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**CONGRESS
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**CONGRESS
PROGRAMME
AND ABSTRACTS**



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HUNGARIAN
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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 Török**: 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 Hrvatín, Rok Ciglič**: Landscape diversity and hotspots of Slovenia

*Filip Gulán**: 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 Bárányi-Kevei, Szilárd Czóbel, Miklós Kiss*: Land use optimization with genetic algorithm, using the methodology 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, Raffaella 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 “Derdap”, 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 Geography Institute of Geography and Geosciences Eötvös 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 Geography Institute of Geography and Geosciences Eötvös 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 Geography Institute of Geography and Geosciences Eötvös 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 Geography Institute 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

In this paper, the impact of the aerial photo scale and the measurement scale in the GIS software on the magnitude of the digitization (identification) error of a river channel bank was analysed. Repeat digitization of the same channel bank carried out in aerial photographs differing in the scale (1:7,500–1:30,000) with different measurement scales (1:1,000–1:10,000) used on each of them, showed that increasing the scale used for digitizing in the GIS software decreased the magnitude of digitization errors much more than similar increasing the aerial photo scale. The results of the analysis show that the selection of an appropriate digitizing scale in GIS software is an important factor affecting measurement error. The discussion of the results indicates that in some cases the calculation of the digitization error based on the aerial photo scale or the arbitrarily assumed error value may be higher than the real error which has occurred during digitization. The results obtained showed that the product of 0.25 mm and the scale used for digitizing in GIS can be a good approximation of the digitizing error which occurred in the aerial photos taken at the scale range of 1:7,500–1:30,000.

SPATIO-TEMPORAL VARIABILITY OF PIPES DEVELOPMENT IN A MOUNTAINOUS AREA UNDER A TEMPERATE CLIMATE (POLISH BIESZCZADY MTS., EASTERN CARPATHIANS)

Author: *Anita Bernatek**, Institute of Geography and Spatial Management, Jagiellonian University, Poland

Keywords: dynamics, geomorphometry, gully, piping, Poland

Abstract: Piping refers to the mechanical removal of subsurface soil by concentrated water flow, causing the formation of underground channels – pipes. The development of pipes may result in the collapse of soil surface and formation of blind (discontinuous) gullies. The significance of piping in gully erosion has been recognized quite well. However, research about dynamics of piping forms development is still limited. Therefore, this paper aimed at better understanding of spatio-temporal variability of pipes development by measuring pipes over 2 years using electronic total station (Topcon Hiper II). The measurements were performed twice a year (after spring thaw and after summer rainfalls) in 2013-2014. The longitudinal profiles of piping systems were repeatedly done. The survey was carried out in the selected piping systems in the Polish Bieszczady Mts. (Eastern Carpathians), where pipes develop in Cambisols. The research allowed to indicate the direction of pipes development and point out the most active element of piping systems. The development of selected piping systems will be continued up to the total collapse of pipes. The material is supplied to the piping systems primarily in a spring thaw, whereas is discharged during summer rainfalls.

SPATIO-TEMPORAL PATTERN OF BED SEDIMENTS STORAGE UPSTREAM FROM A LARGE DAM RESERVOIR. THE CASE OF THE GRAVEL-BED DUNAJEC RIVER AND THE CZORSZTYN RESERVOIR, POLISH CARPATHIAN

Author: *Maciej Liro**, Jagiellonian University in Krakow, Poland

In this study the impact of the base-level rising upstream from the Czorsztyń Reservoir (CR) constructed in 1997 on the gravel-bed Dunajec River (Polish Carpathian) on the pattern of bed sediments storage was reconstructed from the aerial photos and LiDAR data. The bed sediments area in CR backwater showed the above three-fold higher increasing than observed in the control section (not affected by backwater reservoir), in the first period after dam construction with large flood. The spatial pattern of the in-channel sediment storage was not related to the distance from reservoir but is explained by bank erosion and valley floor configuration. This study showed that reservoir-induced base-level rising promoted the bed sediments storage but spatio-temporal trajectory of this phenomena is related to the local valley characteristics and floods.

REGIONAL DIFFERENTIATION OF RURAL AREAS FOR TOURISM PURPOSES – THE CASE OF EASTERN SERBIA

Authors: *Jelena Ilija Basarić**, *Olgica Bakić*, *Aleksandra Gajic*

Keywords: differentiation, rural areas, GIS technology, tourism, Eastern Serbia

Abstract: Rural areas in Serbia are characterized with high level of diversification in terms of natural, demographic, economic and environmental characteristics. Contemporary tendencies in the spatial development require new approach to determination of rural areas at regional and national level. Natural predispositions of Eastern Serbia observed from physical and geographical standpoint indicate that this area have great tourism potential which is not sufficiently utilized. This paper will give an overview of existing approaches to identification and planning treatment of rural areas in Eastern Serbia. The application of GIS technology based on available data will be presented along with possible differentiation of rural areas in Eastern Serbia. Results may contribute to the improvement the existing methodology of determination of rural areas for tourism purposes. In that context are proposed some guidelines regarding future development of tourism in this part of Serbia.

SLOT2

Chair: *Anita Bernatek* Discussant: *Florina Ardelean*

Schedule: Tuesday, 1 September, 10:45–12:30

AN AUTOMATED APPROACH TO DETERMINE OPTIMAL PARAMETERS FOR GEOMORPHONS MAPPING

Authors: *Edina Józsa**, University of Pécs, Faculty of Sciences, Doctoral School of Earth Sciences, Hungary; *Adriana Sărășan*, West University of Timisoara, Romania