

## INTRODUCTION

Dear colleagues,

Welcome to the 8th edition of the International Conference on Cartography and GIS in Bulgaria. The Conference is organized for the second time under the patronage of the President of the National Assembly of Bulgaria Mrs. Tsveta Karayancheva. The previous events took place in Borovets (2006, 2008), Nessebar (2010), Albena (2012, 2016), Varna-Riviera (2014) and Sozopol (2018). The conference is organized by Bulgarian Cartographic Association and University of Architecture, Civil Engineering and Geodesy (UACEG) in Sofia. Co-organizer is Military Geographic Service. The event is organized with the support of the Bulgarian Science Fund. This year, 2020 the World Health Organization announced COVID-19 outbreak as a pandemic and this was a reason that the conference was postponed to June 2021. Nevertheless, the organizing committee decided Proceedings Vol. 1 to be published in 2020 and Vol. 2 in 2021. The ancient seaside town of Nessebar, a world cultural heritage city, will welcome the participants from 14 to 19 June 2021 for the second time of the Conference's history. It is one of the major seaside resorts on the southern Bulgarian Black Sea Coast. Due to the city's abundance of historic buildings, UNESCO included Nessebar in its list of World Heritage Sites in 1983.

The organizers' aim is to collect knowledge and share experience about the latest achievements in the field of cartography and GIS with special accents for the region of the Balkan Peninsula, Europe and global aspects. Another goal is to discover and offer decisions for satisfaction of the ever increasing demands for analyses, handling and visualization of geo-spatial data in the area of science, economy, management, ecology, early warning and crises situations in smart ways coming in modern times at a national, regional and global scale.

The main topics of the conference and the Proceedings are:

- 3D Cartographic Modelling
- Cartographic Concepts in Big Data Environment
- Cartographic Visualization
- Cartography and GIS in Education
- Geoinformation for Smart Cities
- Geospatial Analysis and Data Mining
- Geospatial Information Semantics
- Geospatial Information Ontology
- GIS for Geology, Natural Sciences and Ecosystems
- GIS Technologies and Related Disciplines
- GNSS Technologies in Cartography
- Map Design and Production
- Map Projections and Geodetic Coordinate Systems
- Remote Sensing Technologies for Cartographic Purposes
- UAV Applications and New Trends
- Volunteered Geographic Information
- Web Cartography and Digital Atlases
- Seminar on Disaster Risk Reduction – Solutions and Innovations

In these years, marked by pandemic, social and natural crisis, these topics allow us to outline the hunger of our users for cartography achievements. They also show the need of businessmen, government representatives and scientists for real time cartographic representations and better SDI, GPS and GIS solutions. To deliver them, we need support and cooperation of domain specialists in different branches of the Earth sciences.

During the conference, five ICA commissions will have their annual meetings:

- Commission on Cartography in Early Warning and Crisis Management
- Commission on Cartography and Children
- Commission on Geospatial Semantics
- Commission on Map Projections
- Commission on Maps and the Internet

A two-day Seminar on Disaster Risk Reduction – Solutions and Innovations is organized by Prof. Dr. Milan Konecny, vice-chair of the Commission on Cartography on Early Warning and Crisis Management and ICA President (former) and with co-organizer Faculty of Science, Masaryk University, Brno, Czech Republic.

Special ISDE Plenary Session is organized and supported by International Society for Digital Earth.

The conference is supported by different ministries and government institutions that expect significant results to be achieved and many new projects to be started during the event. As NATO member since 2004, EU member since 2007, Bulgaria welcomes all ideas for collaboration in the field of Earth sciences. An example for such cooperation is the above-mentioned Seminar that has acquired EU dimension built around the Bulgarian and Czech combined efforts. Among the members of the Local Organizing Committee, numerous universities that specialize in the field of Cartography and GIS can be distinguished. The organizers are proud to announce that ESRI as a leader company in geo-informatics and cartography domains participate as a platinum sponsor of the event.

8ICCGIS media partners are GeoConnection, Coordinates, Remote Sensing Journal, and International Journal of Geo-Information.

World-famous scientists are invited to present keynote speeches:



Tim Trainor – President of International Cartographic Association, USA

*Beyond the SDI, the new UN Integrated Geospatial Information Framework and the Role of Cartography*



Dr. Alessandro Annoni – President of International Society for Digital Earth, Italy



Prof. Dr. Dr. h.c. Georg Gartner – Technical University Vienna, Former President of ICA, Austria

*Location-based Services: Evolution and Development*

The main international organizer of ICCGIS is the International Cartographic Association (ICA) with the exclusive supports of the President of ICA Mr. Tim Trainor, Vice-Presidents and many chairs of ICA commissions. This cooperation arouses interest among 365 authors from 30 countries.

We would like to wish all colleagues successful work, inspiring ideas for future projects about present issues and many new opportunities for improvement and collaboration in the near future.

**Prof. Dr. Temenoujka Bandrova and Dr. Silvia Marinova**