

The latest updates, news and activities from the ISC

GA doubles its support



Australian Government

Geoscience Australia

Geoscience Australia (GA) has increased its support of the ISC operations by 100% from year 2013. We are grateful to Dr Daniel Jaksa, the Section Leader for the Australian Tsunami Warning System for this important development. In addition to its financial support, GA is providing valuable seismic bulletin data for earthquakes in and around Australia, including those reviewed by the analysts working for the Tsunami Warning System. GA scientists are also co-operating with the ISC in the area of providing datasets used in monitoring the Comprehensive Test Ban Treaty. It is also likely that the ISC-GEM Catalogue will be used by GA researchers engaged in the assessment of seismic hazard and risk under the GEM initiative.

First past the post



This year the Council of Geosciences of South Africa was the first Member to pay its 2013 dues to the ISC. We invite other Members to follow this great example. It is rather unfortunate that the ISC staff members often have to spend a considerable amount of their limited time resources chasing up the unpaid membership fees.

Seismologists often need to identify and review scientific articles related to specific earthquakes or other seismic events that occurred at particular times or in specific regions. Most advanced bibliographical searches such as Google Scholar would require them to type a text string containing a commonly used name for the earthquake or the region and date it occurred. The search may need to be repeated several times to account for all possible transliterations of a place name in English, several different ways of specifying a date and a variety of names of the area where the earthquake has occurred. The results then have to be merged and the unavoidable duplicates removed. The procedure is daunting and often leads to unstable results.

The ISC Event Bibliography allows web users to search for references to scientific publications linked to both natural and anthropogenic events that have occurred in the geographical region of their interest by performing an interactive search based on earthquake (location, time, magnitude, etc.) and/or publication parameters (author name, journal, year of publication, etc.).

Seismologist/Developer
required
www.isc.ac.uk

Notable seismic events in your
area in July-Dec 2010?
Consider submitting a short
article to the
ISC Bulletin Summary

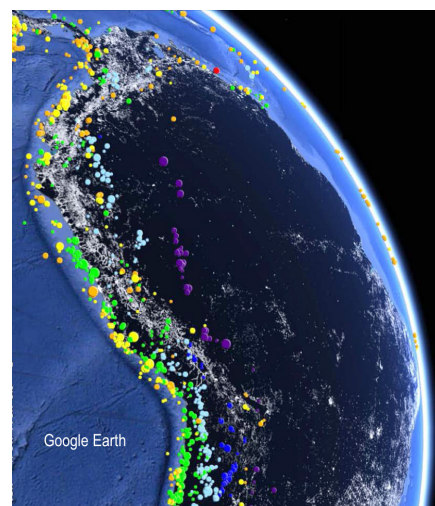
The ISC-GEM Catalogue released

After three years of intensive work, the ISC-GEM Global Instrumental Earthquake Catalogue (1900-2009) has been released for non-commercial use (www.isc.ac.uk/iscgem). The Catalogue is the result of a special effort to adapt and substantially extend and improve currently existing bulletin data to serve the requirements of specific user groups who assess and model seismic hazard and risk. The Catalogue will also have a multidisciplinary use in a wide range of areas such as studies of global seismicity, inner structure of the Earth, tectonics, nuclear monitoring research, rapid determination of hazard etc.

This global Catalogue was also designed to serve as a reference to be used for calibration purposes by those compiling regional seismicity catalogues that contain events of much smaller magnitudes. This way the catalogues prepared by other teams for different regions may contain comparable earthquake locations and magnitude parameters, especially in border regions.

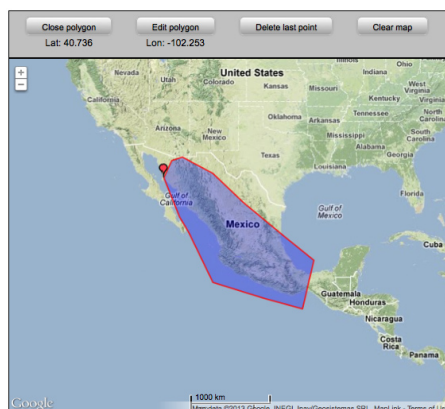
The work was funded by the GEM Foundation as part of the five Global Hazard Components. The project was led by the ISC and performed by a team of international experts in accordance with the requirements of the Scientific Board of GEM and following recommendations of a team of IASPEI Observers.

The Catalogue is already well used. Several updates have been introduced following suggestions from Alexey Ivashchenko from the Tsunami Lab of the Institute of Oceanology, Russian Academy of Sciences, Moscow; Helene Lyon-Caen from the Laboratoire de Géologie, Ecole Normale Supérieure in Paris; Natalia Mikhailova from the National Data Center of Kazakhstan.



The ISC-GEM Catalogue is now available from
www.isc.ac.uk/iscgem

The ISC Event Bibliography launched



Anderson, J.G., 1991. Strong motion seismology, #UNR1 700-720.
Mendez, A.J. and Anderson, J.G., 1991. The temporal and spatial evolution of the 19 September 1985 Michoacan earthquake as inferred from near-source ground-motion records, *Bull. seism. Soc. Am.* 81, 3, 844-861.
Okal, E.A., 1992. Use of the mantle magnitude M_m for the reassessment of the moment of historical earthquakes. I: shallow events, *Pure appl. Geophys.*, 139, 1, 17-57, DOI: [10.1007/BF00876825](https://doi.org/10.1007/BF00876825)
Kanamori, H., Jennings, P.C., Singh, S.K., and et al., 1993. Estimation of strong ground motions in Mexico City expected for large earthquakes in the Guerrero seismic gap, *Bull. seism. Soc. Am.* 83, 3, 811-829.

This is the first release of the Event Bibliography, which is not yet comprehensive enough to include all relevant articles. We continue to include further entries and invite our users to help us with necessary updates.

References to publications are not limited to seismology. They cover a broad range of disciplines including, but not limited to, earthquake engineering, tectonics, structural geology, geodesy, remote sensing, nuclear test monitoring, tsunami, landslides, environmental studies, coastal science, natural disasters, hydrology, geochemistry, atmospheric sciences and geomagnetism. This feature makes the Event Bibliography an attractive tool for multidisciplinary studies and useful for researchers and students from different fields. We expect that this ISC product will also be helpful in facilitating the work of authors, reviewers and journal editors during the entire process of scientific article publication.

2010 Addition to the GT List

205 GT events were added to the IASPEI Reference Event List for data year 2010. The list includes earthquakes and explosions, for which hypocentral information (lat, lon, depth) is known with high confidence (to 10 km or better (GT10)) with seismic signals recorded at regional and/or teleseismic distances. Unfortunately, the large majority of these events have been identified in the northern hemisphere. Jointly with the CTBTO and other institutions we are engaged in collecting information on potential candidate events in the southern hemisphere under the new RSTT (Regional Seismic Travel Times) initiative. The forthcoming RSTT session during the AGU Meeting of Americas in Cancun, Mexico will assist this cause.

ISC Prize winner visits ISC

Five years ago, the ISC established a modest annual prize in Mathematics and Geophysics for the best first year student at the Earth Science Department of its home institution – the University of Oxford. Last year's prize winner, Ms Rebecca Morgan, set a good example by coming to visit the ISC in early February. During her visit she learned about the ISC operations and development projects and also gave a talk on her current work at the University related to the structure and stratigraphy of the Cardigan Bay basin. At the end of her visit, Rebecca was treated to a friendly lunch with the ISC staff members.



Rebecca Morgan and Rose Wylie

CTBTO Link to ISC db contract extended

The Contract to provide a Link for the CTBTO to the wealth of the ISC data has been further extended by one year. We are grateful to the Director of the IDC, Dr Lassina Zerbo, for his support of this development. The web-services designed by the ISC under this project are well used by the IDC and National Data Centres. We also acknowledge the help of Dr Jerry Carter and Dr Mikhail Rozhkov in providing advice, assistance and critical suggestions for this high-profile ISC project.

New Member of the ISC Bulletin Analysis Team



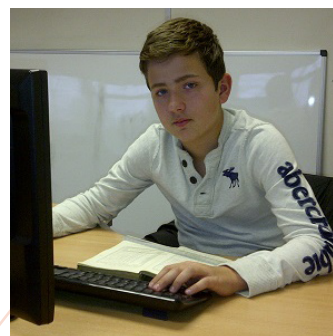
At the start of 2013, Rebecca Verney moved into the ISC Analyst's office to begin her new job as Trainee Analyst. Rebecca had previously worked at ISC as a data entry officer on the ISC-GEM Catalogue and the ISC Event Bibliography. To enhance her training programme in seismology, Rebecca visited the Earth Science Department of Bergen University in Norway that has been a keen data contributor to the ISC for more than 50 years.

From left to right: Berit Marie Storheim, Jens Havskov and Rebecca Verney

Rebecca spent a week gaining an insight into how seismic waveform data is processed. She worked with Berit Marie Storheim, Chief Engineer, and Jens Havskov, Professor Emeritus, who demonstrated the techniques of waveform processing of teleseismic, regional and local events using the SEISAN earthquake analysis software which is used by a large number of the ISC data contributing agencies around the world. We are very grateful to our Norwegian colleagues for the time spent with Rebecca, which will help her future work on the ISC Bulletin.

Work experience at the ISC

As part of the work within the local community, the ISC is often engaged in giving work experience to students of local secondary schools. This winter Tom Malthouse (Downs School, Compton) and Aleksey Storchak (Pangbourne College) spent a week each helping to digitise the paper-based bulletins of the British Association for Advanced Sciences dating back to the beginning of the 20th century. This work will contribute towards further improvement of the ISC-GEM Catalogue. Both young men were thrilled to learn that their small contribution will actually be helpful towards the accurate assessment of global seismic hazard and consequently, for saving lives from potential disasters.



From the left: Tom Malthouse, Domenico Di Giacomo and Aleksey Storchak

International meetings

During the first four months of 2013, the ISC staff took part in several international meetings. The ISC Bulletin Analyst, Blessing Shumba, went to the January Africa Array meeting in Johannesburg where he continued his successful work of encouraging African colleagues to exchange bulletin data with the ISC.

Domenico Di Giacomo and Dmitry Storchak presented the newly released ISC Products (the ISC-GEM Catalogue and the ISC Event Bibliography) at the SSA meeting in Salt Lake City. Dmitry held conversations with the members of the SSA Publication Board aiming to automate further updates of the ISC Event Bibliography as far as the numerous BSSA and SRL articles are concerned. Dmitry Storchak also attended the 8th Gulf Seismic Forum in Oman, helping to resolve the issues with data contributions from the region.

István Bondár and Dmitry Storchak went to the LDG/CEA in Bruyeres-Le-Chatel in France to discuss further co-operation with LDG, present new developments at the ISC, familiarise ourselves with the work of the French Tsunami Working Centre and to hear about the developments under the RESIF project that brings together the data from several seismic networks in Metropolitan France. Finally, Dmitry Storchak was invited to give a lecture at the Young Geophysicist's School in Perm, Russia, just west of Ural Mountains, not far from the site of the recent meteor explosion.



International Seismological Centre

Tel: +44 (0) 1635 861022
Fax: +44 (0) 1635 872351
Email: admin@isc.ac.uk
www.isc.ac.uk