ISSMGE Bulletin: Volume 8, Issue 6

Hot News

The Portuguese Environmental Geotechnics Commission (CPGA)

Mission

The Comissão Portuguesa de Geotecnia Ambiental (*CPGA* - Portuguese Environmental Geotechnics Commission) was created in 2012 by the Sociedade Portuguesa de Geotecnia (*SPG* - Portuguese Geotechnical Society), to which it belongs, and intends to promote the development of the knowledge and the adoption of principles and practices that contribute for the environmental sustainability; for the dissemination of studies and works in national and international conferences, organized by the *CPGA* or by related entities; to organize conferences, visits and courses of national and international nature; to compile and make available national and international publications and relevant technical information; and to promote the collaboration with similar international committees and the Portuguese representation in international conferences.

The CPGA identified three main areas related to environmental geotechnics for the development of its activity: Waste Landfills; Soil Contamination; and Waste Recycling.

CPGA's operation and action scope is consigned in its statutes, approved in 2013 in the SPG General Assembly.

Activities

CPGA began by organizing two Round-Table meetings (at the Faculty of Engineering - University of Porto - *FEUP*, March 13rd 2013 and at the National Laboratory for Civil Engineering - *LNEC*, May 14th 2013), aiming to widen the discussion and to collect ideas from Portuguese experts with different academic backgrounds (bioengineering, chemistry, environment, geobioscience, geotechnics, hydrogeology) and professional experiences (design, industry, owners of work, public administration, public laboratories, universities). Thirty-one experts have participated in the meetings.



Figure 1. LNEC round-table meeting

The <u>memos</u> based on each of the Round-Table meetings, the main national challenges associated with environmental geotechnics and the need to address some of the emergent topics in the area, constituted the key factors during the selection of the themes for the following *CPGA* <u>Workshops</u>, coorganized by other Portuguese institutions during the 2014-2016 period:

- Contaminated Soils: Legislation and Methods of Diagnostic and Research National Laboratory for Civil Engineering (LNEC), Lisbon, October 2nd 2014 (see program)
- Nanotechnology Applied to Environmental Geotechnics
 University of Minho (UM), Braga, December 4th 2014 (international event, see program)

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- Operation of Landfills
 - University of Trás-os-Montes and Alto Douro (UTAD), Vila Real, April 2015
- Recycling of Mining Waste in Geotechnics
 - National Laboratory for Civil Engineering (LNEC), Lisbon, June 16th 2015
- Contaminated Soils: Technologies and Solutions of Remediation.
 - School of Engineering Polytechnic of Porto (ISEP), Oporto, October/November 2015
- Design and Methods of Design of Landfills.
 - Faculty of Engineering University of Porto (FEUP), Oporto, February/March 2016
- Environmental Risk Assessment of Waste for Application in Geotechnical Works Working Group, 2014-2016.

	CONTAMINATED SOILS: LEGISLATION AND METHODS OF DIAGNOSTIC AND RESEARCH LNEC, Lisbon, October 2nd 2014
	Program
08:30	Welcome
09:00	Opening Ceremony
09:30	SESSION I
	Moderator: Ricardo Amaral Pinto (EDM, Portugal)
	Portuguese legislation on contaminated soils
	Cristina Carrola (Portuguese Environmental Agency - APA, Portugal)
	International legislation on contaminated soils
	Celeste Jorge (National Laboratory for Civil Engineering - LNEC, Portugal)
	Background on Portuguese soils geochemistry - Case studies of local and regional natural
	anomalies
44.00	Sofia Barbosa (Mining Development Company - EDM, Porugal)
11:00	Coffee Break
11:30	Portugal's radiometric map Maria João Batista (National Laboratory of Geology and Energy - LNEG, Portugal)
	Methodology used to study potentially contaminated sites
	Catarina Sequeira (Consultant, Portugal)
12:30	Lunch
14:00	SESSION II
	Moderator: Ana Picado (LNEG, Portugal)
	Environmental sampling in depth
	Jorge Gonçalves (Geoplano, Portugal)
	Contamination of soils and waters by P-NAC - The case study of the former Portuguese Explosives
	Society (SPEL)
	Judite Fernandes (LNEG, Portugal)
	Research and diagnostics from the perspective of the environmental risk assessment and human
	health
45.00	Felipe Couto (RSK, UK)
15:30	Coffee Break
16:00	The legal framework regarding contaminated soils
	Rita Santinho Martins (GÓMEZ-ACEBO & POMBO Abogados S. L. P., Portugal)
	Bridging the gap between environmental responsibility risk and obligatory liability insurance contract
	Ana Marques (AIG, Portugal)
17:00	Round-Table Discussion Session
	Moderator: Carla Santos Silva (Journal of Indústria e Ambiente)
18:00	Closing Ceremony
10.00	closing determinity

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	NANOTECHNOLOGY APPLIED TO ENVIRONMENTAL GEOTECHNICS University of Minho, Braga, December 4 th 2014
	Program
09:00	Welcome Opening Ceremony
09:30	Nanomaterials for environmental geotechnical applications Senentxu Lanceros-Méndez (University of Minho, Portugal)
10:10	Environmental impacts of nanoparticales: from cells to ecosystems Fernanda Cássio (University of Minho, Portugal)
10:35	Coffee Break
11:00	Zero-valent iron nanoparticles: synthesis, characterization and applications Célia Ferreira (Polytechnic Institute of Coimbra, Portugal)
11:25	Application, quality assessment and behavior of zero-valent iron nanoparticles Jan Slunský (NANO IRON, Czech Republic)
12:05	Lab scale experiments with nanoparticles Miroslav Cernik (University of Liberec, Czech Republic)
12:45	Lunch
14:30	Applying multiwall carbon nanotubes as a cement-reducing additive for soil stabilization António Alberto (University of Coimbra, Portugal)
14:55	The reference state of use of nZVI for the contaminated site treatment: technological perspectives, expectations, and reality Petr Kvapil (AQUATEST, Czech Republic)
15:35	Soil and groundwater remediation with zero-valent iron nanoparticles: Barreiro pilot test Jorge Gonçalves (Geoplano, Portugal)
16:00	Coffee Break
16:20	Bioremediation of hexachlorocyclohexane (HCH) at a contaminated site Alette Langenhof (Wageningen University, Netherlands)
16:45	Nanomaterial modified membranes for environmental applications Pedro Martins (University of Minho, Portugal)
17:10	Nanotechnological strategies to restore biogeochemical cycles of carbon, nutrients and metals in nature Teresa Tavares (University of Minho, Portugal)
17:35	Discussion Session ·
18:00	Closing Ceremony

Until the end of the mandate, in 2016, the *CPGA* intends to conclude the publication "Waste Valorization in Geotechnical Works. Characterization and Measures for the Sector Development" (in Portuguese), initiated by the Technical Committee for Waste Valorization in Geotechnical Works.

Connection to Technical Committees of International Societies

The *CPGA* assumes, by *SPG* delegation; the connection with the *ISSMGE* Technical Committees "*TC215* - Environmental Geotechnics" (representative members: Doctor António José Roque and Professor Maria de Lurdes Lopes) and "*TC307* - Sustainability in Geotechnical Engineering" (representative members: Professor Nuno Cristelo and Doctor Sara Rios; corresponding member: Professor Castorina Vieira); the *IAEG* Technical Committees "Commission 20 - Risk Based Contaminated Land Management" (no representative member) and "Commission 27 - Environmental Aspects of Construction Materials" (representative member: Doctor Celeste Jorge); and the *ISRM* Technical Committee "Commission on Radioactive Waste Disposal" (no representative member).

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Dissemination and contacts

The *CPGA* website is maintained in bilingual form (PT/EN) to allow the consultation by foreigners, and in particular the members of the mentioned international technical committees connected to the *CPGA*. In the dissemination of <u>international events</u> and <u>foreign technical documentation</u>, the *CPGA* website privileges those produced by the international technical committees which it represents in Portugal. <u>WebSite</u>: www.spgeotecnia.pt/cpga/; Email: cpga.spg@lnec.pt.



Figure 2. CPGA website

Board of CPGA Commission

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