



# CONGRESS PROGRAMME AND ABSTRACTS









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# CONGRESS PROGRAMME AND ABSTRACTS



#### STEERING COMMITTEE

József Benedek, Péter Csorba, Gyula Gábris, Róbert Győri, Erzsébet Horváth, Dávid Karátson, Ádám Kertész, Éva Kiss, Károly Kocsis, Zoltán Kovács, Gábor Kozma, Dénes Lóczy, Gábor Mezősi, Gábor Michalkó, Norbert Pap, Zoltán Szalai, Judit Timár, András Trócsányi, Márton Veress, László Zentai

#### **CONGRESS SECRETARIAT**

Ágnes Erőss, Zsolt Heiling, József Kovács, László Mari, Andrea Mohai, András Sik, Krisztián Zimay

EVENT MANAGEMENT: Heiling Média Ltd.



#### ASSOCIATION OF GEOGRAPHICAL SOCIETIES IN EUROPE

Website: www.eugeo.eu E-mail: info@eugeo.eu

President: Henk Ottens

EC Members: Zoltán Kovács, Christian Vandermotten

Secretary-General: Massimiliano Tabusi



#### **HUNGARIAN GEOGRAPHICAL SOCIETY**

Address: 1112 Budapest, Budaörsi út 43-45.

Website: www.foldrajzitarsasag.hu E-mail: info@foldrajzitarsasag.hu

President: Gyula Gábris

Vice President: Zoltán Kovács, Gábor Michalkó

Secretary-General: László Mari Secretary: Ágnes Erőss Director: Zsolt Heiling

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with respect to new industries, economic trends, and emerging space economies. These changes can and do occur at a variety of geographic scales from neighborhood to international and the geography of their impacts can be equally wide-ranging. A special session can be dedicated to the changes in postsocialist economies and economic spaces.

### SLOT1 RELOCATION OF ECONOMIC ACTIVITY IN CENTRAL AND EASTERN EUROPE

Chair: Neil Reid, University of Toledo, United States

#### Schedule: Monday, 31 August, 13:00-14:45

Magdalena Dej, Maciej Huculak, Wojciech Jarczewski\*: Relocation of economic activity within metropolitan areas in Poland. Scale and key drivers

Éva Kiss\*: Relocation in the Hungarian industry

Norbert Petrovici\*, Titus Man Cristian, Ciprian Moldovan, Rusu Raularian: Relocation of economic activity in Cluj County: The Making of a Service City Hinterlands

Gergely Jozsef Torok\*: Traditional industrial spaces, new economic trends – the evolving specialization of the Transylvanian regions

#### SLOT2 LAND, INNOVATION, AND EMERGING ECONOMIC SPACES

Chair: Piotr Pachura, Częstochowa University of Technology, Poland

#### Schedule: Monday, 31 August, 15:15-17:00

Marie-Caroline Vandermeer\*, Jean-Marie Halleux: Impact of Economic Land Prices on Business Productivity and Regional Economic Development in Wallonia

Irma Booyens\*, Christian M. Rogerson: Creative tourism in Cape Town: an innovation perspective

Yvonne Franz\*, Michael Friesenecker: New social spheres in economic spaces

Neil Reid\*, Piotr Pachura: Emerging Trends in the European Beer Industry

#### P14 ENVIRONMENTAL GEOGRAPHY

Organizers: André Evette, Irstea, France; Zoltán Szalai, Eötvös Loránd University / RCAES HAS, Hungary

Location: Room J

**Session description:** Environmental geography is the type of geography that is specialized in addressing the relationship between human beings and the environment, in particular, the natural resources. This discipline has several specialty groups that bridge the human/physical divide in relevant ways. The most known branches are Energy and Environment, Hazards, Landscape Sensitivity and Human Dimensions of Global Change specialty groups. This session is dedicated to the interactions of physical environment and human activities. Participation of young scientists and PhD students is encouraged.

#### SLOT1

Chair: Zoltán Szalai, Eötvös Loránd University / RCAES HAS, Hungary

#### Schedule: Monday, 31 August, 13:00-14:45

Drago Perko, Mauro Hrvatin, Rok Ciglič\*: Landscape diversity and hotspots of Slovenia

Filip Gulan\*: Spatial quality as common denominator of novel integrated concepts for renewable energy development Adam Harmat\*, Gábor Csüllög, Gergely Horváth, Dániel Meleg, Béla Munkácsy, Mária Szabó, László Tamás: Energy use in the Bükk LEADER Region

Borbála Hortobágyi\*, Andreas Burkart, Dov Corenblit, Jean-Luc Peiry, Johannes Steiger, Franck Vautier: 3D diachronic survey of riparian vegetation dynamics by photogrammetric methods: application of UAV and small airplane photographs Márton Kiss\*, Ilona Bárány-Kevei, Szilárd Czóbel, Miklós Kiss: Land use optimization with genetic algorithm, using the method-

ology of evaluating ecosystem services

#### SLOT2

Chair: Zoltán Szalai, Eötvös Loránd University / RCAES HAS, Hungary

#### Schedule: Monday, 31 August, 15:15–17:00

János Mika\*, Zoltán Murányi, Csaba Patkós, Zoltán Utasi: Observed air pollution specifics of the valley-based towns in Hungary László Miklós\*: Geosystem-landscape-environment: convergences or divergences?

Luca Simone Rizzo\*, Raffaela Gabriella Rizzo, Filippo Smerghetto: Land-use pressures on rural-urban territories, highly suited for wine production. Mapping landscape services and trajectories of change in Northern Italy

Zalán Tobak\*, József Szatmári: Environmental monitoring supported by aerial and field survey - A case study on the wildfire near Bugac Boudewijn van Leeuwen\*: Towards a drought early warning system based on a combination of satellite and in situ soil moisture measurements

#### SLOT3

Chair: Zoltán Szalai, Eötvös Loránd University / RCAES HAS, Hungary

#### Schedule: Monday, 31 August, 17:15-19:00

Aleksandra Gajic\*, Branko Protic: Landscape evaluation for tourism purposes - case study of National Park "Đerdap", Serbia Gergely Horváth\*, Gábor Csüllög, Béla Munkácsy, Mária Szabó, László Tamás: Investigation of landscape load caused by mining activities on a Hungarian industrial region

Péter Csorba\*, Teodóra Bata, Gábor Mezősi: Mathematical method for measuring the similarities of Hungarian microregions

#### P16 GEOGRAPHICAL EDUCATION

Organizers: *Péter Bagoly-Simó*, Humboldt-Universität zu Berlin, Germany; *Gergely Horváth*, Department of Environmental and Landscape GeographyInstitute of Geography and GeosciencesEötvös Loránd University, Hungary; *Mariann Makádi*, Hungary

Location: Room K

**Session description:** The expected presentations will encompass the theoretical and practical questions of the geographical education of different levels, with special respect to the modern methods.

#### **SLOT1 TEXTBOOKS AND CURRICULA**

Chair: *Péter Bagoly-Simó*, Humboldt-Universität zu Berlin, Germany Discussant: *Gergely Horváth*, Department of Environmental and Landscape GeographyInstitute of Geography and GeosciencesEötvös Loránd University, Hungary

#### Schedule: Wednesday, 2 September, 08:30-10:15

Anett Kádár\*, Andrea Farsang: Comparing the geographical misconceptions of high school students and university undergraduates Teresa Sadoń-Osowiecka\*: Possibilities of Learning Geography without Handbooks

Yvonne Behnke\*: Visual literacy and geography textbooks - Eye-tracking study

Mariann Makádi, István Arday, Gergely Horváth\*: Renewal of the methodology of the geographical education by using new generation of textbooks

Zoltán Ginelli (Gyimesi)\*: Globality and Eurocentric narratives in Hungarian higher education Péter Bagoly-Simó\*: 25 Years Later: Geography Education in Post-Socialist Europe

#### SLOT2 GEOGRAPHICAL KNOWLEDGE AND SKILLS

Chair: *Péter Bagoly-Simó*, Humboldt-Universität zu Berlin, Germany Discussant: *Gergely Horváth*, Department of Environmental and Landscape GeographyInstitute of Geography and GeosciencesEötvös Loránd University, Hungary

#### Schedule: Wednesday, 2 September, 10:45-12:30

Erika Homoki, László Sütő\*: Geographical knowledge of countries in the Carpathian Basin

Gergely Horváth\*, Judit Visi: Environmental attitude, environmental education and geographical education

Mariann Makádi, Gergely Horváth\*: See, not only look at! Observations and investigations in geographical education

Bertalan Péter Farkas\*, Ildikó Éva Kovács, Aranka Mészáros, Gyula Nemeskéri: Financial literacy among 15-17 years old secondary school students – the relevance of the economical education

David Örbring\*: Abilities in geography in compulsory school in Sweden – an international comparative perspective Markus Tapani Hilander\*: Taking a step outside the photo and frame: Analyzing drawings depicting New York City in the context of geography education

#### **SLOT3 HIGHER EDUCATION**

Chair: *Gergely Horváth*, Department of Environmental and Landscape GeographyInstitute of Geography and Geosciences Eötvös Loránd University, Hungary Discussant: *Péter Bagoly-Simó*, Humboldt-Universität zu Berlin, Germany

#### Schedule: Wednesday, 2 September, 15:00-16:45

Michael Solem\*, Richard Boehm: A research coordination network for geography education

Giacomo Pettenati\*, Cristiano Giorda: From geographical education to territorial education. Theories and practices from the laboratories of geography for students of Educational Sciences of the University of Turin

Marco Bertagni\*: Bertagni Geography: a new way of thinking, teaching and applying geography. Paradigmatic case studies of geography based, multi-perspective and multi-disciplinary approaches

Bertalan Péter Farkas\*, Attila László Főző: An international community for science education in Europe: Scientix

#### TOWARDS A DROUGHT EARLY WARNING SYSTEM BASED ON A COMBINATION OF SATELLITE AND IN SITU SOIL MOISTURE MEASUREMENTS

Author: Boudewijn van Leeuwen\*, University of Szeged, Department of Physical Geography and Geoinformatics, Hungary

Keywords: drought, early warning, soil moisture monitoring

Abstract: Climate models predict a combined trend of higher average temperatures and less summer precipitation in the Carpathian Basin. This results in extra vulnerability of the region to droughts. Decreasing soil moisture is a crucial indicator for drought and therefore it is important to develop an operational system that can continuously monitor soil moisture over larger areas.

Currently a framework is being developed that uses a combination of in situ measurements of soil moisture and satellite based soil moisture measurements. The satellite derived daily measurements are calculated using the so-called LST/VI triangle method which is based on land surface temperature and vegetation index data, and provide only information on the soil moisture distribution within the region. This information is relative, which means that soil moisture values at the same location but at consecutive days cannot be compared to each other. The in situ measurements are accurate point measurements taken at a very high temporal interval, but only at a distinct number of locations. Using these point measurements to calibrate the satellite measurements results in spatially continuous daily comparable soil moisture measurements over a large area. These measurements are used to create a database which shows the trend of the development of soil moisture in the study region. Combined with meteorological (e.g. rainfall, potential evapotranspiration) and other data (climate and soil type), this information is essential to predict agricultural drought in the near future.

SLOT3

Chair: Zoltán Szalai

Schedule: Monday, 31 August, 17:15-19:00

#### LANDSCAPE EVALUATION FOR TOURISM PURPOSES – CASE STUDY OF NATIONAL PARK "ĐERDAP", SERBIA

Authors: Aleksandra Gajic\*; Branko Protic, Faculty of Geography, University of Belgrade, Serbia

Keywords: "Đerdap" National Park, evaluation, GIS technology, landscape, recreation

Abstract: National park "Derdap" is settled in the northeastern part of the Republic of Serbia, along the international border with Romania. By its surface it is the biggest National park in Serbia. Main geomorphological determinant of the area is Đerdap gorge with length of 100 km. The evaluation of the territory of the National park in this paper, was carried out using the method of diversity (V-Wert method). The method is based on the quantitative determination of the natural elements of the landscape where the forested area, water surface, relief, land use and climate factors are analyzed.

The aim of this paper is to determine the suitability of the National Park "Đerdap" for the recreation purposes. Application of GIS technology is based on the available data on relief, land use and climate factors.

Research framework that is set up by this model, with certain modifications illustrate the advantages of using GIS tools in the evaluation of the landscape. Processing and aggregation of a large number of spatial data can be used in the evaluation and comparison of different areas. Results of this paper may contribute to a better differentiation of the areas suitable for recreation and future tourism development in this area and could be important for future application of this method in different areas in Serbia.

#### INVESTIGATION OF LANDSCAPE LOAD CAUSED BY MINING ACTIVITIES ON A HUNGARIAN INDUSTRIAL REGION

Authors: Gergely Horváth\*, Department of Environmental and Landscape Geography, Institute of Geography and Geosciences, Eötvös Loránd Univesity, Hungary; Gábor Csüllög; Béla Munkácsy; Mária Szabó; László Tamás

Keywords: landscape load, mining, quantitative assessment, landscape conflicts

Abstract: The main aim of the investigation is to determine the landscape load index of the single landscapes based on the example of a selected sample area. In the course of the determination of the indices the type of the raw material and extraction, the recent or past activity of the mining claims and their size provided the base of the evaluation; in addition, also geoinformatical methods contributed to the assessment. The sample area once was a significant mining region; among several raw materials especially the importance of its brown coal and basalt mining was overriding. The landscape-forming impact of the mines, together with the former – by now mostly abandoned –industrial plants settled on these raw materials up to now determines the image and character of the landscape both in direct and indirect way. By using the elaborated load indices it is possible to summarize and rank the impacts and consequences, and, on the other hand, the indices promote to recognize what kind of landscape conflicts exist caused by mining land-use, what is the level of these conflicts and what are their after-effects in the investigated landscape. In addition, the determination of these indices contributes to establishing a qualitative database, as well, which promotes the investigation of the impacts of the mining activity from the point of view of the landscapes. The results of the research are to be used in practice, too, because revealing of the landscape conflicts by indices can promote to the reclamation of the landscapes and can contribute for making plans for the optimum usage of the landscape for the self-governments and for other officials and local authorities.