

Computational Engineering News
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**International Symposium on
Computational Geomechanics
(COMGEO II)**

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The second International Symposium on Computational Geomechanics (ComGeo II) was held at the Hotel Croatia, Cavtat (Dubrovnik), Croatia, 27 - 29 April 2011. ComGeo series is a sequel to the NUMOG (Numerical Models in Geomechanics) series which was held on ten occasions during 1982 – 2007 at different locations in Europe and Canada. ComGeo I was held in Juan-les-Pains, Nice, France, around the same time two years ago.

Before summarizing its technical content, I would like to consider the two main, sometime contrasting, but equally important aspects of any conference. We could refer to them as the “inside” and the “outside” aspects of the conference. By “inside”, I mean the technical sections; the challenging discussions with colleagues coming from distant countries, and who you would have hardly met if the conference were not organized. Even the coffee breaks, the lunches, strolling from

the conference site to the hotel, chatting with young PhD candidates from a university on the other side of the globe, even these apparently minor aspects, belong to the “inside” of the conference.

Then, we have the conference “outside”. This aspect concerns the location where the conference is held, which sometimes is fascinating, sometimes unbearably dull; the people you meet when waiting for the

city bus that will bring you to the conference centre; the unexpected taste of the food you find in exceedingly small family restaurants; the intriguing sound of the music you could hear; the demanding effort necessary to communicate with people who speak a language even the name of which is difficult for you to pronounce.

Having defined the two “sides”, let’s consider them with reference to ComGeo II symposium. Everybody has experience of conferences organized in large cities. They are quite convenient, for sure. Transportation is easy, no problem in reaching the city and conference venue by airplane or train. In many cases, however, you face the problem of what to do after the sessions. Leaving the conference, you see the local citizens rushing to their homes. In a few minutes the streets become almost empty and you find yourself, with some conference mates, wandering around and looking for a not too expansive restaurant, which is often not easy to find. We could say that the “inside” aspects of these conferences prevail, whilst the “outside” ones are sometimes weak. On the other hand, we find the conferences organized in fascinating resorts, far away from the madding crowds of big cities of the western world. Frequently they require a relatively complex journey, involving long sequence of flights. The transport from the airport to your accommodation might be exciting, if you can understand what the taxi driver is talking about. No doubt that these conferences have quite pleasant “outside” aspects.

I should say, honestly, that both sides of ComGeo II conference had a surprisingly

high level to me. Cavtat is a lovely small port on the Adriatic Sea, in the southern corner of Croatia. The local international airport is conveniently connected to major European hubs and is located a few kilometres away from Cavtat and Dubrovnik, so there was no problem related to the local transportation. The innumerable small islands facing the coast, the old monuments of the cities, the flavour of the old Croatian culture, are fascinating. I must confess that I particularly appreciate good wine and food, especially seafood. With this respect, the choice of small nice restaurants of Cavtat and surrounding villages was unlimited.

The conference was held in the quite comfortable and modern hotel Croatia, facing the sea and surrounded by a beautiful pinewood. In spite of its level, the cost of the accommodation was quite reasonable. In short, the choice of the organizers concerning the conference “outside” was excellent indeed. Also the contribution of Mrs. Pande at the registration desk, who took care of the many small problems of individual participant with her warm attitude, should not be overlooked.

The “inside”, or technical aspects, of the symposium were even superior. Ninety papers were selected for presentation based on more than 160 abstracts of papers submitted for consideration. Eighty seven papers were presented in two parallel sessions over three days. There was discussion on each and every paper as participants asked questions or expressed their opinion or drew attention to similar works reported in other areas. It was fascinating to listen to intense discussions amongst colleagues during the coffee and lunch breaks. It was a real pleasure to meet again many long time friends including Professors Gens, Alonso, Pande, Pietruszczak, Carter and many others.

The presentation included a good mix of papers on theoretical aspects of computational geomechanics, constitutive models, thermo-hydro-mechanical coupled problems and practical applications in the fields of slopes, foundations, flow through porous media, petroleum and mining engineering. In addition, nine feature lectures were delivered that presented a state-of-the-art of a wide range of advanced topics. These included:

- Effective permeability of heterogeneous porous media (A.P.S. Selvadurai, Canada)
- Static fatigue produces time effects in granular materials (P.V. Lade, USA)
- Geotechnical analysis of energy piles (L. Laloui, Switzerland)
- Influence of heterogeneity on the reliability and failure of a long 3D slope (M. Hicks, The Netherlands)
- Failure in geomaterials, a new paradigm (F. Darve, France)
- Thermal variability of the internal friction around a cylindrical heat source (T. Hueckel, USA)
- Multiscale approach to modeling of macroscopic behaviour of geomaterials (D. Lydzba, Poland)
- Static fatigue in sand and delayed effects in cone penetration resistance after dynamic compaction (R. Michalowski, USA)
- Analysis of underground excavations in clay rocks (A. Gens, Spain)

An additional feature of the Symposium was a review lecture “Some observations on computational geomechanics research 1980-2010” presented by Gyan Pande and Stan Pietruszczak. The lecture described the advancements that took place in this field during the past three decades. It prompted a unique discussion, which followed it, among researchers who made significant contributions to this area. I believe that this discussion was particularly relevant for young researchers. In fact, to know the history that brought us to the point in which we are now is essential for guiding our steps onward to the future.



At the Reception on 27 April 2011

Short course on Constitutive Models for Geomaterials in Rhodes, Greece

IC²E is pleased to announce the first intensive short course on ‘Constitutive Models for Geomaterials’, 8 – 10 December 2011 at the City Centre Hotel, Rhodes, Greece. The course will be delivered by

Professor Poul Lade, Catholic University of Washington, USA

Professor Emeritus Gyan Pande, Swansea University, UK

&

Professor Stan Pietruszczak, McMaster University, Canada

The course is intended to impart ‘vendor or software neutral’ knowledge of fundamental issues rather than how to get results from a computer program. It will be of interest to practising engineers wishing to improve their understanding of plethora of models, young academics and postgraduate students involved in research on any aspect of geomechanics. The entire course will be recorded, edited and will be available online to virtual students worldwide in due course. For full details please visit

<http://www.ic2e.org/seminars.html>

Chapters from ‘Fundamentals of Plasticity in Geomechanics’ now on website

The above book written by Stan Pietruszczak, McMaster University, Canada, published recently by CRC press is now available for downloading on the IC²E website at <http://www.ic2e.org>. If you need to read only a few selected chapters, then downloading will be a cheaper option than buying a hard copy.

Down the memory lane

Did you ever attend a NUMOG?

This series of International Symposia named ‘Numerical Models in Geomechanics’ were held at Zurich, Switzerland (1982); Ghent, Belgium (1986); Niagara Falls, Canada (1989); Swansea, UK (1992); Davos, Switzerland (1995); Montreal, Canada (1997); Graz, Austria (1999); Rome, Italy (2002), Ottawa, Canada (2004) and finally in Rhodes, Greece, in 2007. The symposia were well known for high quality of technical content, informal atmosphere and enjoyable social programmes. If you attended any of these Symposia and have pictures of friends and colleagues which you would like to share, please send them to me (geeta@ic2e.org). These will be linked to a special site on the Facebook.

And if you attended ComGeo I, (in Nice, France, 2009) and got the flavour of NUMOGs, you too are welcome to send your pictures.

Hope to hear from you soon.

Regards

Geeta Pande

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