4th Congress of Croatian and Hungarian Geomathematicians and
15th Congress of Hungarian Geomathematicians

Opatija, May 23-25, 2012

The 4th Congress of Croatian–Hungarian Geomathematicians, and at the same time the 15th Congress of Hungarian Geomathematicians, was held from May 23 to 25, 2012. After the traditional meetings in small Hungarian town Morahalom, for the first time, it was held in Croatia, in the pearl of the Adriatic sea, beautiful Opatija. It gathered 42 participants from five countries out of which there were 24 from Hungary and 15 from Croatia. Its organisers were geomathematical sections of the Croatian Geological Society (CGS) (*http://www.geologija.hr/geomat.php*) and of the Hungarian Geological Society (HUNIG) (*https://www.smartportal.hu*) whose main aim was to help the geological usage and adaptation of mathematics.

The congress was addressed to Geomathematics as geoscience (an excellent review of the notions geomathematics and geoscience could be found in the article written by Lapaine and Malvić: *Geomathematics Between Mathematics and Geosciences*, Annual 2009 of the Croatian Academy of Engineering 12; 51-67).

The chairman of the Organizing Committee was Prof. Dr. Tomislav Malvić (INA & Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb) and the chairman of the Scientific Committee was Prof. Dr. János Geiger (Department of Geology and Paleontology, University of Szeged).

At the opening ceremony, except by the chairman of the Organizing and Scientific Committee, welcome speeches were also given by Prof. Dr. Jasenka Sremac (chairlady of the CGS) and Željko Krušlin, grad. eng. (secretary of the HUNIG), who used the opportunity to call all participants to the 2nd Central and Eastern European international oil and gas conference and exhibition, which will be held this year

in Šibenik.

The congress invited participants for oral and poster presentations and publications in the conference proceedings. The key topics of this congress were:

- Applied geomathematics (geosciences, environmental science)
- Geomathematics in reservoir characterization and modelling
- Hydrological and hydrogeological modelling
- Theoretical geomathematics (geostatistics, neural networks, statistics)
- Geoinformatics (including GIS).

The Croatian Geological Society published the *Conference book "Geomathematics as geosicence"* (ISBN 978-953-95130-6-9) with CD. Editors are Tomislav Malvić, János Geiger and Marko Cvetković. This 242 page book includes reviewed papers and appendix with submission that remained in the form of abstracts. It can be freely retrieved at the address *http://www.geologija.hr/geomat.php*. All participants received a paper copy of it, the books: Geomatematički rječnik, Neuronski alati u geologiji ležišta ugljikovodika, Primjena geostatistike u analizi geoloških podataka and Naftaplin journal no. 4 (2010).

As the opening activity, Prof. Dr. János Geiger held a short lecture titled *Analysis and Visualization of Local and Regional Uncertainties in Reservoir Characterization*. It offered a guided tour through the main steps of practical solutions and the main theoretical points of interpretations of the three types of geological uncertainties which appear on the macro and mega reservoir scales.

The program consisted of 7 posters and 24 oral presentations divided in 7 sessions of which one was traditionally devoted to student content. All of them were held at the congress hall of the well-known and pleasant hotel Opatija.

Except the scientific program, a gala dinner was also organized. Cosy and pleasant atmosphere was consequence of long acquaintance and friendship between many of congress participants. Numerous discussion on various topics could be heard at the dinner.

Employees of the Faculty of Geodesy, University of Zagreb who participated in the congress with the paper were:

- Martina Horvat Triplat, Miljenko Lapaine: Bošković-Laplace's and Related Methods of Adjustment and
- Željka Tutek: Free and Open-Source Simulator of Porous Media.
- Prof. Dr. Miljenko Lapaine was the member of the Scientific Committee.

At the closing ceremony, the results of the participants voting for the best contribution were announced. The first place won Kristina Novak Zelenika (INA) with *Cut-offs definition in Indicator Kriging mapping, case study Lower Pontian reservoir in the Sava Depression* and in students selection the best was Bálint Csökmei (Department of Physical Geography an Geoinformatics, University of Szeged) with *Detection of invasive plants on the flood plain of river Tisza, using hyperspectral airborne imagery*.

The 5th Congress of Croatian–Hungarian Geomathematicians, and the 16th Congress of Hungarian Geomathematicians will be organised next year in Hungary.

We can conclude that this meeting was very successful, so we hope that the next congress will also be so well-organized. Also, we want to congratulate the organizers and wish them a lot of success in the future work.

Kristina Novak Zelenika, Martina Triplat-Horvat, Željka Tutek ■

4. kongres hrvatsko-mađarskih geomatematičara i 15. kongres mađarskih geomatematičara

Opatija, 23-25. svibnja 2012.

Četvrti kongres hrvatsko-mađarskih geomatematičara i istodobno 15. kongres mađarskih geomatematičara, održan je od 23. do 25. svibnja 2012. Nakon već tradicionalnog održavanja skupa u malenom mađarskom gradiću Morahalomu, po prvi put je mjesto njegovog održavanja bilo u Hrvatskoj, u našem biseru Jadrana, prelijepoj Opatiji. Okupio je 42 sudionika iz pet zemalja od čega 24 iz Mađarske i 15 iz Hrvatske. Njegovi organizatori su bile geomatičke sekcije Hrvatskog geološkog društva (*http://www.geologija.hr/geomat.php*) i Mađarskog geoošog društva (*https://www.smartportal.hu*) kojima je glavni cilj pomoći u korištenju i primjeni matematičkih metoda u geologiji.

Kongres je bio naslovljen kao *Geomatematika kao geoznanost* (izvrstan pregled pojmova geomatematika i geoznanost može se naći u članku koji su napisali Lapaine i Malvić: *Geomathematics Between Mathematics and Geosciences*, Annual 2009 of the Croatian Academy of Engineering 12; 51-67).

Predsjednik Organizacijskog odbora bio je doc. dr. sc. Tomislav Malvić (INA & Rudarsko-geološko-naftni fakultet Sveučilišta u Zagrebu), a predsjednik Znanstvenog odbora prof. dr. sc János Geiger (Department of Geology and Paleontology, University of Szeged).

Na svečanom otvaranju pozdravne govore održali su, osim predsjednika Organizacijskog i Znanstvenog odbora, prof. dr. sc. Jasenka Sremac (predsjednica HGD-a) te Željko Krušlin, dipl. ing. (tajnik HUNIG-a), koji je ujedno tom prilikom pozvao i sve sudionike na 2. međunarodnu konferenciju i izložbu o naftno-plinskom gospodarstvu u Središnjoj i Istočnoj Europi, koja će se ove godine održati u Šibeniku.

Kongres je pozvao na sudjelovanje s usmenim i posterskim prezentacijama te objavljivanjem u zborniku skupa. Glavne teme ovog kongresa bile su:

- Primijenjena geomatematika (geoznanosti, znanost o okolišu)
- Geomatematika u karakterizaciji i modeliranju ležišta
- Hidrološko modeliranje
- Teorijska geomatematika (geostatistika, neuralne mreže, statistika)
- Geoinformatika (uključujući GIS).

Hrvatsko geološko društvo izdalo je zbornik radova *Conference book "Geomathematics as geosicence"* (ISBN 978-953-95130-6-9) sa CD-om. Urednici su Tomislav Malvić, János Geiger i Marko Cvetković. Na 242 stranice knjiga sadrži recenzirane članke i dodatak s prilozima koji su ostali u obliku sažetaka. Može joj se slobodno pristupiti na adresi *http://www.geologija.hr/geomat.php*. Svi sudionici su dobili njezino tiskano izdanje, zatim knjige: Geomatematički rječnik, Neuronski alati u geologiji ležišta ugljikovodika, Primjena geostatistike u analizi geoloških podataka i časopis Naftaplin br.4 (2010).

Na početku kongresa prof. dr. János Geiger sa Sveučilišta u Szegedu održao je kratki tečaj *Analiza i vizualizacija lokalnih i regionalnih neodređenosti u karakterizaciji ležišta*. Dao je uvid u glavne korake praktičnih rješenja i ključne točke teorijskih interpretacija triju tipova geoloških neodređenosti koje se javljaju na makro i mega skalama ležišta.

Program se održavao u prostoru poznatog i ugodnog hotela Opatija. Sastojao se od 7 postera i 24 usmena izlaganja koji su bili podijeljeni u 7 sekcija od kojih je jedna tradicionalno bila posvećena studentskim radovima. Uz znanstveni program organizatori su priredili i svečanu večeru. Za ugodnu i domaću atmosferu zaslužno je sada već višegodišnje poznanstvo pa i prijateljstvo gotovo svih sudionika kongresa, a uz večeru su se mogli čuti brojni razgovori o najrazličitijim temama.

S izlaganjem su s Geodetskog fakulteta Sveučilišta u Zagrebu na kongresu sudjelovali:

- Martina Horvat Triplat, Miljenko Lapaine: Bošković-Laplace's and Related Methods of Adjustment i
- Željka Tutek: Free and Open-Source Simulator of Porous Media.
- Prof. dr. sc. Miljenko Lapaine bio je član Znanstvenog odbora.

Na završnoj svečanosti proglašeni su rezultati glasovanja sudionika za najbolji prilog. Prvo mjesto je osvojila Kristina Novak Zelenika (INA) s temom *Cut-offs definition in Indicator Kriging mapping, case study Lower Pontian reservoir in the Sava Depression*, a među studentima najbolji je bio Bálint Csendes (Department of Physical Geography an Geoinformatics, University of Szeged) s radom *Detection of invasive plants on the flood plain of river Tisza, using hyperspectral airborne imagery*.

Peti kongres hrvatsko-mađarskih geomatematičara i istodobno 16. kongres mađarskih geomatematičara, održat će se sljedeće godine u Mađarskoj.

Možemo zaključiti da je susret bio vrlo uspješan i nadamo se da će i sljedeći kongres biti tako dobro organiziran. Također želimo čestitati organizatorima i zaželjeti im puno uspjeha u budućem radu.

Kristina Novak Zelenika,
Martina Triplat-Horvat,
Željka Tutek ■