



## INTRODUCTION

The Geological Society of Greece (EGE) announces its 14<sup>th</sup> International Conference. The Conference is going to be held in Thessaloniki (Northern Greece), during May 25-27, 2016 and will be hosted at the Aristotle University Research Dissemination Centre ([kedeia.rc.auth.gr](http://kedeia.rc.auth.gr)).

The primary goal of the Conference is the presentation of the most recent advances in Earth and Environmental Sciences, mainly in the Aegean Region and its surroundings, aiming at highlighting their impacts on natural resources, natural hazards, and environmental problems.

## SUBJECTS - THEMES

The Conference addresses all subjects of Earth Sciences. A tentative list of themes follows: Active Tectonics, Applied Geophysics, Applied Mineralogy, Archaeometry, Atmospheric Environment, Climatology, Energy Resources, Engineering Geology, Environment and Health, Geoarchaeology, Geochemistry, Geochronology, Geology and Education, Geosciences and Environment, Geothermal Energy, Geotopes, GIS and Geoinformatics, Hydrogeology, Industrial Rocks and Minerals, Marine Geology, Meteorology, Mineralogy, Mineral Exploration, Natural Hazards, Neotectonics, Oceanography, Ore Deposits, Palaeoclimatology, Palaeontology, Physical Geography, Physics of the Earth's Interior, Quaternary Geology, Remote Sensing / Earth Observation, Sedimentology, Seismology, Speleology, Stratigraphy, Structural Geology, Sustainable Development, Tectonics, Urban Geology.

## REGISTRATION AND PAYMENT

To register, visit [www.ege2016.gr](http://www.ege2016.gr) and click on "Registration" (*available from July 10*). Participation fees are summarized in the following table:

Category	A. Until September 30, 2015	B. Until February 25, 2016	C. After February 25, 2016
Delegates*	100/130 €	120/150 €	150/180 €
Young scientists**	80/100 €	100/120 €	130/150 €
Undergraduate students	30 €		

\* The first fee in each category corresponds to EGE members (based on the latest list of members, as provided by the Secretary of the Geological Society of Greece), while the second to non-members.

\*\* In order for a delegate to qualify for a **Young scientist** fee, he or she **must**:

- Be **35 years** old or younger in 2016 (i.e. born not earlier than January 1, 1981; an ID may be requested),
- and**
- Be the **lead author** of the associated paper(s).

Regular and young scientist delegates are entitled to all Conference activities (paper presentation, conference material, proceedings in electronic format, gala dinner, coffee breaks, etc.). Undergraduate student delegates are entitled to attendance and coffee breaks only.

The above mentioned fees correspond to **one paper per registration**. If a delegate wants to submit one or more additional papers under the same registration, this is possible only if **he/she is the single author**. In this case, an **additional fee of 40 €** per single-author paper will be charged. If you are interested in this option, please contact the Organizing Committee for details.

**Please note that no paper will be accepted for publication without prior payment of registration fees.**

All additional expenses regarding the payment of registration fees (e.g. bank expenses) have to be paid by the delegates themselves.

## **SUBMISSION OF PAPERS**

EGE 2016 welcomes contributions in the form of **full papers**. Visit [www.ege2016.gr](http://www.ege2016.gr) to download the template and submit your paper. Deadline for submitting your paper is **September 30, 2015**.

In order for a paper to be accepted for presentation and publication in the proceedings, a completed registration for each paper until 25 February 2016 at the latest is required.

## **REVIEWING**

Full papers will be peer-reviewed by two external referees. They will be assigned by the Conveners of each Session or by the Organizing Committee for Special and General Sessions, respectively.

Authors are required to review their submitted papers according to the comments of the referees and re-submit them through [www.ege2016.gr](http://www.ege2016.gr).

## **PRESENTATION MODES**

There will be both oral and poster presentations in all sessions (May 25-27, 2016).

Participants will be able to choose their preference (oral or poster mode) in the application form, but their definite mode of presentation will be decided by the Programme Committee and the respective Conveners, based on space / time restrictions.

- **Oral Presentation** – The allocated time for oral presentations will be 15 minutes in total. This includes time for the presenter to be introduced, present his/her contribution, answer a number of questions, and do any wrap-up. Therefore, presenters should plan their actual presentation for no more than 12 minutes. There is a tight schedule and it is important that each presenter stay within the time limit. Presenters will have access to a laptop with LCD projector and a laser pointer. Please, bring your presentation to the meeting on a USB flash drive to load on the in-room laptops. You will not be able to use your own laptop for your presentation. You can load your presentation on one of the conference laptops before the first

session, during the coffee breaks, or during lunch preceding your presentation. A support staff member will be in each room to assist with the loading.

- **Poster Presentation** – For each poster, display boards will be allocated. The poster board usable space will be announced in EGE 2016 website when further details become available. The poster area will open thirty minutes before the sessions begin each day. It is advisable to hang the posters sometime before 9:00 a.m. the day of the respective session, if possible. Posters will need to be taken down by the end of the day of each session. Presenters will be required to be next to their posters site during specific time slots.

## SCIENTIFIC PROGRAMME

EGE 2016 programme includes three days of oral and poster sessions (**May 25-27, 2016**). The scientific programme has been organized into two broad groups: **Special Sessions** of specific interest and **General Sessions**. The scheduled sessions are:

### *Special Event*

Since 2016 is proclaimed by UNESCO as Aristotle Anniversary Year, a round table will be organized on the subject of Aristotle Philosophy and Nature.

### *Special Sessions*

**S01 Environmental Geochemistry: mobility and speciation of chemical elements in the system rock-soil-water-plant** (*endorsed by SEGH*)

*Conveners: Ariadne Argyraki, Athanasios Godelitsas*

**S02 Holocene geomorphological changes of coastal areas**

*Conveners: Konstantinos Vouvalidis, Niki Evelpidou, Dorit Sivan*

**S03 Statistical Seismology**

*Conveners: Eleftheria Papadimitriou, Vassilios Karakostas, Georgios Tsaklidis*

**S04 Probabilistic and deterministic seismic hazard, ground motion and permanent deformation assessment from strong earthquakes of the broader Aegean area**

*Conveners: Costas Papazachos, Basil Margaris*

**S05 Site characterization, estimate of seismic site response and its incorporation into the ground motion predictive models**

*Conveners: Anastasia Kiratzi, Nikos Theodoulidis, Nikos Klimis, Konstantia Makra*

**S06 Earthquake-induced ground deformations**

*Conveners: Ioannis Koukouvelas, George Papathanassiou*

**S07 Geodetic methods for crustal deformation monitoring**

*Conveners: Dimitrios Rossikopoulos, Christos Pikridas, Aristidis Fotiou*

**S08 Modeling and monitoring crustal deformation and Aegean geodynamics using GPS/InSAR and geophysical/seismological methods**

*Conveners: Athanassios Ganas, Pierre Briole, Issaak Parcharidis*

**S09 Geospatial technology in education, training, capacity building and outreach; towards STEM promotion and development of skills**

*Conveners: Nikos Lambrinos, Antonios Mouratidis*

**S10 Geohazard analysis with Remote Sensing and GIS**

*Conveners: Issaak Parcharidis, Constantinos Loupasakis*

**S11 Multitemporal Remote Sensing data analysis for geoscience applications**

*Conveners: Michael Foumelis, Georgia Doxani*

**S12 Recent advances in Earth Sciences: monitoring networks, services and products – what do scientists deliver and what does society need**

*Conveners: Nikolaos Melis, Zafeiria Roumelioti*

***General Sessions***

**G01 Structural Geology and Neotectonics**

**G02 Stratigraphy and Palaeontology**

**G03 Applied Geology (Engineering Geology, Hydrogeology, Urban Geology, etc.)**

**G04 Mineral Sciences, Petrology, Geochemistry, Isotope Geology and Volcanology**

**G05 Seismology, Geophysics and Physics of the Earth's Interior**

**G06 Meteorology, Climatology and Atmospheric Environment**

**G07 Earth Sciences and Society (Geotopes, Teaching and Education, Health, Sustainable Development, etc.)**

**G08 Physical Geography, Sedimentology, Quaternary Geology, Karst and Speleology**

**G09 Remote Sensing and Information Technologies in Geosciences**

**G10 Marine Geology and Oceanography**

**G11 Environmental Geosciences**

**CANCELLATION POLICY**

All requests for cancellations must be made in writing to NB EVENTS (info@ege2016.gr). Cancellation fees apply as follows:

- Before December 1, 2015: full refund minus bank expenses.
- Before March 30, 2016: 50% cancellation fee (50% refund).
- After April 1, 2016: 100% cancellation fee (no refund).

#### ACCOMODATION

NB EVENTS - EGE2016 Official Organizer has negotiated special hotel rates for some of the best hotels in Thessaloniki. Participants will have the opportunity to book one of the recommended hotel through the EGE2016 online accommodation booking system. The accommodation system and hotel information will be available soon. Please note that hotel prices have been secured by the conference organizer for a limited number of rooms and can be guaranteed only if you book your hotel through EGE2016 online accommodation booking system.

For more information please contact us:

<b>Communication:</b>	<b>Address:</b>
info@ege2016.gr	114, Tsimiski str.
+30-2310-223461	Thessaloniki
+30-2310-221408	GR54622
http://nbevents.gr	Greece

#### OTHER INFO

- **Facilities.** Delegates of EGE2016 may choose from a variety of restaurants in the close vicinity of the Congress venue.
- **Transportation.** KEDEA building, which will host EGE 2016, is located in the city centre, next to the main Aristotle University campus. Public bus and taxi services to and from the centre of the city are provided on a 24h basis. One - way bus ticket costs € 1.00, while taxi fees depend on the time of travel, traffic load, etc., but normally should not exceed € 15.00 for any route within the city limits. Route details and maps are available at [www.oasth.gr](http://www.oasth.gr).
- **Arrival by airplane.** Macedonia International Airport of Thessaloniki (airport code SKG) has daily connections to many major European destinations through scheduled services of a large number of international airlines. It is the second largest airport in Greece and is located 15 km away from the city centre with regular public bus connections. There are also some low-cost charter flights operating from European cities directly to Thessaloniki. An alternative option is to use the low-cost carriers' flights operating to Athens and connect by train to Thessaloniki. Delegates are strongly recommended to book air travel as early as possible, as Greece is a busy tourist destination.
- **Arrival by train.** The city's railway station is the largest in Greece and is located very close to the city centre. There are international daily arrivals and departures from and to several destinations. It is served by a dense network of public bus transportation. Timetables and tickets are supplied by the (OSE) Hellenic State Railways Offices ([www.ose.gr](http://www.ose.gr), Thessaloniki office tel: +30 (231) 05.17.517).
- **Arrival by car.** Those wishing to drive to Greece may either ferry their cars across to one of the country's major ports (Igoumenitsa, Piraeus, Patras etc.) or enter the country overland. The mainland points of entry are Kakavia, Kristallopigi (Albania), Evzoni, Niki (FYR of Macedonia), Promahonas (Bulgaria), Kastania and Kipi (Turkey). All border stations operate on 24 hour service basis.

- **Visas.** Greece is a member of the European Union; therefore no visa is needed for E.U. citizens. Non - E.U. participants should contact their nearest Greek Embassy or Consulate for further information. For a complete listing of Greek Embassies and Consulates abroad, including full contact information, you may visit the page of the Greek Ministry of Foreign Affairs at [www.mfa.gr](http://www.mfa.gr). Those who require a formal invitation for the purpose of obtaining a visa, or raising travel funds in their country, may apply to NB Events ([info@ege2016.gr](mailto:info@ege2016.gr)).
- **Insurance.** Travel insurance and medical care, when needed, are solely under the responsibility of the participants.
- **Climate & Clothing.** Weather is usually mild in late May, but it can be wet. Temperatures may sometimes reach well above 25° C. Generally one should expect sunny days, probably with high humidity and perhaps cool nights which require warmer clothing.

### USEFUL ADDRESSES

Some Internet addresses that might be of use to the participants:

#### *Organization*

- 14<sup>th</sup> International Conference of the Geological Society of Greece: [www.ege2016.gr](http://www.ege2016.gr)
- Geological Society of Greece: [www.geosociety.gr](http://www.geosociety.gr)
- Department of Geology, Aristotle University of Thessaloniki: [www.geo.auth.gr](http://www.geo.auth.gr)
- Aristotle University of Thessaloniki: [www.auth.gr](http://www.auth.gr)

#### *Travel*

- Thessaloniki international airport, general information: [www.thessalonikiairport.gr](http://www.thessalonikiairport.gr)
- Public bus schedules, routes and maps: [www.oasth.gr](http://www.oasth.gr)
- Hellenic Railways: [www.ose.gr](http://www.ose.gr)

### ORGANIZING COMMITTEE

#### **President:**

**Pavlidis Spyros** – Professor  
School of Geology, Aristotle University of Thessaloniki

#### **Executive Secretariat:**

**Chatzipetros, Alexandros** – Assistant Professor  
School of Geology, Aristotle University of Thessaloniki

**Kaklis, Triantafyllos** – Dr. Geologist  
School of Geology, Aristotle University of Thessaloniki

**Kostopoulos, Dimitrios** – Associate Professor  
School of Geology, Aristotle University of Thessaloniki

**Thomaidou, Effimia** – Dr. Geologist  
School of Geology, Aristotle University of Thessaloniki

**Treasurer:**

**Kantiranis, Nikolaos** – Assistant Professor  
School of Geology, Aristotle University of Thessaloniki

**Members:**

**Anagnostopoulou, Christina** – Assistant Professor  
School of Geology, Aristotle University of Thessaloniki

**Galanakis, Dimitrios** – Dr. Geologist, EGE Secretary  
General Institute of Geology and Mineral Exploration

**Michailidis, Stylianos**  
Association of Greek Geologists – Northern Greece Chapter

**Moraiti, Evgenia** – Dr. Geologist, EGE Treasurer  
Institute of Geology and Mineral Exploration

**Mouratidis, Antonios** – Lecturer  
School of Geology, Aristotle University of Thessaloniki

**Spyridis, Efthimios**  
Geotechnical Chamber of Greece

**Vamvakaris, Dominikos** – Dr. Seismologist  
School of Geology, Aristotle University of Thessaloniki

**Vargemezis, Georgios** – Associate Professor  
School of Geology, Aristotle University of Thessaloniki

**Vavelidis, Michail** – Professor  
School of Geology, Aristotle University of Thessaloniki

## ANNEX: SESSION DETAILS

### *Special Sessions*

**S01 Environmental Geochemistry: mobility and speciation of chemical elements in the system rock-soil-water-plant (endorsed by SEGH)**

**Conveners:** *Ariadne Argyraki, Athanasios Godelitsas*

*argyraki@geol.uoa.gr, agodel@geol.uoa.gr*



The mobility and speciation of chemical elements is central to many of the feedbacks that connect geochemical, biological, and geological processes at Earth's surface, while it is a crucial issue in the assessment of reactivity, biological availability and bioaccessibility of contaminants as well as the remediation of contaminated land. This session will cover presentations that focus on the components of elemental mobility and speciation as well as methodologies for studying such phenomena in field, laboratory and modeling studies and across spatial scales. The session will bring together cross-disciplinary scientists including geologists and geochemists, soil and plant scientists, engineers and environmental chemists and will provide the opportunity for exchanging knowledge and experiences from the Aegean Region and beyond, fostering future collaboration in the field of study.

**S02 Holocene geomorphological changes of coastal areas**

**Conveners:** *Konstantinos Vouvaldis, Niki Evelpidou, Dorit Sivan*

*vouval@geo.auth.gr, evelpidou@geol.uoa.gr, dsivan@research.haifa.ac.il*

The research on geomorphological changes of coastal areas is a leading research the last decades. Sea level rise, active tectonics, and climate change are the dominant key factors for the evolution of coastal areas during Holocene. The depositional and erosional processes on the coastal zone changed not only the coastal palaeogeography and palaeoenvironment but also affected human habitation and constructions. Contributions attempting to quantify, assess, and compare trends of the evolution of coastal areas in a regional or local level are invited to this session.

**S03 Statistical Seismology**

**Conveners:** *Eleftheria Papadimitriou, Vassilios Karakostas, Georgios Tsaklidis*

*ritsa@geo.auth.gr, vkarak@geo.auth.gr, tsaklidi@math.auth.gr*

The purpose of this session is to provide seismologists and statisticians with an opportunity for discussing problems related to statistical analysis of earthquake occurrence and forecasting, as well as to defining future research directions. Topics explored have included the statistical behavior of earthquake occurrence and patterns, earthquake triggering, earthquake physics, dynamic earthquake hazard estimation, time-dependent earthquake forecasting, and forecast evaluations. Topics are referred but not limited to:

- Triggering; rate/state dependent friction law in relation to seismicity rate changes.
- Seismicity studies including statistical modeling, e.g., recurrence, characteristic earthquakes, declustering, etc.
- Time-dependent models for earthquake forecast and hazard assessment
- Prospective and retrospective testing of earthquake forecasts.



**S04 Probabilistic and deterministic seismic hazard, ground motion and permanent deformation assessment from strong earthquakes of the broader Aegean area**

**Conveners:** *Costas Papazachos, Basil Margaris*

*kpapaza@geo.auth.gr, margaris@itsak.gr*

We invite presentations on all aspects of seismic hazard assessment, including both probabilistic and deterministic methods. We especially welcome focused studies on scenarios and simulations from strong earthquakes, regarding their strong ground motions and permanent (static) displacements, as well as their expected impact. Case studies of recent earthquakes, including results from focused modeling (e.g. results from microzonation studies, surface displacements, etc.) or large-scale applications (e.g. shake maps, etc.) that contribute to improved seismic hazard assessment are also invited. Presentations should focus on the Aegean area, though applications to similar seismotectonic environments can be also submitted.

**S05 Site characterization, estimate of seismic site response and its incorporation into the ground motion predictive models**

**Conveners:** *Anastasia Kiratzi, Nikos Theodoulidis, Nikos Klimis, Konstantia Makra*

*kiratzi@geo.auth.gr, ntheo@itsak.gr, nklimis@civil.duth.gr, makra@itsak.gr*

The scope of this session is to bring together geologists, seismologists and engineers in order to discuss how they can combine geological, topographical, geophysical and geotechnical data, to characterize the site conditions and estimate the seismic site response. Soil alters the characteristics of seismic waves in a way that the amplitude, the frequency content and the duration of seismic motions on the free soil surface differ from those on the surface of outcropping bedrock. The importance of amplification on soil conditions has long been recognized in analysing and predicting earthquake ground motion. To account for the site effect is always an issue for seismologists and engineers. Among the most recognized soil types and local geological conditions that affect the recording ground motions are: the horizontal extent and the thickness of the alluvial deposits, the dip angle of the formations overlying the bedrock, the topography and of course the presence of active faults that surface cut the alluvial deposits. Despite the fact that topography and that of the bedrock basin are sometimes equally influential in altering seismic ground motion and determining the overall site response, soil amplification effects are of primary geotechnical concern in the seismic design of civil engineering structures. Papers covering the following topics are welcome:

- The role of the geotechnical engineer in site characterization: exploration methods, equipment types and their suitability, in-situ and laboratory tests
- The role of the geologist / geophysicist in site characterization: surface geology, topography, in situ – active or/and passive measurements
- VS30 as a proxy accounting for site-effects: advantages, pitfalls
- Empirical methods to estimate seismic response
- Numerical methods to simulate soil profile and seismic motion
- Site-effects and their incorporation into empirical ground motion predictive equations, seismic hazard maps, ShakeMaps, microzonation studies.
- Good practices and case studies

**S06 Earthquake-induced ground deformations**

**Conveners:** *Ioannis Koukouvelas, George Papathanassiou*

*iannis@upatras.gr, gpapatha@geo.auth.gr*

Earthquakes are commonly accompanied by secondary effects like landslides and liquefactions. These secondary effects are part of natural processes, and in man-made processes used in science and commerce. This session welcomes contributions related to the earthquake-induced ground

deformation, hazard assessment and to the evaluation of the potential of triggering relevant phenomena such as liquefaction and landslides/rockfalls. The contributions can be addressed issues focusing either on case studies or on new methodologies proposed to be applied in order to delineate likely to failures areas.

**S07 Geodetic methods for crustal deformation monitoring**

**Conveners:** *Dimitrios Rossikopoulos, Christos Pikridas, Aristidis Fotiou*

*rossi@topo.auth.gr, cpik@topo.auth.gr, afotiou@topo.auth.gr*

The detailed knowledge of the crustal deformation at fine scales is a fundamental issue for achieving an increasing understanding of the processes acting at the surface of the Earth as well as in its interior. The geodetic methods are used to measure movements of the Earth's surface and deformations in the upper part of the Earth's crust with high spatial and temporal resolution as referred to a global reference system. The new space geodetic techniques like in e.g. GNSS, Satellite Laser Ranging and INSAR play an important role in research into these underlying physical processes. The fields of GNSS and terrestrial control networks, near real time processing strategies, secular velocity fields estimating, co-seismic and time-dependent processes and loading phenomena using geodetic based data are interesting topics where this special session is going to focus.

**S08 Modeling and monitoring crustal deformation and Aegean geodynamics using GPS/InSAR and geophysical/seismological methods**

**Conveners:** *Athanassios Ganas, Pierre Briole, Issaak Parcharidis*

*aganas@noa.gr, briole@ens.fr, parchar@hua.gr*

This session aims to attract presentations of new results on crustal deformation patterns and geodynamic processes in the Aegean/East-Med region. We seek submissions that apply multidisciplinary methods of monitoring crustal deformation using tectonics, GPS/GNSS - InSAR measurements, and geophysical/seismological data. We also welcome contributions examining the Hellenic subduction zone and occurrence of strong earthquakes, deformation near large active faults, ground offsets (dynamic and static) related to the seismic cycle and use of space geodesy techniques towards understanding the seismotectonics of active rifts and thrust belts of the Aegean. A third goal of this session is to bring together researchers from a variety of backgrounds to present work related to the use of high rate GPS data and its integration with seismic observations for monitoring purposes.

**S09 Geospatial technology in education, training, capacity building and outreach; towards STEM promotion and development of skills**

**Conveners:** *Nikos Lambrinos, Antonios Mouratidis*

*labrinos@eled.auth.gr, amourati@geo.auth.gr*

Geospatial information and technology, such as satellite imagery, Global Navigation Satellite Systems (GNSS) and Geographical Information Systems (GIS), have become the backbone of modern society. In this context, the role of education, training, capacity building and outreach is crucial, in order to provide qualified graduates - especially at vocational, bachelors and masters level - and to build an overall "spatially enabled" society. Nevertheless, the foundations of this effort lie in attracting the interest of youngsters, already at primary and secondary education level. On the other hand, often in combination with information and communications technology (ICT), education itself has also been greatly benefiting from this evolution, as the learning process can be significantly enhanced, by the use of geospatial information and related technology, both in and out of the classroom. The proposed session is envisaged to bring together education experts, geoscientists active in education, teachers, as well as policy makers and other stakeholders. Contributions concerning all types of life-long learning (formal,

non-formal and informal) and levels of education, including primary and secondary education, vocational education and training and adult education are equally welcome. Sharing of experiences and results from training, capacity building and outreach activities are also highly encouraged.

**S10 Geohazard analysis with Remote Sensing and GIS**

**Conveners:** *Issaak Parcharidis, Constantinos Loupasakis*

*parchar@hua.gr, cloupasakis@metal.ntua.gr*

Remote sensing and GIS based techniques are complementary for the analysis and the characterization of natural catastrophic phenomena, providing substantial information on their distribution and their intensity. The proposed special session focuses on the following themes: Geohazard assessment by means of Remote Sensing. GIS based techniques (terrain analysis, multi criteria analyses) in geohazard assessment, Researchers as well as practitioners are encouraged to present case studies and applications, conceptual ideas and new methods on the analysis of natural hazards by means of space born measurements as well as GIS based techniques.

**S11 Multitemporal Remote Sensing data analysis for geoscience applications**

**Conveners:** *Michael Foumelis, Georgia Doxani*

*michael.foumelis@esa.int, georgia.doxani@esa.int*

Remotely sensed data are an essential source of information with significant contribution to geosciences, providing qualitative and quantitative mapping and monitoring capabilities of large areas. Earth Observation (EO) data have been acquired by multiple optical and radar sensors on-board satellite missions for several decades, building up a considerable archive of invaluable information. With the progressively enhanced spatial, spectral, radiometric and temporal resolution, EO data archives continue to grow and information extraction from multitemporal data is becoming increasingly significant. On the one hand, imageries from historical missions (e.g. LANDSAT, SPOT, ASTER, MODIS, ERS, ENVISAT, etc.) are still being exploited, as considerable amount of research is focused on developing novel algorithms for the analysis of long time series. On the other hand, new EO missions, such as the Copernicus Sentinels, specifically designed for building multitemporal data, provide the means for large coverage and systematic acquisitions, covering almost the entire spectrum of Geosciences. The open and free data policy is an additional asset, challenging the handling of such large data volumes and stimulating innovation. In essence, multitemporal analysis techniques are on the cutting edge of research, serving in the long term operational activities of many research institutions and decision making entities. Exploring multitemporal EO datasets for trends, cycles and changes are of interest for many fields of geosciences, especially in land cover/use classification, vegetation mapping, soil moisture retrieval, urban monitoring, change detection, ground displacements and strain accumulation, modelling of land surface processes, water resources and energy fluxes (including land surface temperature) and last but not least contribution to various phases of geohazard management. In this context, this Special Session shall welcome contributions on state-of-the-art techniques for exploiting multitemporal optical and SAR remote sensing data as well as case studies on relevant geoscience applications.

**S12 Recent advances in Earth Sciences: monitoring networks, services and products – what do scientists deliver and what does society need**

**Conveners:** *Nikolaos Melis, Zafeiria Roumelioti*

*nmelis@noa.gr, zroum@auth.gr*

The recent, April 2015, M7.8 Nepal earthquake showed that earth sciences related data may already be enough to predict severe natural disasters, although societies may not be always capable to

effectively use these scientific products towards hazard mitigation. On the other hand, the 1995 M6.4 Kozani-Grevena earthquake in Northern Greece and the 1999, M5.9 earthquake close to Athens came as a surprise to the scientific community. So, where do we stand today, in terms of our knowledge of earth-related hazards in the broader Aegean region? What are the recent advances in earth monitoring networks and the services and products that are based on their data (i.e. databases, public information, real-time or near real-time applications, etc.)? What needs do they serve (scientific, public, private sector) and how can we enhance them for the benefit of our society? In the quest of the maximum applicability and usefulness of our services and products, we invite submissions with descriptions of recently deployed earth monitoring networks (seismological, volcanological, geodetic, surface dynamics etc.) in the Aegean and its surroundings and/or recent advances in pertinent services and products. We also encourage the submission of opinion papers from scientists, emergency responders and disaster mitigation groups that can point out existing difficulties, in the applicability of recent deliverables from earth scientists and include suggestions for improvements.

### ***General Sessions***

General Sessions are intended to accommodate every paper that is not specifically submitted under a Special Session. Please, indicate the General Session number when you submit a paper. Reviewing of papers submitted under a General Session will be coordinated by the Organizing Committee.

- G01 Structural Geology and Neotectonics**
- G02 Stratigraphy and Palaeontology**
- G03 Applied Geology (Engineering Geology, Hydrogeology, Urban Geology, etc.)**
- G04 Mineral Sciences, Petrology, Geochemistry, Isotope Geology and Volcanology**
- G05 Seismology, Geophysics and Physics of the Earth's Interior**
- G06 Meteorology, Climatology and Atmospheric Environment**
- G07 Earth Sciences and Society (Geotopes, Teaching and Education, Health, Sustainable Development, etc.)**
- G08 Physical Geography, Sedimentology, Quaternary Geology, Karst and Speleology**
- G09 Remote Sensing and Information Technologies in Geosciences**
- G10 Marine Geology and Oceanography**
- G11 Environmental Geosciences**