# 5<sup>th</sup> International Seminar on Underground Space Health & Safety in Underground Space

2nd BULLETIN

Co-organized by:











**LNEC Congress Center** October 18th, 2019

http://cpt-seminars.lnec.pt/index.html

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The Portuguese Commission on Tunneling and Underground Space (CPT) of the Portuguese Geotechnical Society (SPG) and the National Laboratory for Civil Engineering (LNEC) are organizing the 5th International Seminar on Underground Space with the lemma "Health and Safety in Underground Space". The Seminar will be held at the Congress Center of the National Laboratory for Civil Engineering in October 18th, 2019.

The lemma of the Seminar reflects the interests and concerns of the professional community of the built underground space about vital issues related with the human presence during construction and service.

The multi-disciplinary and transversal scope of the Seminar is evident on the multitude of professional domains: Engineering areas of Mechanics, Electricity and Electronics, Computation, Control and Safety, and, last but not least, Architecture and Psychology.

The adoption of emerging technologies on construction materials, methods and equipment in the planning and management of exploration and maintenance has been revolutionizing this field of activity.

CPT envisages renewing its high standard of organization built since the very beginning, more than 10 years ago. We hope to welcome numerous participants, both CPT affiliates and professionals of underground space engineering as well as students.

## **Organizing Committee**

J. Bilé Serra (LNEC/CPT) João Viegas (LNEC)
Raúl Pistone (COBA/CPT) Manuel Tender (CPT)
Jorge Saraiva (Dinâmica Aplicada) Luís Miranda (LNEC/CPT)

### Who should attend?

This seminar is aimed at a wide spectrum of participants interested in the problems of construction safety and operation of underground works: regulatory entities, clients, concessionaires, planners, designers, contractors, equipment suppliers, professors, researchers and students.

<b>⊕</b> 08:15	SECRETARIAT OPENING Proceedings delivery and onsite registration
08:15 09:00 09:20	OPENING SESSION Opening Ceremony SESSION 1
09:20	Historical evolution of Health and Safety issues in tunnels  Dr Donald Lamont (Hyperbaric & Tunnel Safety Ltd)
10:00	Enhancing H&S by application of digital engineering techniques. The case of the Northern Line Extension and Tideway Tunnel  Eng Joakim Schuwer (Ferrovial Agroman)
10:20	Virtual reality Tunnell Boring Machine. Thames Tideway Tunnel - Central Project  Eng Alex Vaughan and Eng Barry Major (Ferrovial Agroman)
10:40	Tunnels Emergency Planning – Methodology and Challenges  Eng Ferreira de Castro (Action Modulers, Consulting & Technology, Lda)
11:05	Coffee Break SESSION 2
11:25	Design provisions: mitigation measures and control procedures  Dr Ingo Riess (Riess Ingenieur-GmbH)
12:05	Active protection in fire fighting. Fire Fighting Pumping Systems (FFPS)  Eng Tomás Pinheiro (EFAFLU)
12:45	Refurbishment of the smoke control system and evacuation strategy in the Brussels North-South Railway tunnel  Eng François Lapy / Eng Bart de Pauw (TUC Rail)
13:10	Lunch
14:30	SESSION 3 Portuguese National Authority standpoint regarding the safety of operating tunnels  Dr Pedro Costa (IMT)
15:10	Tunnels in operation: design provisions for air quality control in tunnels in operation  Dr João Viegas (LNEC)
15:50	Road Tunnels: Experimental period, assessment of systems and equipment in operation. Operation team training  Eng Dirceu Santos (Action Modulers, Consulting & Technology, Lda)
16:15	Coffee Break
16:35	SESSION 4 Health & Safety in underground works. Technical guide by the GT3 of CPT  Dr Manuel Tender (CPT, Mota Engil)
17:15	Incidents and accidents. Risk Analaysis and ISO 31000 standard  Dr Jorge Saraiva (Dinamica Aplicada)
17:55	Human factors regarding fire safety in road tunnels  Dr Marc Tesson (CETU)
18:20	CLOSING SESSION Closure of the Seminar









# Registration fees

Until October 7 <sup>th</sup> 2019		
SPG/OE/OA members	€ 110,00	
Other professionals	€ 130,00	
Students	€ 40,00	

After October 7 <sup>th</sup> 2019		
SPG/OE/OA members	€ 125,00	
Other professionals	€ 145,00	
Students	€ 40,00	

## Registration by e-mail

E-mail to spg@Inec.pt with fiscal data for invoice and transfer receipt.

Web site: http://cpt-seminars.lnec.pt/index.html

# Payment

Payment through bank transfer to Caixa Geral de Depósitos - Alvalade IBAN PT50 0035 2167 0000 4717 0306 5 SWIFT/BIC: CGDIPTPL

#### Date and venue

October 18th, 2019

**LNEC Congress Center** 

Laboratório Nacional de Engenharia Civil (www.lnec.pt)

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#### Secretariat

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