



Andrija Mohorovičić Geophysical Institute
Department of Geophysics, Faculty of Science
University of Zagreb

on the occasion of the 150th anniversary of Geophysical Institute
in Zagreb organizes international scientific meeting

GEOPHYSICAL CHALLENGES OF THE 21ST CENTURY

First announcement and call for participation

Zagreb, Croatia
2 December 2011

Supported by



Call for participation

In December 2011 Geophysical Institute, nowadays Andrija Mohorovičić Geophysical Institute (AMGI), Faculty of Science, University of Zagreb, Croatia, marks its 150th anniversary. The anniversary will be celebrated at a one-day international scientific meeting. The main goal of the meeting is to integrate efforts of geophysicists in various disciplines targeting to solve some of the recent societal issues. The meeting will consist of several invited lectures given by international experts in the field of geophysics and of poster sessions. Both, the invited lectures and the poster sessions will be organized in the following sections:

1) Air-sea interactions and climate change (air-sea turbulent interface and the transfer of heat, water and momentum, as well as the feedback of the sea on the atmosphere; separation of trends from multidecadal variability; downscaling of hindcasts and forecasts from the global to the regional scale; tele-connections; climatic scenarios).

2) Geophysical hazards: earthquakes, floods and extreme weather events (all aspects of seismic hazard estimation and mitigation of seismic risk – hazard mapping, microzonation, legislation issues, antiseismic design of buildings, etc.; tsunamis; floods and analyses of meteorological, oceanographic and hydrological conditions favorable for flood occurrences; extreme weather events such as droughts, heat waves, cold spells, deep convection, extreme precipitation, extreme thunderstorms etc.).

3) Air, water and soil pollution (experimental investigations of air, precipitation, water and soil pollution; modeling of diffusion and advection of pollutants in the atmosphere and the ocean; coupling of chemical, meteorological and oceanographic models aiming to predict pollution levels in the atmosphere and seas; analyses of meteorological, hydrological and/or oceanographic conditions favoring the occurrence of air, water, sea and/or soil pollution episodes; the role of the air, water and/or soil pollution in human health; the role of pollution in the climate change).

4) Geophysics and traffic security (forecasts of mesoscale convective systems and their necessity in the air-traffic security; detailed windstorm prediction; icing; hailstorms; fog; winds and wind waves, coupled meteorological-oceanographic models for wave predictions; resolution and verification of coupled air-sea models in the coastal seas).

5) Application of geophysical research in the energy issues

(seasonal forecasts of prolonged rain or dry seasons; measurement, theory and modeling of available wind energy; optimal solar-energy resources in the near future; geo-thermal energy in Central Europe; wind waves and tides in energy production).

6) Agroclimatological scenarios (micro-agroclimatological analyses; current rapid agroclimatic changes; future agroclimatic projections and scenarios).

During the meeting, a monograph devoted to the 150th anniversary of the Geophysical Institute will be presented. We invite all participants interested in presenting a poster to send the abstract (up to 250 words), poster title, names and addresses of authors to AMGI.150@gfz.hr by **30 September 2011**.

Scientific Committee

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