Council delegates attending the XXIV General Assembly in 2007 are listed on page 12.

The IUGG Bureau handles administrative affairs between Council meetings. It is elected by the Council and consists of seven members – four officers (President, Vice President, Secretary-General, and Treasurer) and three members at large. The Bureau meets annually.

Le Comité directeur de l'UGGI travaille en vue d'atteindre les objectifs scientifiques de l'Union et des Associations internationales grâce à une coordination et une définition efficace des politiques générales. Il regroupe les membres du Bureau de l'UGGI, le président sortant de l'Union et les présidents des Associations internationales.

Le Comité des finances de l'UGGI traite des affaires budgétaires avec le Trésorier de l'UGGI. Il regroupe personnes élues par le Conseil de l'UGGI. Les membres du Comité des finances ne peuvent être membres ni du Bureau de l'UGGI, ni du Comité directeur de l'UGGI.

### **Les Associations internationales**

Les huit Associations internationales semi-autonomes de l'UGGI assument, chacune, les responsabilités relatives à une série de sujets ou de thèmes spécifiques, relevant des activités générales de l'Union. Chaque Association possède sa propre sous-structure, comme il sera expliqué ci-dessous. Les Associations internationales définissent des normes de recherche et conviennent de définitions et d'algorithmes, tels que le *Manual of Seismological Observatory Practice* ou le *Guide for Magnetic Repeat Station Surveys*. Pour les sujets importants les résolutions doivent être adoptées à l'unanimité. Ils transmettent dans le cadre de leur mission éducative les résultats de leurs recherches à la communauté scientifique internationale, aux agences gouvernementales, aux entreprises et au grand public. Les huit Associations internationales sont les suivantes:

Association Internationale des Sciences Cryosphériques (AISC)  
International Association of Cryospheric Sciences (IACS)

Association Internationale de Géodésie (AIG)  
International Association of Geodesy (IAG)

Association Internationale de Géomagnétisme et d'Aéronomie (AIGA)  
International Association of Geomagnetism and Aeronomy (IAGA)

Association Internationale des Sciences Hydrologiques (AISH)  
International Association of Hydrological Sciences (IAHS)

Association Internationale de Météorologie et des Sciences de l'Atmosphère (AIMSA)  
International Association of Meteorology and Atmospheric Sciences (IAMAS)

Association Internationale pour les Sciences Physiques des Océans (AISPO)  
International Association for the Physical Sciences of the Oceans (IAPSO)

Association Internationale de Séismologie et de Physique de l'Intérieur de la Terre (AISPIT)  
International Association of Seismology and Physics of the Earth's Interior (IASPEI)

Association Internationale de Volcanologie et de Chimie de l'intérieur de la Terre (AIVCIT)  
International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

The IUGG Executive Committee works to further the scientific objectives of the Union and International Associations by effective co-ordination and formulation of general policies. It consists of the IUGG Bureau, the retiring president of the Union, and the Presidents of the International Associations.

The IUGG Finance Committee interacts with the IUGG Treasurer regarding budgetary matters. It consists of persons elected by the IUGG Council. The members of the Finance Committee are not members of the IUGG Bureau or the IUGG Executive Committee.

### **The International Associations**

The eight semi-autonomous International Associations within IUGG are each responsible for a specific range of topics or themes within the overall scope of the Union's activities. Each has a sub-structure as discussed below. The International Associations work to set standards for research and agree on definitions and algorithms, such as the *Manual of Seismological Observatory Practice* or the *Guide for Magnetic Repeat Station Surveys*. Participants pass resolutions on important issues where all agree. They make research visible to the international scientific community, to governmental agencies, to industry, and to the general public through their education activities. These eight International Associations are as follows:

Les Associations internationales jouent également un rôle particulier en faisant bénéficier tous les pays du monde des dernières avancées scientifiques, grâce à des rencontres, des ateliers et des assemblées. Les Associations internationales tiennent leurs propres Assemblées scientifiques tous les quatre ans environ, généralement deux ans avant la tenue de l'Assemblée générale de l'UGGI. En 2008, un des huit Associations internationales a tenu son Assemblée scientifique; les autres tiendront leurs Assemblées en 2009. Lors des Assemblées scientifiques, les Associations internationales parrainent des symposiums sur des sujets particuliers, souvent en partenariat.

Les géodésiens et les géophysiciens de tous les pays du monde sont invités à participer aux nombreux symposiums et ateliers des Associations internationales et des Assemblées générales de l'UGGI. Lors de ces rencontres, les scientifiques ont l'occasion de discuter de leurs méthodologies, résultats et hypothèses respectifs, et de planifier des projets de recherche en collaboration.

Les symposiums ont vocation à s'adresser tout particulièrement aux jeunes scientifiques des pays en voie de développement. L'UGGI a prévu un budget particulier pour assurer leur participation aux symposiums organisés sous l'égide de l'Union et de ses Associations.

Comme l'UGGI, les Associations internationales sont gérées par des officiers qui sont élus pendant leurs Assemblées Générales. Dans son domaine respectif, chaque Association est responsable de la définition de son propre programme et de soutenir les activités de ses propres composantes.

### **Commissions de l'Union**

En raison de la nature interdisciplinaire des domaines traités par les Associations internationales, quatre Commissions de l'Union ont été créées pour assister l'Union et la communauté géophysique internationale par la promotion de l'étude de problèmes interdisciplinaires particuliers. Ces organisations sont habilitées par le Comité directeur de l'UGGI à mener des recherches conjointes entre les Associations. Les commissions de l'Union font l'objet d'un examen et d'un remaniement lors de chaque Assemblée générale de l'UGGI. Les quatre Commissions suivantes sont actuellement en activité:

- Géophysique mathématique; Mathematical Geophysics (CMG)
- Étude des profondeurs terrestres; Study of the Earth's Deep Interior (SEDI)
- Commission sur les risques géophysiques et le développement durable; Geophysical Risk and Sustainability (GRC)
- Commission de l'union pour les données et l'information; Union Commission for Data and Information (UCDI)

En outre, deux ou plusieurs Associations internationales peuvent créer et soutenir des groupes de travail conjoints chargés de sujets scientifiques spécifiques.

### **Commission Inter-Unions**

Le Programme International du Lithosphère, guidé par le Comité Scientifique du Lithosphère (SCL), fut établi en 1980 comme la Commission Inter-Union sur le Lithosphère (ICL) par le Conseil International des Sciences (CIUS), selon la demande de l'Union Internationale des Sciences Géologiques

The International Associations also play a special role in bringing state-of-the art science to all the countries of the world through meetings, workshops, and assemblies. The International Associations convene their own Scientific Assemblies approximately every four years, generally two years following the IUGG General Assembly. In 2008, one of the eight International Associations held the scientific assembly. The other Associations will hold scientific assemblies in 2009. At Scientific Assemblies the International Associations sponsor symposia on particular topics, often in partnership with one another.

Geodesists and geophysicists from all countries of the world are encouraged to attend the numerous Symposia and Workshops of the International Associations and the General Assemblies of IUGG. At these meetings scientists have the opportunity to discuss their respective methodologies, results, and hypotheses and to plan collaborative research projects.

The Symposia are intended to be particularly helpful to younger scientists from developing countries of the world. The IUGG has made special financial provision for them to participate in the Symposia organised under the aegis of the Union and its Associations.

Like IUGG, International Associations are managed by officers who are elected during their General Assembly. Within its own discipline each Association is responsible for determining its own programme of investigations and for supporting the activities of its own component parts.

### **Union Commissions**

Owing to the interactive nature of the subject fields managed by the International Associations, four Union Commissions have been established which serve the Union and the international geophysical community by promoting the study of particular interdisciplinary problems. These bodies are chartered by the IUGG Executive Committee to conduct inter-association science. Union Commissions are reviewed and renewed at each IUGG General Assembly. The following four Commissions are presently active:

- Mathematical Geophysics (CMG); Géophysique mathématique
- Study of the Earth's Deep Interior (SEDI); Étude des profondeurs terrestres
- Geophysical Risk and Sustainability (GRC); Commission sur les risques géophysiques et développement durable
- Union Commission for Data and Information (UCDI); Commission de l'union pour les données et l'information

In addition, two or more International Associations may set up and support joint working groups to address specific scientific topics.

### **Inter-Unions Commission**

The International Lithosphere Program, guided by the Scientific Committee on the Lithosphere (SCL), was established in 1980 as the Inter-union Commission on the

(IUGS) et l'Union Géodésique et Géophysique Internationale (UGGI). Le nom fut changé au Comité Scientifique sur le Lithosphère en 1999. Selon la Décision 8.4 de l'Assemblée Générale de 2005 du CIUS, le CIUS a décidé de terminer son soutien du SCL/ILP et de recommander un décallage de responsabilité vers l'UGGI et l'IUGS. Depuis cette décision, l'UGGI et l'IUGS ont ratabli la mission du ILP et ont collaboré pour re-définir l'ILP comme une entité Inter-Union. De nouveaux Termes de Référence ont été approuvés par les deux Unions.

## FINANCES

L'UGGI collecte les cotisations annuelles pour financer les projets scientifiques inter-unions, les initiatives inter-associations et les activités administratives de l'UGGI, y compris ses publications. La moitié du revenu net de l'UGGI est remis aux Associations internationales qui peuvent décider de l'utilisation de ces fonds.

Le revenu de l'Union provient des contributions annuelles des entités adhérentes. Les entités adhérentes ont le choix entre le statut de membre régulier ou de membre associé (ne payant pas de cotisation). Les entités adhérentes peuvent envoyer un délégué aux rencontres quadriennales du Conseil de l'UGGI et voter sur les affaires administratives. Les scientifiques des entités adhérentes peuvent occuper un poste de responsabilité dans les Associations internationales et ils ont un droit de vote lors des séances de travail. Les membres associés ne versent pas de cotisation, n'ont pas de droit de vote et leurs scientifiques ne peuvent pas occuper de poste de responsabilité. Les scientifiques des entités adhérentes associés sont toutefois les bienvenus aux activités scientifiques et sociales tenues lors de toutes les rencontres de l'UGGI et des Associations internationales. Les données scientifiques et les recherches effectuées par les entités adhérentes associées sont prises en considération par les autres scientifiques, et nombreuses sont les occasions de rencontres et de collaboration avec d'autres participants de l'UGGI. Si la situation économique d'un pays ne lui permet pas l'adhésion de plein droit à l'UGGI., le statut de membre associé peut être une étape vers l'adhésion de plein droit.

Les cotisations qu'une entité adhérente régulière paie sont calculées selon un barème (en fonction de la ‘catégorie - Table 1’) défini par le Comité des finances de l'UGGI. Les catégories reflètent la situation économique du pays et à sa participation aux Assemblées Générales de l'UGGI. Les détails figurent dans le titre III des statuts et le titre III du règlement intérieur de l'UGGI. Chaque catégorie correspond à un nombre d'unités permettant de calculer la cotisation. En 2009 la valeur d'une unité de cotisation est de 1750 dollars. Le Comité des finances utilise un algorithme pour déterminer le montant de l'unité. Le Comité des finances examine également la catégorie d'adhésion de chaque entité adhérente au moins une fois tous les quatre ans.

Tout défaut de paiement d'une cotisation par un pays entraîne son passage dans une catégorie particulière de membres sans droit de vote, dits « observateurs ». Le défaut prolongé de paiement des cotisations peut entraîner l'expulsion d'un pays de l'UGGI.

Lithosphere (ICL) by the International Council for Science (ICSU), at the request of the International Union of Geological Sciences (IUGS) and the International Union of Geodesy and Geophysics (IUGG). The name was formally changed to the Scientific Committee on the Lithosphere in 1999. According to Decision 8.4 from the 2005 ICSU General Assembly, ICSU decided "to withdraw ICSU sponsorship from SCL/ILP and to recommend that responsibility would then shift to IUGG and IUGS." Since that time, IUGG and IUGS have reaffirmed the ILP mission and have collaborated to re-define ILP as an inter-Union body. New Terms of Reference have been approved by both Unions.

## FINANCES

IUGG collects annual contributions to carry out its support for Inter-Union science, Inter-Association initiatives, and IUGG administration, including IUGG publications. One half of IUGG's net income from the previous year is passed to the International Associations to use as they see fit.

The income of the Union comes from annual contributions of the Members. Member Adhering Bodies can choose to be regular paying Members or Associate (non-paying) Members. Members may send a delegate to quadrennial meetings of the IUGG Council and vote on matters of business. Scientists from regular Members may hold office in the International Associations and vote at their business meetings. Associate Members pay no contributions, have no voting rights, and their scientists may not hold offices. However, scientists from Associate Member countries are welcome to attend all scientific and social activities at all IUGG and International Association meetings. The scientific data collected and research performed within Associate Member countries is valued by other scientists and the opportunities for networking and collaboration with other IUGG participants are abundant. Associate Membership can be a first step toward regular membership, if a country's economic condition does not currently permit the payment of annual dues.

A regular Member Adhering Body pays dues according to a scale (“the category number - See Table 1”) established by the IUGG Finance Committee. Categories are related to the economic condition of the country and its participation in IUGG General Assemblies. Details are specified in Statute III and By-Law III of IUGG. Each category has an associated number of Units used to determine the dues to be paid. The value of a single Unit of membership 2009 is \$ 1,750. The Finance Committee uses an algorithm to determine the price of a Unit. The Finance Committee also reviews the category of membership for each Member Adhering Body at least every four years.

Failure to pay fees in a timely manner places a country into a special class of non-voting membership known as “observers.” Continued failure to pay fees is grounds for expulsion from IUGG.

## Table 1: Member Adhering Bodies of IUGG

Category A denotes Associate Membership as defined by the IUGG Statutes and By Laws adopted at the XXII IUGG General Assembly in Birmingham, UK, 1999.

MEMBERS	Dates of ADMISSION & TERMINATION	CATEGORY	UNITS
ALBANIA	1997-2002, 2003	1	1
<i>ALGERIA</i>	<i>1971-2006</i>		
ARGENTINA	1927	3	3
ARMENIA	2000	1	1
AUSTRALIA	1919	5	7
AUSTRIA	1948	3	3
BELGIUM	1919	4	5
BOLIVIA	1960-2000, 2006	A	0
BOSNIA & HERZEGOVINA	2003	1	1
BRAZIL	1922	3	3
BULGARIA	1930	1	1
<i>BURUNDI</i>	<i>1987-1995</i>		
CANADA	1919	6	10
CHILE	1924	2	2
CHINA	1977	6	10
CHINA – Acad. Of Sciences in Taipei	1995	4	5
COLOMBIA	1938-1971, 2000	1	1
CONGO D.R. (**)	2004	1	1
CROATIA	1992	1	1
<i>CUBA</i>	<i>1960-1996</i>		
CZECH REPUBLIC	1993	2	2
DENMARK	1923	4	5
<i>DOMINICAN REP.</i>	<i>1957-1971</i>		
EGYPT	1924	2	2
ESTONIA	1991	1	1
<i>ETHIOPIA</i>	<i>1952-2000</i>		
FINLAND	1927	3	3
FRANCE	1919	7	15
GERMANY	1951	8	20
GHANA	1957-1987, 2006	1	1
GREECE	1922-2003; 2008	3	3
<i>GUATEMALA</i>	<i>1957-2000</i>		
<i>GUINEA</i>	<i>1987-1995</i>		
<i>HAITI</i>	<i>1956-1971</i>		
HUNGARY	1930	2	2
ICELAND	1967	1	1
INDIA	1947	5	7
INDONESIA	1951	1	1
IRAN	1957	1	1
<i>IRAQ</i>	<i>1983-1996</i>		
IRELAND	1946	2	2
ISRAEL	1951	1	1
ITALY	1919	6	10
<i>IVORY COAST</i>	<i>1975-1996</i>		
JAPAN	1919	8	20
JORDAN	1979	1	1
<i>KENYA</i>	<i>1975-1997</i>		
KOREA	1960	2	2
<i>KOREA /DEM.REP</i>	<i>1967-2000</i>		
<i>LEBANON</i>	<i>1967-2003</i>		
<i>LIBYA</i>	<i>1979-1996</i>		

**Table 1 (continued): Member Adhering Bodies of IUGG**

MEMBERS	Dates of ADMISSION & TERMINATION	CATEGORY	UNITS
LUXEMBOURG	1971	1	1
<i>EX-YUGOSLAVIAN REPUBLIC OF MACEDONIA</i>	<i>1995-2001</i>		
MADAGASCAR	1967-1995		
MALAYSIA	1967-2002		
MAURITIUS	2003	A	0
MEXICO	1922	2	2
MONACO	1967	1	1
<i>MONGOLIA</i>	<i>1995-2001</i>		
MOROCCO	1924	1	1
MOZAMBIQUE	1983	1	1
<i>MYANMAR (BURMA)</i>	<i>1957-2003</i>		
<i>NEPAL</i>	<i>1975-1987</i>		
NETHERLANDS	1925	4	5
NEW ZEALAND	1927	1	1
NIGERIA	1971	2	2
NORWAY	1923	4	5
PAKISTAN	1952	2	2
PERU	1925-1979, 2000	A	0
PHILIPPINES	1951	3	3
POLAND	1924	2	2
PORTUGAL	1919	2	2
ROMANIA	1930	1	1
RUSSIA***	1992	6	10
<i>SAUDI ARABIA</i>	<i>1971-2001</i>		
<i>SENEGAL</i>	<i>1960-1995</i>		
<i>SERBIA &amp; MONTENEGRO (*)</i>	<i>1996-2006</i>		
<i>SIERRA LEONE</i>	<i>1967-1983</i>		
SLOVAK REPUBLIC	1993	1	1
SLOVENIA	1994	1	1
SOUTH AFRICA	1924	3	3
SPAIN	1922	5	7
<i>SUDAN</i>	<i>1955-2000</i>		
SWEDEN	1923	4	5
SWITZERLAND	1923	5	7
SYRIA	1948-1995		
TANZANIA	1975-2000		
THAILAND	1923	2	2
TUNISIA	1927-2001		
TURKEY	1949	2	2
UK	1919	8	20
<i>URUGUAY</i>	<i>1924-2000</i>		
USA	1919	11	35
<i>VENEZUELA</i>	<i>1975-2008</i>		
VIETNAM	1931	1	1
ZIMBABWE	1967-2000		

(\*) Adhesion in 1996 under the name of the Federal Republic of Yugoslavia which was changed in 2003 to Serbia & Montenegro. In 2006, Serbia & Montenegro divided, and attempts to confirm membership of either country have been unsuccessful.

(\*\*) Adhesion in 1991 under the name Zaire, membership terminated in 1997.

(\*\*\*) Adhesion in 1954 under the name of the U.S.S.R.

**Table 2: Regional Distribution of Members**

<b>REGION</b>	<b># OF MEMBERS</b>
Africa	7
Asia	15
Europe	32
North and Central America	3
Oceania	2
South America	6

**Table 3: IUGG General Assemblies**

	<b>Assembly</b>	<b>Year</b>	<b>National</b>	<b>Foreigners</b>	<b>Total</b>
IV.*	Stockholm	1930	91	240	331
V.	Lisbon	1933	40	160	200
VI.	Edinburgh	1936	80	264	344
VII.	Washington	1939	580	225	805
VIII.	Oslo	1948	46	322	368
IX.	Bruxelles	1951	60	858	918
X.	Rome	1954	163	760	923
XI.	Toronto	1957	293	872	1165
XII.	Helsinki	1960	121	1254	1375
XIII.	Berkeley	1963	1124	814	1938
XIV.	Zurich	1967	151	2049	2200
XV.	Moscow	1971	1070	1507	2577
XVI.	Grenoble	1975	413	2151	2564
	Durham, UK	1977	Exceptional	G.A.	
XVII.	Canberra	1979	469	1475	1944
XVIII.	Hamburg	1983	495	2709	3204
XIX.	Vancouver	1987	539	3400	3939
XX.	Vienna	1991	162	4169	4331
XXI.	Boulder	1995	2066	2415	4481
XXII.	Birmingham	1999	647	3405	4052
XXIII.	Sapporo	2003	1989	2162	4151
XXIV.	Perugia	2007	618	3757	4375

\*The figures given do not take into account the accompanying persons.

## CURRENT OFFICERS OF IUGG

### Bureau of the Union

<i>President:</i>	Tom Beer	AUSTRALIA
<i>Vice-President:</i>	Harsh Gupta	INDIA
<i>Secretary General:</i>	Alik Ismail-Zadeh	GERMANY/RUSSIA
<i>Treasurer:</i>	Aksel W. Hansen	DENMARK
<i>Members:</i>	Yun-tai Chen David Jackson Ali A.A. Tealeb	CHINA USA EGYPT

The following Officers are not voting Members of the Bureau:

<i>Assistant Secretary General:</i>	Simone Oswald	GERMANY
<i>Assistant Treasurer:</i>	Anders Svensson	DENMARK

### Executive Committee of the Union

According to Article 10 of the Statutes of IUGG the Executive Committee consists of:

- the Bureau (see above),
  - the Retiring President of the Union, U. Shamir (ISRAEL)
  - the Presidents of the International Associations:
- |                |                         |                       |
|----------------|-------------------------|-----------------------|
| <i>IACS:</i>   | Georg Kaser             | AUSTRIA               |
| <i>IAG:</i>    | Michael Sideris         | CANADA                |
| <i>IAGA:</i>   | Eigil Friis-Christensen | DENMARK               |
| <i>IAHS:</i>   | Arthur Askew            | SWITZERLAND/AUSTRALIA |
| <i>IAMAS:</i>  | Guoxiong Wu             | CHINA                 |
| <i>IAPSO:</i>  | Lawrence Mysak          | CANADA                |
| <i>IASPEI:</i> | Zhongliang Wu           | CHINA                 |
| <i>IAVCEI:</i> | Setsuya Nakada          | JAPAN                 |

### Finance Committee of the Union

<i>Chair:</i>	Juan Francisco Vilas	ARGENTINA
<i>Members:</i>	David Collins	UK
	Jan Krynski	POLAND
	Kiyoshi Suyehiro	JAPAN

**IUGG Liaison Officers with Intergovernmental Organizations**

<i>Cartographic Office of the United Nations:</i>	Luiz Fortes	BRAZIL
<i>United Nations Educational, Scientific and Cultural Organization (UNESCO):</i>		
<i>International Hydrological Programme:</i>	Pierre Hubert	FRANCE
<i>International Oceanographic Commission (IOC):</i>	Eugene Morozov	RUSSIA
<i>World Meteorological Organization (WMO):</i>	Arthur Askew John Turner	SWITZERLAND/AUSTRALIA UK

**IUGG Representatives on ICSU Committees and ICSU Regional Offices***Committee on Space Research (COSPAR):*

Egil Friis-Christensen DENMARK

*Federation of Astronomical and Geophysical Data Analysis Services (FAGS):*Ruth Neilan USA  
Alik Ismail-Zadeh GERMANY*Scientific Committee on Antarctic Research (SCAR):*

Ian Allison USA

*Scientific Committee on the Problems of the Environment (SCOPE):*

Norman E. Peters USA

*Scientific Committee on Oceanic Research (SCOR):*Michael C. MacCracken USA  
Lawrence Mysak CANADA*Scientific Committee on Solar-Terrestrial Physics (SCOSTEP):*

Robert Vincent AUSTRALIA

*World Climate Research Programme (WCRP):*

Guoxiong Wu CHINA

*Regional Office for Africa (ROA):*

Richard Wonnacott SOUTH AFRICA

*Regional Office for Asia & the Pacific (ROAP):*

Sri Widjiantoro INDONESIA

*Regional Office for Latin America and Caribbean (ROLAC):*

Luiz Fortes BRAZIL

**IUGG Representatives on Other Bodies***International Civil Aviation Organization (ICAO):*William I. Rose USA  
Marianne Guffanti (*alternate*)*Pan-American Institute of Geography and History (PAIGH):*

Hermann Drewes GERMANY

**ACCREDITED DELEGATES TO THE COUNCIL OF THE IUGG***24th General Assembly, Perugia, ITALY, 2-13 July 2007* *Listeners (from Associate Member Countries) are indicated by italics.*

E. Sulstarova (ALBANIA), A.A. Stahlschmidt (ARGENTINA), C. Risso (ARGENTINA), A. Antonyan (ARMENIA), I. Jackson (AUSTRALIA), C. Twaroch (AUSTRIA), M. Kuhn (AUSTRIA), V. Dehant (BELGIUM), B. Ducarme (BELGIUM), *E. Minaya (BOLIVIA)*, M. Mulic (BOSNIA & HERZEGOVINA), L. Fortes (BRAZIL), D. Blitzkow (BRAZIL), Z. Hajnal (CANADA), R. Barriga (CHILE), R. Maturana (CHILE), G. Wu (CHINA), Y.-H. Yeh (CHINA – TAIPEI), B.-S. Huang (CHINA-TAIPEI), W. Martinez-Diaz (COLOMBIA), V. Lukanda Mwaba (D.R.CONGO), M. Orlik (CROATIA), P. Holota (CZECH REPUBLIC), V. Cermak (CZECH REPUBLIC), S. Gregersen (DENMARK), S. Mahmoud (EGYPT), R. Room (ESTONIA), P. Malkki (FINLAND), M. Menvielle (FRANCE), R. Schlich (FRANCE), R. Kind (GERMANY), *W.E.I. Andah (GHANA)*, L. Bozo (HUNGARY), J. Adam (HUNGARY), A. Snorrason (ICELAND), V.P. Dimri (INDIA), H. Harjono (INDONESIA), A.A. Bidokhti (IRAN), C. Bean (IRELAND), Z. Levin (ISRAEL), L. Ubertini (ITALY), K. Takeuchi (JAPAN), W.M. Moon (KOREA), N. Schares (LUXEMBOURG), N. D’Oreye (LUXEMBOURG), H. Perez de Tejada (MEXICO), D. Rhoades (NEW ZEALAND), F. Fajemirokun (NIGERIA), B.L. Bye (NORWAY), A. Ali (PAKISTAN), N. Elahi (PAKISTAN), S. Muhammed (PAKISTAN), L.W. Baran (POLAND), L.A. Mendes-Victor (PORTUGAL), C. Sava (ROMANIA), A.D. Gvishiani (RUSSIA), L. Brimich (SLOVAK REPUBLIC), M. Brilly (SLOVENIA), C. Merry (SOUTH AFRICA), I. Ansorge (SOUTH AFRICA), R. Vieira (SPAIN), G. Marklund (SWEDEN), N. Ivchenko (SWEDEN), C. Fierz (SWITZERLAND), N. Soyer (TURKEY), A. Kilicoglu (TURKEY), D. Collins (UK), P. Grew (USA), N. Van Giang (VIETNAM)

## Past Officers of IUGG Bureau

### PAST IUGG PRESIDENTS

1919-1933	C. Lallemand (France)
1933-1936	W. Bowie (USA)
1936-1942	D. La Cour (Denmark)
1946-1948	B. Helland-Hansen (Norway)
1948-1951	F.A. Vening-Meinesz (Netherlands)
1951-1954	S. Chapman (UK)
1954-1957	K.R. Ramanathan (India)
1957-1960	J.T. Wilson (Canada)
1960-1963	V.V. Belousov (U.S.S.R.)
1963-1967	J. Kaplan (USA)
1967-1971	J. Coulomb (France)
1971-1975	H. Charnock (UK)
1975-1979	A. Ashour (Egypt)
1979-1983	G.D. Garland (Canada)
1983-1987	D. Lal (India)
1987-1991	V.I. Keilis-Borok (U.S.S.R.)
1991-1995	H. Moritz (Austria)
1995-1999	P.J. Wyllie (USA)
1999-2003	M. Kono (Japan)
2003-2007	U. Shamir (Israel)
2007-2011	T. Beer (Australia)

### PAST IUGG VICE-PRESIDENTS

1919-1922	S.A.S. Prince Albert Ie de Monaco
	W. Bowie (USA)
	Sir Napier Shaw (UK)
	M. Tanakadate (Japan)
1922-1948	The Presidents of the Associations
1948-1951	S. Chapman (UK)
	L.H. Adams (USA)
1951-1954	G. Cassinis (Italy)
	J. Bjerknes (USA)
1954-1957	J.T. Wilson (Canada)
1957-1960	V.V. Belousov (U.S.S.R.)
	W. Heiskanen (Finland)
1960-1963	J. Bartels (F.R.G.)
	J. Kaplan (USA)
1963-1967	K.E. Bullen (Australia)
	J. Coulomb (France)
1967-1969	H. Kuno (Japan)
1969-1971	L. Constantinescu (Romania)
1971-1975	A. Ashour (Egypt)
1975-1979	G.D. Garland (Canada)
1979-1983	N.V. Shebalin (U.S.S.R.)
1983-1991	C. Kisslinger (USA)
1991-1995	P.J. Wyllie (USA)
1995-2003	U. Shamir (Israel)
2003-2007	T. Beer (Australia)
2007-2011	H. Gupta (India)

### PAST IUGG GENERAL SECRETARIES\*

1919-1930	Sir Henry Lyons (UK)
1930-1946	H. St. J.L. Winterbotham (UK)
1946-1951	J.M. Stagg (UK)
1951-1963	G.R. Laclavère (France)
1963-1973	G.D. Garland (Canada)
1973-1991	P. Melchior (Belgium)
1991-1999	G. Balmino (France)
1999-2007	J.A. Joselyn (USA)
2007-	A. Ismail-Zadeh (Germany)

\*P. Melchior (Belgium) served as Adjoint Secretary General from 1971-1975

### PAST IUGG TREASURERS

1960-1971	E. Andersen (Denmark)
1971-1979	E. Kejlsø (Denmark)
1979-1987	O. Bedsted Andersen (Denmark)
1987-1999	S. Gregersen (Denmark)
1999-	A.W. Hansen (Denmark)

### PAST IUGG BUREAU MEMBERS

1957-1960	G. Deacon (UK)
	J.W. Joyce (USA)
	C. Tsuboi (Japan)
1960-1963	M.S. Krishnan (India)
	T. Nagata (Japan)
1963-1967	B. Bolin (Sweden)
	V.A. Troitskaya (U.S.S.R.)
1967-1971	L. Constantinescu
	T. Malone (USA)
	A.M. Oboukhov (U.S.S.R.)
1971-1975	W.C. Ackermann (USA)
	L. Constantinescu (Romania)
	N.V. Shebalin (U.S.S.R.)
1975-1979	N.V. Shebalin (U.S.S.R.)
	H. Lacombe (France)
	C. Kisslinger (USA)
1979-1983	J.C.I. Dooge (Ireland)
	H. Lacombe (France)
	C. Kisslinger (USA)
1983-1987	J.C.I. Dooge (Ireland)
	V.I. Keilis-Borok (U.S.S.R.)
	H. Moritz (Austria)
	G. McBean (Canada)
1987-1991	H. Moritz (Austria)
	Ye Duzheng (China)
	G. McBean (Canada)
1991-1995	Ye Duzheng (China)
	A.S. Monin (Russia)
1995-1999	J. Chen (China)
	A.S. Monin (Russia)
	S. Uyeda (Japan)
1999-2001	J. Chen (China)
	H.K. Gupta (India)
	L.V. Shannon (South Africa)
2001-2003	T. Beer (Australia)
	J. Chen (China)
	H.K. Gupta (India)
2003-2007	Y.T. Chen (China)
	H.K. Gupta (India)
	A.A.A. Tealeb (Egypt)
2007-2011	Y.T. Chen (China)
	D. Jackson (U.S.A)
	A.A.A. Tealeb (Egypt)

## Past Officers of IUGG Finance Committee

### PAST FC PRESIDENTS

1948-1954	J.T. Wilson (Canada)
1957-1957	A.T. Doodson (UK)
1957-1963	K.H. Beij (USA)
1963-1967	M. Doporto (Ireland)
1967-1971	T.J. Kukkamäki (Finland)
1971-1975	J.M. Stagg (UK)
1975-1979	C.A. Whitten (USA)
1979-1983	H.I.S. Thirlaway (UK)
1983-1995	J.O. Cardus (Spain)
1995-1999	A.A. Ashour (Egypt)
1999-2003	A.F. Spilhaus (USA)
2003-2007	M. Hamlin (UK)
2007-	J.F. Vilas (Argentina)

### PAST FC SECRETARIES

1948-1957	K.H. Beij (USA)
1957-1960	M. Goldschmidt (Israel)
1960-1967	T.J. Kukkamäki (Finland)
1967-1975	C.A. Whitten (USA)
1975-1979	H.I.S. Thirlaway (UK)
1979-1987	A.E. Maxwell (USA)
1987-1989	J. Somogyi (Hungary)
1989-1999	A.F. Spilhaus (USA)
1999-2003	P. Pinet (France)

### PAST FC MEMBERS

1948-1951	G. Diandreas (Peru) A.T. Doodson (UK) J. Vignal (France)
1951-1954	A.T. Doodson (UK) M. Goldschmidt (Israel) J. Vignal (France)
1954-1957	M.J. Goldschmidt (Israel) J. Vignal (France) F. Gassmann (Switzerland)
1957-1960	J.M. Rayner (Australia) A. Romana (Spain) J. Vignal (France)
1960-1963	M. Doporto (Ireland) J.M. Rayner (Australia) A. Romana (Spain)
1963-1967	C.A. Whitten (USA) S. Krynski (Poland) A. Romana (Spain)
1967-1971	S. Krynski (Poland) J.M. Stagg (UK) E. Walzer (Switzerland)
1971-1975	S. Krynski (Poland) E. Walser (Switzerland) G. Yamamoto (Japan)
1975-1979	S. Krynski (Poland) G. Yamamoto (Japan) P.K. Das (India)
1979-1983	J.O. Cardus (Spain) J. Rais (Indonesia) J. Somogyi (Hungary)
1983-1987	A. Ashour (Egypt) J. Rais (Indonesia) J. Somogyi (Hungary)
1987-1991	A. Ashour (Egypt) J. Rais (Indonesia) A.F. Spilhaus (USA)
1991-1995	A. Ashour (Egypt) A.F. Spilhaus (USA) M.J. Hamlin (UK)
1995-1999	V.K. Gaur (India) E. Groten (Germany) M.J. Hamlin (UK)
1999-2003	V.K. Gaur (India) E. Groten (Germany) M.J. Hamlin (UK)
2003-2007	B.L.N. Kennett (UK) K. Suyehiro (Japan) J.F. Vilas (Argentina)
2007-2011	D. Jackson (U.S.A) D. Collins (UK) J. Krynski (Poland) K. Suyehiro (Japan)

## Union Commissions

### Union Commission on Data and Information (UCDI):

<i>Chair:</i>	Peter Fox	USA
<i>Vice-Chair:</i>	Charles Barton	AUSTRALIA
<i>Secretary:</i>	Adelina Geyer Traver	SPAIN
<i>Members:</i>	Tim Ahern	USA
	Maria Assunção F. Silva Dias	BRAZIL
	Pierrick Givone	FRANCE
	John Gould	UK
	Ruth Neilan	USA
	Mark Parsons	USA
	Bernd Richter	GERMANY

### Union Commission on Geophysical Risk and Sustainability (GRG):

[www.iugg-georisk.org](http://www.iugg-georisk.org)

<i>Chair:</i>	Kuniyoshi Takeuchi	JAPAN
<i>Vice-Chairs:</i>	Vladimir Kossobokov	RUSSIA
	Ramesh Singh	INDIA
<i>Secretary:</i>	Gerd Tetzlaff	GERMANY
<i>Treasurer:</i>	Paula Dunbar	USA
<i>Past Chair:</i>	Alik Ismail-Zadeh	GERMANY
<i>Members:</i>	Tom Beer	AUSTRALIA
	Hermann Drewes	GERMANY
	Viacheslav Gusiakov	RUSSIA
	David Jackson	USA
	A. Jayawardena	CHINA
	Evgeny Kontar	USA
	Susan McLean	USA
	Steve McNutt	USA
	Uri Shamir	ISRAEL
	Martin Funk	SWITZERLAND

### Union Commission on Mathematical Geophysics (CMG):

<i>Chair:</i>	Daniel H. Rothman	USA
<i>Secretary:</i>	Claudia Pasquero	USA
<i>Vice-Chair:</i>	Einat Aharonov	ISRAEL
<i>Vice-Chair:</i>	Eli Tziperman	USA
<i>IAG Liaison:</i>	Peiliang Xu	JAPAN
<i>IAGA Liaison:</i>	Matthias Holschneider	GERMANY
<i>IAHS Liaison:</i>	Daniel Schertzer	FRANCE
<i>IAMAS Liaison:</i>	Dick Peltier	CANADA
<i>IAPSO Liaison:</i>	Gordon Swaters	USA
<i>IASPEI Liaison:</i>	Yehuda Ben-Zion	USA
<i>IAVCEI Liaisons:</i>	Augusto Neri	ITALY

### Union Commission on the Study of Earth's Deep Interior (SEDI):

[www.sedigroup.org](http://www.sedigroup.org)

<i>Chair:</i>	Gauthier Hulot	FRANCE
<i>Vice-Chair:</i>	Satoru Tanaka	JAPAN
<i>Secretary General:</i>	Mike Bergman	USA
<i>Advisory Committee:</i>	Francis Albarede	FRANCE
	Reinhard Boehler	GERMANY
	Bruce Buffett	USA
	Ondrej Cadek	CZECH REPUBLIC
	Ulrich R. Christensen	GERMANY
	Catherine Constable	USA
	Ibrahim A. Eltayeb	SULTANATE OF OMAN
	Guillaume Fiquet	FRANCE
	Rongshan Fu	CHINA
	Ed Garnero	USA
	Gary Glatzmaier	USA
	George Helffrich	UK
	Richard Holme	UK
	Shun-Ichi Karato	USA
	Louise Kellogg	USA
	Masaru Kono	JAPAN
	Ban-Yuan Kuo	CHINA – TAIPEI

Kei Kurita	JAPAN
David Loper	USA
Guy Masters	USA
Jerry X. Mitrovica	CANADA
Andrea Morelli	ITALY
Barbara Romanowicz	USA
Lev P. Vinnik	RUSSIA
Kathryn Whaler	UK
Vladimir N. Zharkov	RUSSIA

## Inter-Unions Commission

**Inter-Unions Commission on the Lithosphere: The International Lithosphere Program**  
[www.scl-ilp.org](http://www.scl-ilp.org)

### Officers Appointed for the Term 2008-2010

<i>President:</i>	Sierd Cloetingh	NETHERLANDS
<i>Secretary General:</i>	Roland Oberhänsli	GERMANY
<i>Executive Secretary:</i>	Alexander Rudloff	GERMANY
<i>Bureau Members (Executive):</i>	IUGG: Kevin Furlong	USA
	IUGG: Kalachand C. Sain	INDIA
	IUGS: Yoshiyuki Tatsumi	JAPAN
	IUGS: Jean-Paul Cadet	FRANCE
	IUGS and IUGG: Alan Green	SWITZERLAND
<i>(Associated):</i>	Jean-Pierre Burg	SWITZERLAND
	David G. Gee	SWEDEN
	Robert Missotten	UNESCO
	Andrey F. Morozov	RUSSIA
	François Roure	FRANCE
	Mark D. Zoback	USA
	Harsh Gupta	INDIA
	Mary von Knorring	SWEDEN
<i>(Lifetime):</i>	Peter Ziegler	SWITZERLAND
	Pembroke Hart (deceased 2008)	USA
	Asahiko Taira	JAPAN
<i>Past President (ex officio):</i>	Jörg F.W. Negendank	GERMANY
<i>Past Secretary General:</i>	Søren Gregersen	DENMARK

## II. INTERNATIONAL ASSOCIATIONS

IUGG comprises eight semi-autonomous International Associations, each responsible for a specific range of topics or themes within the overall scope of the Union's activities and each with a sub-structure discussed below. The International Associations hold Scientific Assemblies such as those since 1969 listed in Table 4.

### The eight International Associations are:

Association Internationale des Sciences Cryosphériques (AISC)  
International Association of Cryospheric Sciences (IACS)

Association Internationale de Géodésie (AIG)  
International Association of Geodesy (IAG)

Association Internationale de Géomagnétisme et d'Aéronomie (AIGA)  
International Association of Geomagnetism and Aeronomy (IAGA)

Association Internationale des Sciences Hydrologiques (AISH)  
International Association of Hydrological Sciences (IAHS)

Association Internationale de Météorologie et des Sciences de l'Atmosphère (AIMSA)  
International Association of Meteorology and Atmospheric Sciences (IAMAS)

Association Internationale pour les Sciences Physiques des Océans (AISPO)  
International Association for the Physical Sciences of the Oceans (IAPSO)

Association Internationale de Séismologie et de Physique de l'Intérieur de la Terre (AISPIT)  
International Association of Seismology and Physics of the Earth's Interior (IASPEI)

Association Internationale de Volcanologie et de Chimie de l'intérieur de la Terre (AIVCIT)  
International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

**Table 4: Scientific Assemblies of the International Associations**

International Association	Year	Meeting Location	Number of Participants
IASPEI	1969	Madrid, Spain	NA
IAGA	1969	Madrid, Spain	475
IAPSO	1970	Tokyo, Japan	602
IASPEI	1973	Lima, Peru	250
IAGA	1973	Kyoto, Japan	613
IAMAP	1974	Melbourne, Australia	596
IAPSO	1974	Melbourne, Australia	596
IAG	1975	Grenoble, France	398
IASPEI	1977	Durham, UK	500
IAVCEI	1977	Durham, UK	500
IAGA	1977	Seattle, USA	950
IAMAP	1977	Seattle, USA	950
IASPEI	1981	London, Canada	448
IAGA	1981	Edinburgh, UK	747
IAMAP	1981	Hamburg, Germany	921
IAG	1982	Tokyo, Japan	200
IAVCEI	1982	Reykjavik, Iceland	190
IAHS	1982	Exeter, UK	530
IAPSO	1982	Halifax, Canada	759
IASPEI	1984	Hyderabad, India	285
IASPEI	1985	Tokyo, Japan	651
IAGA	1985	Praha, Czechoslovakia	994
IAMAP/IAPSO	1985	Hawaii, USA	450
IAHS	1986	Budapest, Hungary	310
IAPSO	1988	Acapulco, Mexico	543
IAG	1989	Edinburgh, UK	NA
IASPEI	1989	Istanbul, Turkey	611
IAGA	1989	Exeter, UK	1200

**Table 4 (continued): Scientific Assemblies of the International Associations**

<b>International Association</b>	<b>Year</b>	<b>Meeting Location</b>	<b>Number of Participants</b>
IAMAS/IAPSO	1989	Reading, UK	1020
IAHS	1989	Baltimore, USA	440
IASPEI	1990	Nairobi, Kenya	132
IAVCEI	1991	Naples, Italy	800
IAG	1993	Beijing, China	350
IAVCEI	1993	Canberra, Australia	600
IAMAS/IAHS	1993	Yokohama, Japan	450
IAGA	1993	Buenos Aires, Argentina	505
IASPEI	1994	Wellington, New Zealand	483
IAPSO	1995	Hawaii, USA	700
IAG	1997	Rio de Janeiro, Brazil	350
IASPEI	1997	Thessaloniki, Greece	1040
IAVCEI	1997	Puerto Vallarta, Mexico	600
IAGA	1997	Uppsala, Sweden	1200
IAHS	1997	Rabat, Morocco	500
IAMAS/IAPSO	1997	Melbourne, Australia	1100
IAG	2001	Budapest, Hungary	461
IASPEI/IAGA	2001	Hanoi, Vietnam	1078
IAVCEI	2000	Bali, Indonesia	490
IAMAS	2001	Innsbruck, Austria	851
IAHS	2001	Maastricht, Netherlands	400
IAPSO*	2001	Mar del Plata, Argentina	430
IAVCEI	2004	Pucon, Chile	936
IAG/IAPSO*	2005	Cairns, Australia	724
IAGA	2005	Toulouse, France	886
IAHS	2005	Foz de Iguassu, Brazil	459
IAMAS	2005	Beijing, China	840
IASPEI	2005	Santiago, Chile	360
IAVCEI	2008	Reykjavik, Iceland	
IAG	2009	Buenos Aires, Argentina	
IAGA	2009	Sopron, Hungary	
IAHS	2009	Hyderabad, India	
IAMAS/IAPSO/IACS	2009	Montreal, Canada	
IASPEI	2009	Cape Town, South Africa	

\* With International Association for Biological Oceanography (IABO)

### **III. International Association of Cryospheric Sciences (IACS) Association Internationale des Sciences Cryosphériques (AISC)**

<http://www.cryosphericosciences.org>

On July 4, 2007, at the XXIVth IUGG General Assembly in Perugia, Italy, the IUGG Council decided to launch the International Association of Cryospheric Sciences, IACS as the 8th IUGG Association. IACS is now a sister organization to long established Associations such as those for Hydrological Sciences (IAHS), Meteorology and Atmospheric Sciences (IAMAS) and Physical Sciences of the Oceans (IAPSO). The decision by the IUGG Council was mainly reached in recognition of the fact that the study of the Cryosphere has to be seen on equal footing to investigations of other components of the Earth system. With the initiation of IACS, its predecessors, the International Commission for Snow and Ice (ICSI) and the Union Commission on Cryospheric Sciences (UCCS) are superseded.

#### **IACS BUREAU 2007-2011**

<i>President (until July 2009):</i>	Georg Kaser	AUSTRIA
<i>President (2009-2013):</i>	Ian Allison	AUSTRALIA
<i>Vice-Presidents:</i>	Gino Cassasa	CHILE
	Kumiko Goto-Azuma	JAPAN
	Peter Jansson	SWEDEN
<i>Secretary-General:</i>	Manfred Lange	GERMANY
<i>President Elect (until July 2009):</i>	Ian Allison	AUSTRALIA
<i>Past President (2009-2011):</i>	Georg Kaser	AUSTRIA

#### **IACS HEADS OF DIVISIONS 2007-2011**

##### **Snow and Avalanches:**

Charles Fierz SWITZERLAND

##### **Continental Glaciers and Ice Sheets:**

Julian Dowdeswell UK

##### **Marine and Freshwater Ice:**

Claude Duguay CANADA

##### **Cryosphere, Atmosphere and Climate:**

Valérie Masson Delmotte FRANCE

##### **Planetary and other Ices of the Solar System:**

Ralf Greve JAPAN/GERMANY

### **III. International Association of Geodesy (IAG) Association Internationale de Géodésie (AIG)**

<http://www.iag-aig.org>

In 1862, the “Mitteleuropäische Gradmessung” was founded as the first international scientific association of significance. It expanded to the “Internationale Erdmessung” (Association Géodésique Internationale) in 1886. At the first General Assembly of IUGG (Rome, 2-10 May 1922) it became one of the five constituent sections of the Union. It took its present name at the Stockholm General Assembly of IUGG (1930).

#### **IAG EXECUTIVE COMMITTEE 2007-2011**

The IAG Executive Committee consists of the Bureau, the immediate Past President, the Commission Presidents, the Chair of the Global Geodetic Observing System, the President of the Communication and Outreach Branch, three Representatives of the Services, and two Members at Large.

##### **IAG Bureau:**

<i>President:</i>	Michael G. Sideris	CANADA
<i>Vice-President:</i>	Chris Rizos	AUSTRALIA
<i>Secretary General:</i>	Hermann Drewes	GERMANY

##### **Immediate Past President:**

Gerhard Beutler	SWITZERLAND
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##### **Commission Presidents:**

<i>Commission 1:</i>	Zuheir Altamimi	FRANCE
<i>Commission 2:</i>	Yoichi Fukuda	JAPAN
<i>Commission 3:</i>	Michael Bevis	USA
<i>Commission 4:</i>	Sandra Verhagen	THE NETHERLANDS

##### **Chair of the Global Geodetic Observing System (GGOS):**

Markus Rothacher	SWITZERLAND
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##### **President of the Communication and Outreach Branch:**

Józef Ádám	HUNGARY
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##### **Representatives of the IAG Services:**

Steve Kenyon	USA
Ruth E. Neilan	USA
Harald Schuh	AUSTRIA

##### **IAG Members at Large:**

Kosuke Heki	JAPAN
Richard Wonnacott	SOUTH AFRICA

##### **Non-voting Members:**

<i>President of the ICCT:</i>	Nico Sneeuw	GERMANY
<i>Assistant Secretary:</i>	Helmut Hornik	GERMANY
<i>IAG Past Presidents:</i>	Helmut Moritz	AUSTRIA
	Ivan I. Mueller	USA
	Wolfgang Torge	GERMANY
	Klaus-Peter Schwarz	CANADA
	Fernando Sansó	ITALY
<i>Past Secretaries</i>	Michel Louis	FRANCE
<i>General:</i>	Claude Boucher	FRANCE
	Christian C. Tscherning	DENMARK

## IAG COMMISSIONS

### **Commission 1: Reference Frames**

<i>President:</i>	Zuheir Altamimi	FRANCE
<i>Vice-President:</i>	Mike Craymer	CANADA

### **Commission 2: Gravity Field**

<i>President:</i>	Yoichi Fukuda	JAPAN
<i>Vice-President</i>	Pieter Visser	THE NETHERLANDS

### **Commission 3: Earth Rotation and Geodynamics**

<i>President:</i>	Mike Bevis	USA
<i>Vice-President:</i>	Richard Gross	USA

### **Commission 4: Positioning and Applications**

<i>President:</i>	Sandra Verhagen	THE NETHERLANDS
<i>Vice-President:</i>	Dorota Brzezinska	USA

## IAG SERVICES

### **Bureau Gravimetrique International (BGI):**

<i>Director:</i>	Sylvain Bonvalot	FRANCE
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### **Bureau International de Poids et Measures (BIPM), Section Time, Frequency and Gravimetry:**

<i>Head of Section:</i>	Elisa Felicitas Arias	FRANCE
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### **IAG Bibliography Service (IBS):**

<i>Chair:</i>	Annekathrin Michlenz	GERMANY
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### **International Altimetry Service (IAS):**

<i>Chair of Steering Committee:</i>	Wolfgang Bosch	GERMANY
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### **International Centre for Earth Tides (ICET):**

<i>Chair:</i>	Jean-Pierre Barriot	FRANCE
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### **International Centre for Global Earth Models (ICGEM):**

<i>Director:</i>	Jürgen Kusche	GERMANY
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### **International Digital Elevation Model Service (IDEMS):**

<i>Director:</i>	Philippa Berry	UK
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### **International DORIS Service (IDS):**

<i>Chair of Governing Board:</i>	Gilles Tavernier	FRANCE
<i>Director of Central Bureau:</i>	Laurent Soudarin	FRANCE

### **International Earth Rotation and Reference Systems Service (IERS):**

<i>Chair of Directing Board :</i>	Chopo Ma	USA
<i>Director of Central Bureau:</i>	Bernd Richter	GERMANY

### **International Geoid Service (IGeS):**

<i>President/Director:</i>	Riccardo Barzaghi	ITALY
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### **International Gravity Field Service (IGFS):**

<i>Chair:</i>	Rene Forsberg	DENMARK
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### **International GNSS Service (IGS):**

<i>Chair of Governing Board:</i>	John Dow	GERMANY
<i>Director of Central Bureau:</i>	Ruth Neilan	USA

### **International Laser Ranging Service (ILRS):**

<i>Chair of Governing Board:</i>	Werner Gurtner	SWITZERLAND
<i>Director of Central Bureau:</i>	Michael Pearlman	USA
<i>Secretary:</i>	Carey Noll	USA

### **International Service for Geodesy and Astrometry (IVS):**

<i>Chair of Directing Board:</i>	Harald Schuh	AUSTRIA
<i>Director of Coord. Centre:</i>	Dirk Behrend	USA

**Permanent Service for Mean Sea Level (PSMSL):**

*Director:* Lesley J. Rickards UK

**IAG GLOBAL GEODETIC OBSERVING SYSTEM (GGOS)**

<i>Chair:</i>	Markus Rothacher	SWITZERLAND
<i>Vice-Chairs:</i>	Ruth Neilan	USA
	Hans-Peter Plag	USA

**IAG INTER-COMMISSION COMMITTEE ON THEORY**

<i>President:</i>	Nico Sneluw	GERMANY
<i>Vice-President:</i>	Pavel Novák	CZECH REPUBLIC

**IAG OFFICE**

**Deutsches Geodätisches Forschungsinstitut (DGFI)**

<i>Secretary General:</i>	Hermann Drewes	GERMANY
<i>Assistant Secretary:</i>	Helmut Hornik	GERMANY

**IAG COMMUNICATION AND OUTREACH BRANCH**

**Hungarian Academy of Sciences (HAS) / Budapest University of Technology and Economics (BUTE)**

<i>President:</i>	József Ádám	HUNGARY
<i>Secretary:</i>	Szabolcs Rózsa	HUNGARY

**JOURNAL OF GEODESY**

<i>Editor in Chief:</i>	Roland Klees	THE NETHERLANDS
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**PAST IAG PRESIDENTS**

1864-1885	J.J. Baeyer (Prussia)
1886-1891	C. Ibanez de Ibero (Spain)
1892-1902	H. Faye (France)
1903-1918	L. Bassot (France)
1919-1933	W. Bowie (USA)
1933-1945	F.A. Vening Meinesz (Netherlands)
1945-1951	W.D. Lambert (USA)
1951-1954	C.F. Baeschlin (Switzerland)
1954-1957	J. de Graaf Hunter (UK)
1957-1960	G. Cassinis (Italy)
1960-1963	C.A. Whitten (USA)
1963-1967	G. Bomford (UK)
1967-1971	A. Marussi (Italy)
1971-1975	Y.D. Boulanger (U.S.S.R.)
1975-1979	T.J. Kukkamäki (Finland)
1979-1983	H. Moritz (Austria)
1983-1987	P.V. Angus-Leppan (Australia)
1987-1991	I.I. Mueller (USA)
1991-1995	W. Torge (F.R. Germany)
1995-1999	K.P. Schwarz (Canada)
1999-2003	F. Sanso (Italy)
2003-2007	G. Beutler (Switzerland)
2007-2011	M. Sideris (Canada)

**PAST IAG GENERAL SECRETARIES**

1886-1900	A. Hirsch (Switzerland)
1900-1918	H.G. Van de Sande-Bakhuyzen (Netherlands)
1919-1945	G. Perrier (France)
1946-1960	P. Tardi (France)
1960-1975	J.J. Levallois (France)
1975-1991	M. Louis (France)
1991-1995	C. Boucher (France)
1995-2007	C.C. Tscherning (Denmark)
2007-	H. Drewes (Germany)

## IV. International Association of Geomagnetism and Aeronomy (IAGA) Association Internationale de Géomagnétisme et d'Aéronomie (AIGA)

<http://www.iugg.org/IAGA/>

At the First IUGG General Assembly (Rome, 1922), the *Section de Magnétisme et Electricité Terrestres* became one of the constituent *sections* of the Union. At the IV IUGG General Assembly (Stockholm, 1930), it became the *International Association of Terrestrial Magnetism and Electricity*. It took its present name at the X IUGG General Assembly (Rome, 1954).

### IAGA EXECUTIVE COMMITTEE 2007-2011

<i>President:</i>	Egil Friis-Christensen	DENMARK
<i>Vice-President:</i>	Kathryn Whaler	SCOTLAND
<i>Secretary-General:</i>	Bengt Hultqvist	SWEDEN
<i>Past-President:</i>	Charles Barton	AUSTRALIA
<i>Members:</i>	Mangalathayil Abdu Daniel Baker T. Harinayarayana William Liu Mioara Mandea Eduard Petrovsky Chi Wang	BRAZIL USA INDIA CANADA GERMANY CZECH REPUBLIC CHINA

### IAGA DIVISIONS

#### IAGA Division I – Internal Magnetic Fields

<i>Chair:</i>	Özden Özdemir	CANADA
<i>Co-chair:</i>	Jozef Brestensky	SLOVAKIA

##### *Working Group I-1: Theory of Planetary Magnetic Fields and Geomagnetic Secular Variation*

<i>Chair:</i>	David Ivers	AUSTRALIA
<i>Co-chair:</i>	Jonathan Aurnou	USA

##### *Working Group I-2: Electromagnetic Induction and Electrical Conductivity*

<i>Chair:</i>	Andreas Junge	GERMANY
<i>Co-chair:</i>	Yasuo Ogawa	JAPAN

##### *Working Group I-3: Palaeomagnetism*

<i>Chair:</i>	Harald Boehnel	MEXICO
<i>Co-chair:</i>	Emilio Herrero Bervera	USA

##### *Working Group I-4: Rock Magnetism*

<i>Chair:</i>	Ann Hirt	SWITZERLAND
<i>Co-chairs:</i>	Karl Fabian	NORWAY

#### IAGA Division II – Aeronomic Phenomena

<i>Chair:</i>	Alan Rodger	UK
<i>Co-chair:</i>	Dora Pancheva	BULGARIA

##### *Working Group II-A: Electrodynamics of the Middle Atmosphere*

<i>Chair:</i>	Richard A. Goldberg	USA
<i>Co-chair:</i>	Martin Füllekrug	UK

##### *Working Group II-C: Meteorological Effects on the Ionosphere*

<i>Chair:</i>	Werner Singer	GERMANY
<i>Co-chairs:</i>	David Altadill	SPAIN
	Petra Sauli	CZECH REPUBLIC

##### *Working Group II-D: External Forcing of the Middle Atmosphere*

<i>Chair:</i>	Edward Kazimirovsky	RUSSIA
<i>Co-chair:</i>	Charles H. Jackman	USA
	Christoph Jacobi	GERMANY

**Working Group II-F: Long-term Trends in the Mesosphere, Thermosphere and Ionosphere (IAGA/ICMA/SCOSTEP)**

Chair:	Jan Lastovicka	CZECH REPUBLIC
Co-chair:	Gufran Beig	INDIA

**Working Group on Polar Research (with Division III)**

Chair:	Mervyn Freeman	UK
Co-chair:	Allan T. Weatherwax	USA

**IAGA/URSI Working Group: (VERSIM) VLF/ELF Remote Sensing of the Ionosphere and Magnetosphere**

IAGA Chair:	Craig J. Rodger	NEW ZEALAND
URSI Chair:	Janos Lichtenberger	HUNGARY

**IAGA Division III – Magnetospheric Phenomena**

Chair:	Masaki Fujimoto	JAPAN
Co-chair:	Anna Milillo	ITALY

**Working Group on ULF Waves in Magnetosphere**

Chair:	Peter J. Chi	USA
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**Working Group on Polar Research (with Division II)**

Chair:	Mervyn Freeman	UK
Co-chair:	Allan T. Weatherwax	USA

**IAGA Division IV – Solar Wind & Interplanetary Field**

Chair:	Mari Paz Miralles	USA
Co-chair:	Jorge Sanchez Almeida	SPAIN

**IAGA Division V – Geomagnetic Observatories, Surveys & Analysis**

Chair:	Monika Korte	GERMANY
Co-chair:	Alan W.P. Thomson	UK

**Working Group V-OBS: Geomagnetic Observation**

Chair:	Pieter Kotze	SOUTH AFRICA
Co-chair:	Pavel Hejda	CZECH REPUBLIC

**Working Group V-DAT: Geomagnetic Data and Indices**

Chair:	Mita Rajaram	INDIA
Co-chairs:	Renata Lukianova	RUSSIA

**Working Group V-MOD: Geomagnetic Field Modeling**

Chair:	Stefan Maus	USA
Co-chair:	Christopher Finlay	SWITZERLAND

**IAGA Inter-divisional Commissions**

**Inter-divisional Commission on Developing Countries**

Chair:	A. Bhattacharyya	INDIA
Co-chairs:	V.Doumouya	IVORY COAST
	H. Takahashi	BRAZIL

**Inter-divisional Commission of History**

Chair:	Edward Cliver	USA
Co-chair:	Nicole Meyer-Vernet	FRANCE

**Working Group on History of Science**

Chair:	Ahmed Abdel Hady	EGYPT
Co-chair:	Christine Amory-Mazaudier	FRANCE

**Inter-divisional Working Group on Education and Outreach**

Chair:	Larry Newitt	CANADA
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### International Services

#### *International Service of Geomagnetic Indices, ISGI (affiliated to FAGS)*

Director: Michel Menvielle FRANCE

#### *International Space Environment Service, ISES (affiliated to FAGS)*

Director: David H. Boteler CANADA

Deputy Director: Henrik Lundstedt SWEDEN

### IAGA/IASPEI/IAVCEI – Working Group on Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV)

<http://www.emsev-iugg.org/emsev/>

Chair: Jaques Zlotnicki FRANCE

Vice-Chair: Malcolm Johnston USA

Secretary: T. Nagao JAPAN

IAGA Liaison: Jann-Yenq Liu TAIWAN

### IASPEI/IAPSO/IAGA International Ocean Network (ION)

Chair: Adam Schultz UK

Secretary: Heinrich Villinger GERMANY

Liaison: Hisashi Utada JAPAN

### PAST IAGA PRESIDENTS

1919-1922	A. Tanakadate (Japan)
1922-1927	C. Chree (UK)
1927-1930	L.A. Bauer (USA)
1930-1948	J.A. Fleming (USA)
1948-1951	S. Chapman (UK)
1951-1954	J. Coulomb (France)
1954-1957	J. Bartels (F.R. Germany)
1957-1960	J. Kaplan (USA)
1960-1963	V. Laursen (Denmark)
1963-1967	M. Nicolet (Belgium)
1967-1971	T. Nagata (Japan)
1971-1975	V.A. Troitskaya (U.S.S.R.)
1975-1979	J. Roederer (USA)
1979-1983	K.D. Cole (Australia)
1983-1987	D.I. Gough (Canada)
1987-1991	R.E. Gendrin (France)
1991-1995	D. J. Williams (USA)
1995-1999	M. Kono (Japan)
1999-2003	D.J. Kerridge (U.K.)
2003-2007	C. Barton (Australia)
2007-2011	E. Friis-Christensen (Denmark)

### PAST IAGA GENERAL SECRETARIES

1919-1927	L.A. Bauer (USA)
1927-1933	Ch. Maurain (France)
1933-1936	M.D. La Cour (Denmark)
1936-1939	A.H.R. Goldie (UK)
1939-1951	J.W. Joyce (USA)
1951-1957	V. Laursen (Denmark)
1957-1963	J.O. Cardus (Spain)
1963-1975	L. Alldredge (USA)
1975-1983	N. Fukushima (Japan)
1983-1995	M. Gadsden (UK)
1995-1999	J.A. Joselyn (USA)
1999-2001	H.W. Kroehl (USA)
2001-	B. Hultqvist (Sweden)

## V. International Association of Hydrological Sciences (IAHS) Association Internationale des Sciences Hydrologiques (AISH)

<http://iahs.info>

At the First IUGG General Assembly (Rome, 1922), the *Section d'Hydrologie Scientifique* became one of the constituent sections of the Union. At the IV IUGG General Assembly (Stockholm, 1930) it became the *International Association of Scientific Hydrology*. It took its present name at the XV IUGG General Assembly (Moscow, 1971).

### IAHS OFFICERS, 2007-2009

<i>President:</i>	Arthur Askew (2005-2009)	AUSTRALIA
<i>President-Elect:</i>	Gordon Young	CANADA
<i>Secretary General:</i>	Pierre Hubert	FRANCE
<i>Vice Presidents:</i>	Dan Rosbjerg	DENMARK
	Rajendra Prasad	INDIA
	Juan Carlos Bertoni	ARGENTINA
<i>Honorary President:</i>	Ivan Johnson	USA
<i>Treasurer:</i>	Chuck Onstad	USA
<i>Editor:</i>	Zbignew Kundzewicz	POLAND
<i>Chair IAHS Ltd.</i>	Des E. Walling	UK

### IAHS INTERNATIONAL COMMISSIONS

#### International Commission on Coupled Land-Atmosphere Systems (ICCLAS)

<i>President:</i>	Hoshin Gupta (2005-2009)	USA / INDIA
<i>President-Elect:</i>	Stewart Franks	AUSTRALIA
<i>Secretary:</i>	Eva Boegh	DENMARK
<i>Vice President:</i>	Thorsten Wagener	GERMANY / USA
	Dawen Yang	CHINA
	Harald Kunstmann	GERMANY

#### International Commission on Continental Erosion (ICCE)

<i>President:</i>	Jim Bogen (2005-2009)	NORWAY
<i>President-Elect:</i>	Valentin Golosov	RUSSIA
<i>Secretary:</i>	Martin Thoms	AUSTRALIA
<i>Vice President:</i>	Arthur Horowitz	USA
	Xinbao Zhang	CHINA
<i>Acting Vice President:</i>	Bénina Touaibia	ALGERIA

#### International Commission on Groundwater (ICGW)

<i>President:</i>	Mary C. Hill (2005-2009)	USA
<i>President-Elect:</i>	Chunmiao Zheng	USA
<i>Secretary:</i>	Roger W. Lee	USA
<i>Vice President:</i>	Karel Kovar	THE NETHERLANDS
	Makoto Taniguchi	JAPAN
	Corinna Abesser	UK

#### International Commission on Remote Sensing (ICRS)

<i>President:</i>	Alain Pietroniro (2005-2009)	CANADA
<i>President-Elect:</i>	Ian Cluckie	UK
<i>Secretary:</i>	Yangbo Chen	CHINA
<i>Vice President:</i>	Frédérique Seyler	FRANCE
	Claude Duguay	CANADA
	Christopher Neale	USA

#### International Commission on Snow and Ice Hydrology (ICSIH)

<i>President:</i>	John Pomeroy (2005-2007)	CANADA
<i>Secretary:</i>	Regine Hock	SWEDEN
<i>Vice-Presidents:</i>	Alexander Gelfan	RUSSIA
	Daniel Marks	USA
	Philip Marsh	CANADA

**International Commission on Surface Water (ICSW)**

<i>President:</i>	Siegfried Demuth (2005-2009)	GERMANY
<i>President-Elect:</i>	Eric Servat	FRANCE
<i>Secretary:</i>	David Hannah	UK
<i>Vice President:</i>	Denis A. Hughes	SOUTH AFRICA
	Hafzullah Aksoy	TURKEY
	Hege Hisdal	NORWAY

**International Commission on Tracers (ICT)**

<i>President:</i>	John Gibson (2005-2009)	CANADA
<i>President-Elect:</i>	Giovanni Zuppi	ITALY
<i>Secretary:</i>	Ichiyanagi Kimei	JAPAN
<i>Vice President:</i>	Piotr Maloszewski	GERMANY / POLAND
	Jean Pierre Ometto	BRAZIL
	Yves Travi	FRANCE

**International Commission on Water Quality (ICWQ)**

<i>President:</i>	Bruce Webb (2004-2009)	UK
<i>President-Elect:</i>	Valentina Krysanova	GERMANY / ESTONIA
<i>Secretary:</i>	Kate Heal	UK
<i>Vice President:</i>	Berit Artheimer	SWEDEN
	U.C. Sharma	INDIA
	Lakshmanan Elango	INDIA

**International Commission on Water Resources Systems (ICWRS)**

<i>President:</i>	Hubert Savenije (2005-2009)	THE NETHERLANDS
<i>President-Elect:</i>	Günter Blöschl	AUSTRIA
<i>Secretary:</i>	Nick van de Giesen	THE NETHERLANDS
<i>Vice President:</i>	George Kuczera	AUSTRALIA
	Andreas Schumann	GERMANY
	Lilang Ren	CHINA

**IAHS Working Groups**

<i>Prediction in Ungauged Basins (PUB)</i>		
Chair:	Günter Blöschl	AUSTRIA

*Education*

Co-Chairs:	Thorsten Wagener Earl Bardsley	USA NEW ZEALAND
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*Hydrometeorological Projects*

Co-Chairs:	Alain Pietroniro Eleanor Blyth	CANADA UK
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*Precipitation*

Chair:	Daniel Schertzer	FRANCE
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*Statistics in Hydrology*

Chair:	Salvatore Grimaldi	ITALY
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*Panel on Hydroinformatics*

Dragan Savic	UK
Ian Cluckie	UK
Siegfried Demuth	GERMANY

**PAST IAHS PRESIDENTS**

1922-1933	E. Wade (UK)
1933-1936	J. Smetana (Czechoslovakia)
1936-1947	O. Lütschg (Switzerland)
1947-1948	G. Slettenmark (Sweden)
1948-1951	M. Bernard (USA)
1951-1957	J. Th. Thijssse (Netherlands)
1957-1960	H.G. Wilm (USA)
1960-1963	W. Friedrich (F.R. Germany)
1963-1967	A. Volker (Netherlands)
1967-1970	K. Szezstay (Hungary)
1970-1971	W.C. Ackermann (USA)
1971-1975	J. Rodier (France)
1975-1979	J.C.I. Doooge (Ireland)
1979-1983	M.F. Meier (USA)
1983-1987	G. Kovacs (Hungary)
1987-1991	V. Klemes (Canada)
1991-1995	U. Shamir (Israël)
1995-2001	J.C. Rodda (UK)
2001-2005	K. Takeuchi (Japan)
2005-2009	A. Askew (Australia)

**PAST IAHS GENERAL SECRETARIES**

1922-1933	G. Magrini (Italy)
1933-1947	F. Diénert (France)
1947-1948	A. Vibert (France)
1948-1971	L.J. Tison (Belgium)
1971-1975	G. Kovacs (Hungary)
1975-1979	J. Rodier (France)
1979-1987	J.C. Rodda (UK)
1987-1995	H.J. Colenbrander (Netherlands)
1995-2000	G.J. Young (Canada)
2000-	P. Hubert (France)

## VI. International Association of Meteorology and Atmospheric Sciences (IAMAS)

### Association Internationale de Météorologie et des Sciences de l'Atmosphère (AIMSA)

<http://www.iamas.org/>

At the First IUGG General Assembly (Rome, 1922), the *Section de Météorologie* became one of the constituent *sections* of the Union. At the IV IUGG General Assembly (Stockholm, 1930) it became the *International Association of Meteorology*. It took the name of *International Association of Meteorology and Atmospheric Physics* at the XI IUGG General Assembly (Toronto, 1957), which later became the *International Association of Meteorology and Atmospheric Sciences*, (Association Internationale de Météorologie et des Sciences Atmosphériques) in 1993.

#### IAMAS BUREAU 2007-2011

<i>President:</i>	Guoxiong Wu	CHINA
<i>Secretary-General:</i>	Hans Volkert	GERMANY
<i>Deputy Sec. General</i>	John Turner	UK
<i>Vice-Presidents:</i>	Anne Thompson	USA
	Maria A.F. Silva Dias	BRAZIL
<i>Past-President:</i>	Michael MacCracken	USA
<i>Members at large:</i>	Philippe Bougeault	FRANCE
	Sabina Stefan	ROMANIA
	Ernest Hugo Berbery	USA
	Vladimir Kattsov	RUSSIA
	Michael MacCracken	USA
	Tetsuzo Yasunari	JAPAN

#### IAMAS COMMISSIONS

##### Atmospheric Chemistry and Global Pollution (ICACGP)

<i>President:</i>	Maria Kanakidou	GREECE
<i>Vice President:</i>	Kimi Kawamura	JAPAN
<i>Secretary:</i>	John Burrows	GERMANY

##### Atmospheric Electricity (ICAE)

<i>President:</i>	Zen Kawasaki
<i>Secretary:</i>	Dahong Wang

##### Climate (ICCL)

[www.iccl-iamas.org](http://www.iccl-iamas.org)

<i>President:</i>	Keith Alverson	FRANCE
<i>Secretary:</i>	Neil Holbrook	AUSTRALIA

##### Clouds and Precipitation (ICCP)

<i>President:</i>	Zev Levin	ISRAEL
<i>Vice-President:</i>	Andrea Flossman	FRANCE
<i>Secretary:</i>	David O'C. Starr	USA

##### ICCP - Committee on Nucleation and Atmospheric Aerosols

<i>Co-Chairs:</i>	Colin O'Dowd	IRELAND
	Paul DeMott	USA

##### Dynamic Meteorology (ICDM)

<i>President:</i>	John W. Nielsen-Gammon	USA
<i>Secretary:</i>	Richard Swinbank	UK
<i>Past President:</i>	Peter Baines	AUSTRALIA

### Middle Atmosphere (ICMA)

<http://www.soest.hawaii.edu/~kph/ICMA.html>

<i>President:</i>	Shigeo Yoden	JAPAN
<i>Secretary:</i>	Daniel Marsh	USA

### Planetary Atmospheres and Their Evolution (ICPAE)

<i>President:</i>	Athena Coustenis	FRANCE
<i>Vice President:</i>	Dmitri Titov	GERMANY
<i>Secretary:</i>	Darrell Strobel	USA

### Polar Meteorology (ICPM)

<i>President:</i>	David Bromwich	USA
<i>Secretary:</i>	Tom Lachlan-Cope	UK

### Ozone (IOC)

<i>President:</i>	Ivar. S. A. Isaksen	NORWAY
<i>Vice President:</i>	Sophie Godin-Beekmann	GERMANY
<i>Secretary:</i>	Christos Zerefos	GREECE
<i>Member:</i>	Rumen D. Bojkov	SWITZERLAND

### Radiation (IRC)

<http://www.irc-iamas.org/>

<i>President:</i>	Teruyuki (Terry) Nakajima	JAPAN
<i>Vice President:</i>	Robert Ellingson	USA
<i>Acting Vice President:</i>	Robert Cahalan	USA
<i>Secretary:</i>	Carmine Serio	ITALY

### PAST IAMAS PRESIDENTS

1919-1930	N. Shaw (UK)
1930-1936	A. Wallen (Sweden)
1936-1948	S. Chapman (UK)
1948-1951	J. Bjerknes (USA)
1951-1954	K.R. Ramanathan (India)
1954-1957	C.G. Rossby (Sweden)
1957-1960	J. Van Mieghem (Belgium)
1960-1963	H.R. Byers (USA)
1963-1967	A.M. Oboukhov (U.S.S.R.)
1967-1971	R.C. Sutcliffe (UK)
1971-1975	S. Fritz (USA)
1975-1979	Ch. Junge (F.R.Germany)
1979-1983	W.L. Godson (Canada)
1983-1987	H.J. Bolle (Austria)
1987-1991	G.B. Tucker (Australia)
1991-1995	B.J. Hoskins (UK)
1995-1999	R.A. Duce (USA)
1999-2003	H.C. (Huw) Davies (Switzerland)
2003-2007	M.C. MacCracken (U.S.A)
2007-2011	Guoxiong Wu (China)

### PAST IAMAS GENERAL SECRETARIES

1919-1922	C.F. Marvin (U.S.A)
1922-1927	F. Eredia (Italy)
1927-1936	Ph. Werhlé (France)
1936-1948	J. Bjerknes (USA)
1948-1954	J. Van Mieghem (Belgium)
1954-1960	R.C. Sutcliffe (UK)
1960-1975	W.L. Godson (Canada)
1975-1987	S. Ruttenberg (USA)
1987-1995	M. Kuhn (Austria)
1995-2007	R. List (Canada)
2007-	H. Volkert (Germany)

## VII. International Association for the Physical Sciences of the Oceans (IAPSO) Association Internationale pour les Sciences Physiques des Océans (AISPO)

<http://www.IUGG.org/IAPSO>

At the First IUGG General Assembly (Rome, 1922), the *Section d'Océanographie* became one of the constituent Sections of the Union. At the IV IUGG General Assembly (Stockholm, 1930) it became the *International Association of Physical Oceanography*. It took its present name at the XIV IUGG General Assembly (Zurich, 1967).

### IAPSO BUREAU 2007 – 2011

<i>President:</i>	Lawrence Mysak	CANADA
<i>Past President :</i>	Shiro Imawaki	JAPAN
<i>Secretary-General:</i>	Johan Rodhe	SWEDEN
<i>Treasurer:</i>	Fred E. Camfield	USA

### IAPSO EXECUTIVE COMMITTEE 2007 – 2011

<i>Vice-Presidents:</i>	Eugene G. Morozov	RUSSIA
	Denise Smythe-Wright	UK
<i>Members:</i>	Isabelle Ansorge	SOUTH AFRICA
	Silvia Blanc	ARGENTINA
	W. John Gould	UK
	John Middleton	AUSTRALIA
	Temel Oguz	TURKEY
	Stefania Sparnocchia	ITALY

### IAPSO COMMISSIONS

#### Mean Sea-Level & Tides

<i>Director:</i>	Philip L. Woodworth	UK
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### JOINT COMMISSIONS

#### Tsunami Commission (Joint with IASPEI & IAVCEI)

<i>Chair:</i>	Kenji Satake	JAPAN
<i>Liaison:</i>	Alexander (Sasha) Rabinovich	CANADA
<i>Vice-Chairs:</i>	Frank Gonzalez	USA
	Gerassimos Papadopoulos	GREECE

<i>Secretary:</i>	Fumihiko Imamura	JAPAN
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#### IAPSO/SCOR Working Group 121 on Deep Ocean Mixing

<i>Chairperson:</i>	Robin D. Muench	USA
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#### SCOR/ IAPSO Working Group 122 on Mechanisms of Sediment Retention in Estuaries

<i>Chairpersons:</i>	Gerardo Perillo	ARGENTINA
	James Syvitski	USA

#### SCOR/ IAPSO Working Group 127 on Thermodynamics and Equation of State of Seawater

<i>Chairperson:</i>	Trevor McDougall	AUSTRALIA
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#### SCOR/ IAPSO Working Group 129 on Deep Ocean Exchanges with the Shelf

<i>Chairperson:</i>	John Johnson	UK
<i>Vice-Chair</i>	Piers Chapman	USA

#### IASPEI/IAPSO/IAGA International Ocean Network (ION)

<i>Chair:</i>	Adam Schultz	UK
<i>Secretary:</i>	Heinrich Villinger	GERMANY
<i>Liaison:</i>		

#### IASPEI/IAVCEI/IAPSO International Heat Flow Commission (IHFC)

<i>Chair:</i>	David. S. Chapman	USA
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### SERVICES

#### Permanent Service for Mean Sea Level (affiliated to FAGS)

<i>Director:</i>	Philip L. Woodworth	UK
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#### IAPSO Standard Seawater Service

<i>Director:</i>	Paul S. Ridout	UK
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**PAST IAPSO PRESIDENTS**

1919-1922	S.A.S. Prince Albert 1er (Monaco)
1924-1930	Odon de Buen (Spain)
1930-1936	M. Knudsen (Denmark)
1936-1946	B. Helland-Hansen (Norway)
1946-1951	H.U. Sverdrup (Norway)
1951-1954	J. Proudman (UK)
1954-1960	H. Mosby (Norway)
1960-1963	G.E.R. Deacon (UK)
1963-1967	R. Revelle (USA)
1967-1970	G. Dietrich (F.R. Germany)
1970-1975	H. Lacombe (France)
1975-1979	R.W. Stewart (Canada)
1979-1983	D. Lal (India)
1983-1987	W.M. Krauss (F.R. Germany)
1987-1991	J.-J. O'Brien (USA)
1991-1996	R.D. Muench (USA)
1996-1999	L.V. Shannon (South Africa)
1999-2003	P. Rizzoli (Italy/USA)
2003-2007	S. Imawaki (Japan)
2007-2011	L. Mysak (Canada)

**PAST IAPSO GENERAL SECRETARIES**

1919-1930	G. Magrini (Italy)
1930-1948	J. Proudman (UK)
1948-1951	H. Mosby (Norway)
1951-1954	R.H. Fleming (USA)
1957-1963	B. Kullenberg (Sweden)
1963-1967	I. Hela (Finland)
1967-1970	A.E. Maxwell (USA)
1970-1987	E.C. LaFond (USA)
1987-1995	R.E. Stevenson (USA)
1995-2007	F.E. Camfield (USA)
2007-	J. Rodhe (Sweden)

## VIII. International Association of Seismology and Physics of the Earth's Interior (IASPEI)

### Association Internationale de Séismologie et de Physique de l'Intérieur de la Terre (AISPI)

<http://www.iaspei.org>

At the Sixth International Congress of Geography (London, 1895), Professor G. Gerland (Germany) pointed out the necessity of an international cooperation in seismology. At the Seventh Congress (Berlin, 1899) a *Commission séismologique permanente* was created. The first meeting of the Commission was held in Strasbourg in 1901 under the name of *Première Conférence Séismologique Internationale*. Subsequent conferences were held in Strasbourg (1903) and Berlin (1905). The *Association Internationale de Séismologie* was created at the Strasbourg meeting. It consisted of a *Bureau* and of a *Commission Permanente*. The latter met in Rome (1906), The Hague (1907), Zermatt (1910), Manchester (1911), and Strasbourg (1922). General Assemblies were held jointly in The Hague, Manchester, and Strasbourg. The Association was dissolved by the Strasbourg General Assembly. At the first IUGG General Assembly (Rome, 1922), it became one of the constituent Sections of the Union. It changed its name to *International Association of Seismology* at the IV IUGG General Assembly (Stockholm, 1930). It took its present name at the IX IUGG General Assembly (Bruxelles, 1951). For a detailed account of the history of the International Association of Seismology and Physics of the Earth's Interior, see: J.H. Hodgson, *Our Association, its Past as a Guide to its Future*, published in Comptes Rendus de l'AISPI, n15, Première Partie, pp. 12-28, and *Fifty Years of the International Association of Seismology* (1901-1951) by J.-P. Rothé (18 pages).

#### IASPEI BUREAU 2007 – 2011

<i>President:</i>	Wu, Zhongliang	CHINA
<i>First Vice-President:</i>	Gregory A. Houseman	UK
<i>Second Vice-President:</i>	Ian Jackson	AUSTRALIA
<i>Secretary General/Treasurer:</i>	Peter Suhadolc	ITALY

#### IASPEI EXECUTIVE COMMITTEE 2003 – 2007

<i>Members:</i>	Marcelo Assumpçāo	BRAZIL
	Ilmo T. Kukkonen	FINLAND
	Thorne Lay	USA
	Kenji Satake	JAPAN
<i>Past President:</i>	E. Robert Engdahl	USA

#### IASPEI COMMISSIONS 2007-2011

##### Commission on Tectonophysics and Crustal Structure

<i>Chair:</i>	Kevin Furlong	USA
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##### Task Group on World Stress Map Project

<i>Chair:</i>	Oliver Heidbach	GERMANY
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##### Task Group on Seismic Imaging of the Lithosphere

<i>Chair:</i>	Walter D. Mooney	USA
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##### Task Group for Active Monitoring

<i>Chair:</i>	Mineo Kumazawa	JAPAN
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##### Commission on Earthquake Hazard, Risk & Strong Ground Motion (SHR)

<i>Chair:</i>	Mohsen Ghafory-Ashtiani	IRAN
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##### IASPEI/IAEE Joint Working Group on Effects of Surface Geology

<i>Chair:</i>	Hiroshi Kawase	JAPAN
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##### Working Group on Earthquake Predictability

<i>Co-Chairs:</i>	David D. Rhoades	NEW ZEALAND
	David Jackson	USA

##### ASC/SHR Joint Working Group on Seismic Hazard & Risk Assessment

##### for Asian-Pacific Regions

<i>Co-Chairs:</i>	Fabio Romanelli	ITALY
	Gary Gibson	AUSTRALIA

**Commission on Earth Structure & Geodynamics:**

<i>Co-Chairs:</i>	Greg Houseman Thorne Lay	UK USA
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**Working Group on Reference Earth Models**

<i>Chair:</i>	Gabi Laske	USA
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**Commission on Seismological Observation & Interpretation (CoSOI)**

<i>Chair:</i>	Dmitry A. Storchak	UK
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**Working Group on Magnitude Measurements**

<i>Chair:</i>	James W. Dewey	USA
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**Working Group on Reference Events from Improved Locations**

<i>Co-Chairs:</i>	Paul G. Richards E. Robert Engdahl	USA USA
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**Working Group on Triggered and Induced Seismicity**

<i>Chair:</i>	Stanislaw Lasocki	POLAND
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**Working Group on Updating Manual of Seismological Observatory Practice**

<i>Chair:</i>	Peter Borman	GERMANY
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**Working Group on Networks and Station Codes**

<i>Chair:</i>	Avi Shapira	ISRAEL
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**Working Group on Historical Seismology**

<i>Co-Chairs:</i>	Paola Albini Katsuhiko Ishibashi	ITALY JAPAN
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**Working Group on Reporting Seismic Phase Weights**

<i>Chair:</i>	Lars Ottemöller	UK
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**Working Group on Default Depths**

<i>Chair:</i>	Maiclaire Bolton	CANADA
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**Task Group on Definition of Authoritative Locations**

<i>Chair:</i>	Remy Bossu	FRANCE
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**Task Group on Scattering & Heterogeneity**

<i>Chair:</i>	Haruo Sato	JAPAN
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**Working Group on Seismological Archives**

<i>Chair:</i>	Roger W.M. Musson	UK
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**Commission on Earthquake Sources – Modelling and Monitoring for Prediction**

<i>Chair:</i>	Alexey Zavyalov	RUSSIA
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**Commission on Education & Outreach**

<i>Co-Chairs:</i>	Matthias Ohrnberger John Taber	GERMANY USA
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**Federation of Digital Broadband Seismograph Network (FDSN)**

<i>Chair:</i>	Gerardo Suarez	MEXICO
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**European Seismological Commission (ESC)**

<i>President:</i>	Jochen Zschau	GERMANY
<i>Secretary General:</i>	Mariano Garcia Fernandez	SPAIN
<i>Assistant Secretary:</i>	Ina Cecić	SLOVENIA

**Asian Seismological Commission (ASC)**

<i>President:</i>	Kazuro Hirahara	JAPAN
<i>Secretary General:</i>	R.K. Chadha	INDIA

**International Commission on Earth Sciences in Africa (ICESA)**

<i>Chair:</i>	Evelyne Mbede	TANZANIA
<i>Vice-Chairperson:</i>	Mohamed G. Abdelsalam	USA
<i>Secretary General:</i>	Francis Tembo	ZAMBIA
<i>Treasurer:</i>	Steve McCourt	SOUTH AFRICA

**INTER-ASSOCIATION ACTIVITIES 2003-2007**

**IASPEI/IAVCEI/IAPSO International Heat Flow Commission (IHFC)**

<i>Chair:</i>	Christoph Clauser	GERMANY
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**IASPEI/IAVCEI Commission on Physics & Chemistry of Earth Materials**

<i>Chair:</i>	Ian Jackson	AUSTRALIA
<i>Secretary:</i>	Sharon L. Webb	GERMANY

**IASPEI/IAVCEI/IAG Committee on Volcano Geophysics**

<i>IASPEI Representative:</i>	Jurgen Neuberg	UK
<i>Co-Chair:</i>	Hiroyuki Kumagai	JAPAN

**IASPEI/IAVCEI Working Group on Subduction Zones Located in Developing Countries (SZLDC)**

<i>Chair:</i>	Raymond P. Maximo	PHILIPPINES
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**IAGA/IASPEI/IAVCEI Working Group on Electromagnetic Studies**

**of Earthquakes & Volcanoes (EMSEV)**

<i>Chair:</i>	Seiya Uyeda	JAPAN
<i>IASPEI/IAVCEI Liaison:</i>	Malcolm J.S. Johnston	USA
<i>Secretary:</i>	Toshiyasu Nagao	JAPAN

**IAPSO/IASPEI/IAVCEI Joint Tsunami Commission**

<i>Chair:</i>	Kenji Satake	JAPAN
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**IASPEI/IAPSO/IAGA International Ocean Network (ION)**

<i>Chair:</i>	Ralph A. Stephen	USA
<i>Secretary:</i>	Heinrich Villinger	GERMANY
<i>Liaison:</i>	Kiyoshi Suyehiro	JAPAN

**IASPEI REPRESENTATIVES TO OTHER GROUPS**

**IAU/IUGG Working Group on Non-Rigid Earth Nutations:**

<i>Representative:</i>	Bruce A. Buffett	USA
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**ICSU Panel on World Data Centers:**

<i>Representative:</i>	Timothy K. Ahern	USA
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**ISC Executive Committee:**

<i>Representative:</i>	Oleg E. Starovoit	RUSSIA
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**IUGG Committee for Mathematical Geophysics:**

<i>Representative:</i>	Yehuda Ben-Zion	USA
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**IUGG GRC Union Commission:**

<i>Representative:</i>	David Jackson	USA
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**IUGG/IUGS Commission on the Lithosphere:**

<i>Representative:</i>	Kevin Furlong	USA
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**SCAR (Solid Earth Geophysical Working Group):**

<i>Representative:</i>	Saurabh K. Verma	INDIA
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**PAST IASPEI PRESIDENTS**

1907	L. Palazzo (Italy)
1907-1911	A. Schuster (UK)
1911-1916	B. Galitzin (Russia)
1916-1922	G. Lecointe (Belgium)
1922-1930	H.H. Turner (UK)
1930-1936	E. Oddone (Italy)
1936-1940	N.H. Heck (USA)
1940-1951	R. Stoneley (UK)
1951-1954	B. Gutenberg (USA)
1954-1957	K.E. Bullen (Australia)
1957-1960	H. Jeffreys (UK)
1960-1963	P. Byerly (USA)
1963-1967	J. Hodgson (Canada)
1967-1971	K. Wadati (Japan)
1971-1975	V.A. Magnitsky (U.S.S.R.)
1975-1979	H. Berckhemer (F.R. Germany)
1979-1983	B.A. Bolt (USA)
1983-1987	Z. Suzuki (Japan)
1987-1991	St. Müller (Switzerland)
1991-1995	A.V. Nikolaev (Russia)
1995-1999	C. Froidevaux (France)
1999-2003	B.L.N. Kennett (Australia)
2003-2007	E.R. Engdahl (USA)
2007-2011	Wu Zhongliang (China)

**PAST IASPEI GENERAL SECRETARIES**

1907-1922	R. de Kovesligethy (Hungary)
1922-1942	E. Rothé (France)
1942-1971	J.P. Rothé (France)
1971-1979	J.C. de Bremaecker (USA)
1979-1991	R.D. Adams (UK)
1991-2003	E.R. Engdahl (USA)
2003-	P. Suhadolc (Italy)

## **IX. International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)**

### **Association Internationale de Volcanologie et de Chimie de l'Intérieur de la Terre (AIVCIT)**

<http://www.iavcei.org>

At the First General Assembly of IUGG (Rome, 2-10 May 1922), the *Section de Vulcanologie* became one of the constituent sections of the Union. This name was changed into *Association Internationale de Vulcanologie* at the Fourth General Assembly (Stockholm 1930). It took its present name at the Moscow General Assembly (1971).

#### **IAVCEI BUREAU**

<i>President:</i>	Setsuya Nakada	JAPAN
<i>Vice-Presidents:</i>	Anita Grunder	USA
	Hugo Moreno-Roa	CHILE
<i>Secretary General:</i>	Joan Martí	SPAIN
<i>Members:</i>	Piero Dellino	ITALY
	Juan Manuel Espindola	MEXICO
	James D.L. White	NEW ZEALAND
	Marta Calvache	COLOMBIA
<i>Past-President:</i>	Oded Navon	ISRAEL
<i>Editor, Bulletin of Volcanology:</i>	John Stix	CANADA
<i>Membership Secretariat:</i>	Caroline Giddings	AUSTRALIA

#### **IAVCEI COMMISSIONS**

##### **Commission on Physics and Chemistry of Earth Materials (joint with IASPEI)**

<i>Chair:</i>	Ian Jackson	AUSTRALIA
<i>Secretary:</i>	Sharon Webb	GERMANY

##### **Commission on Granites**

<i>Leader:</i>	Nick Petford	UK
<i>Secretary:</i>	Sandeep Singh	INDIA

##### **Commission on Large-Volume Basaltic Provinces**

<i>Co-Leaders:</i>	Richard E. Ernst	CANADA
	Ian H. Campbell	AUSTRALIA

##### **Commission on the Chemistry of Volcanic Gases**

<i>Leader:</i>	Yuri Taran	MEXICO
<i>Secretary:</i>	John Stix	CANADA
<i>Newsletter Editor:</i>	Pierre Delmelle	BELGIUM
<i>Webmaster:</i>	Tobias Fischer	USA

##### **Commission on Volcanic Lakes**

<i>Leader:</i>	Johan C. Varekamp	USA
<i>Secretary:</i>	Alain Bernard	BELGIUM

##### **Commission on Explosive Volcanism**

<i>Co-Leaders:</i>	Shinji Takarada	JAPAN
	Sharon Allen	AUSTRALIA

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	Uli Martin	GERMANY
<i>Newsletter Editor:</i>	Vern Manville	NEW ZEALAND

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	Libby Prueher	USA

**Commission on Remote Sensing**

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**Commission on Volcanic Seismology (joint with IASPEI)**

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**World Organization of Volcano Observatories**

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	Olivier Bachman	SWITZERLAND
	Richard Price	UK
	Colin MacPherson	UK

**Commission on Kimberlites**

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<i>Chair:</i>	David S. Chapman	USA
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**IAPSO/IASPEI/IAVCEI Joint Tsunami Commission**

<i>Chair:</i>	Gerassimos Papadopoulos	GREECE
<i>IAVCEI Representative:</i>	Yuichi Nishimura	JAPAN

**IAGA/IASPEI/IAVCEI Working Group on Electromagnetic Studies of Earthquakes and Volcanoes**

<a href="http://yochi.iord.u-tokai.ac.jp/emsev/">http://yochi.iord.u-tokai.ac.jp/emsev/</a>		
<i>Leader:</i>	Seiya Uyeda	JAPAN
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**The International Volcanic Health Hazard Network (IVHHN)**

<i>Co-Leaders:</i>	Claire Horwell	UK
	Peter Baxter	UK

**IASPEI/IAVCEI Working Group on Subduction Zones Located in Developing Countries**

<i>Chair:</i>	Sri Widjiantoro	INDONESIA
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2007-	J. Marti (Spain)

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The composition of the National Committees and, in consequence, the names of the officially accredited national representatives to the Union and its eight Associations are in conformity with what was communicated to the IUGG Secretariat in 2008.

La composition des Comités Nationaux et par voie de conséquence les noms des représentants nationaux officiellement accrédités auprès de l'Union et de ses huit Associations sont conformes à ce qui a été communiqué au Sécrétariat de l'IUGG en 2008.

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**Please note.**

In compliance with the EU General Data Protection Regulation, the address data on pages 62-136 have been removed from the digital edition of the IUGG Yearbook 2009.

### XIII. LIST OF ACRONYMS

ABLOS	Advisory Board on Hydrographic, Geodetic and Marine Geo-Scientific Aspects of the Law of the Sea
AGU	American Geophysical Union
BGI	International Gravimetric Bureau
BIPM	Bureau International des Poids et Measures
CMG	Commission on Mathematical Geophysics
CODATA	Committee on Data for Science and Technology
COSPAR	Committee on Space Research
COSTED	Committee on Science and Technology in Developing Countries
EGS	European Geophysical Society
EMSEV	IASPEI/IAGA/IAVCEI Inter-Associations Commission on Electromagnetic Studies of Earthquakes and Volcanoes
FAGS	Federation of Astronomical and Geophysical Data Analysis Services
GALOS	Geodetic Aspects of the Law of the Sea
GOOS	Global Ocean Observing System
GTF	Geophysics: The Future, Inter-Associations Working Group
GRC	Commission on Geophysical Risk and Sustainability
IACS	International Association of Cryospheric Sciences
IAG	International Association of Geodesy
IAGA	International Association of Geomagnetism and Aeronomy
IAHS	International Association of Hydrological Sciences
IAMAS	International Association of Meteorology and Atmospheric Sciences
IAPSO	International Association for the Physical Sciences of the Ocean
IASPEI	International Association of Seismology and Physics of the Earth's Interior
IAU	International Astronomical Union
IAVCEI	International Association of Volcanology and Chemistry of the Earth's Interior
IBN	International Biosciences Networks
ICAO	International Civil Aviation Organization
ICET	International Council of Earth Tides
ICSU	International Council for Science
IERS	International Earth Rotation Service
IGBP	International Geosphere-Biosphere Programme
IGES	International Geoid Service
IHP	International Hydrological Programme
ILP	International Lithosphere Program
IPGH	Instituto Panamericano de Geografia Historia (also PAIGH)
ISGI	International Service of Geomagnetics Indices
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
PAIGH	PanAmerican Institute of Geography and History
PSMSL	Permanent Service for Mean Sea Level
SCAR	Scientific Committee on Antarctic Research
SCL	Scientific Committee on the Lithosphere
SCOPE	Scientific Committee on Problems of the Environment
SCOR	Scientific Committee on Ocean Research
SCOSTEP	Scientific Committee on Solar-Terrestrial Physics
SCOWAR	Scientific Committee on Water Research
SEDI	Study of the Deep Interior of the Earth
UCDI	Union Commission on Data and Information
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
URSI	Union Radio Scientifique Internationale
WCRP	World Climate Research Programme
WDC	World Data Centre
WGMS	World Glacier Monitoring Service
WMO	World Meteorological Organization