

PALACONGRESSI OLTREMARE					PALAZZO MEDITERRANEO					PALAZZO SERRA DI CASSANO	
HRS	EUROPA	ISCHIA	ITALIA	MEDITERRANEO	HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT					
08.45-10.30	OPENING CEREMONY			OPENING CEREMONY							
10.30-11.00	Opening of the exhibition & coffee break AM	Opening of the exhibition & coffee break AM	Opening of the exhibition & coffee break AM	Opening of the exhibition & coffee break AM							
11.00-13.00	OPENING CEREMONY + KEY NOTE LECTURE			OPENING CEREMONY + KEY NOTE LECTURE							
13.00-14.00	Lunch	Lunch	Lunch	Lunch		 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION / STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES AAA & itacus SESSION					
	ENVIRONMENT SUSTAINABILITY IN UNDERGROUND CONSTRUCTION GENERAL ASPECTS	GROUND IMPROVEMENT IN UNDERGROUND CONSTRUCTIONS ARTIFICIAL GROUND FREEZING	PUBLIC COMMUNICATION AND AWARENESS	URBAN TUNNELS CONVENTIONAL TUNNELLING							
	chair Donato Ludovici (Italy)	chair Giulia Viggiani (Italy)	chair Monica Barbero (Italy)	chair Enrico Pizzarotti (Italy)							
	chair Luisa Patrolecco (Italy)	chair Bill Newns (New Zeland)	chair Abidemi Agwor (Nigeria)	chair Dongmei Zhang (China)							
14.00-14.20	City Rail Link, New Zealand – Reduction of land acquisition time and risk on the City Rail Link Project R. Galli City Rail Link Limited, Auckland, New Zealand T. Ireland & C. Howard Aurecon, Auckland, New Zealand	Design of artificial ground freezing for an access tunnel of a railway station in Switzerland E. Pimentel & G. Anagnostou ETH, Zurich, Switzerland	Best practice of communication for a complex transnational project – the Brenner Base Tunnel K. Bergmeister Brenner Base Tunnel BBT SE, Innsbruck, Austria	A Record of Constructing a Ramp Section of an Expressway by the underground widening excavation method N. Matsukawa, S. Ikezoe, Y. Kono & N. Oshima Hanshin Expressway Company Limited, Osaka, Japan M. Watanabe Kajima Corporation, Tokyo, Japan	14.00-14.45	Travel from Mostra d'Oltremare to Palazzo Serra di Cassano					
14.20-14.40	The role of Cairo metro in saving the social costs of air pollution M.A. Madany National Authority for Tunnels, Cairo, Egypt	Monitoring Artificial Ground Freezing and relevant fundamental observations V. Manassero Underground Consulting, Pavia, Italy	TELT and the tunnel art work project M. Virano, L. Beatrice, G. Dati & G. Avataneo TELT-SAS, Turin, Italy	Brescia Driverless Metro Line - San Faustino Station: a joint work example between Client, Superintendence, Designer and P&CM during the construction phase A. Merlini Brescia Infrastrutture, Brescia, Italy A. Breda Superintendence Archaeology Fine Arts and Landscape for the Provinces of Bergamo and Brescia, Brescia, Italy I. Carbone Consultant and past P&CM Manager for Brescia Driverless Metro Line, Milan, Italy M. Gatti Rocksoil S.p.A., Milan, Italy	14.45-15.20	KEY NOTE LECTURE C. Viggiani					
14.40-15.00	Testing of an Enertun segment prototype in Turin metro line 1 M. Barla, A. Insana & F. Zacco Politecnico di Torino, Turin, Italy	Design of ground freezing for cross passages and tunnel adits J.A. Sopko Moretrench, A Hayward Baker Company, Rockaway, USA	The Naples Line 6 underground metro system works: from the feasibility study to the construction O. Carbone ACaMIR Regione Campania, Naples, Italy G. Molisso HITACHI RAIL STS, Naples, Italy S. Riccio Direzione Centrale Infrastrutture, Lavori Pubblici e Mobilità Comune di Napoli, Naples, Italy	3D numerical back-analysis on an experimental conventional tunnel in Paris Sanoisian “Green” Clay J.P. Janin, A. Beaussier & H. Le Bissonnais SETEC-TERRASOL, Paris, France C. Gérardin & T. Charbonneau RATP, Paris, France	15.20-15.40	Effective use of underground space for sustainable cities S.W. Chiu, K.H. Lai, K.W. Cho & S.P. Lai WSP (Asia) Limited, Hong Kong					
15.00-15.20	Stockholm bypass: environmental sustainability in the excavation of the Lovön rock tunnels G. L. Menchini & S. Piscitelli CMC Cooperativa Muratori Cementisti, Ravenna, Italy	Ground freezing and excavation of the Museum Island metro station under a river in central Berlin – challenges and experiences J. Classen Implenia Construction GmbH, Munich, Germany P. Hoppe Implenia Construction GmbH, Berlin, Germany J. Seegers Projekt-Realisierungsgesellschaft U5, Berlin, Germany	Designing a sustainable railway infrastructure: Envision protocol and the carbon footprint N. Antonias Italferr S.p.A., Rome, Italy	Special design considerations for underpinning systems of existing structures due to tunnelling Y.C. Tan, W.S. Teh & C.Y. Gue G&P Geotechnics Sdn. Bhd., Kuala Lumpur, Malaysia	15.40-16.00	Enabling underground transport construction Guatemala City, Central America F. Birk Ruf EMOCON Group, S.A. Ciudad de Guatemala, Guatemala					
15.20-15.40	coffee break PM	coffee break PM	coffee break PM	coffee break PM	16.00-16.20	coffee break					

	PALACONGRESSI OLTREMARE		PALAZZO MEDITERRANEO		PALAZZO SERRA DI CASSANO	
HRS	EUROPA	ISCHIA	ITALIA	MEDITERRANEO	HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
	ENVIRONMENT SUSTAINABILITY IN UNDERGROUND CONSTRUCTION MANAGEMENT OF TUNNEL MUCK	GROUND IMPROVEMENT IN UNDERGROUND CONSTRUCTIONS GROUTING AND GROUND IMPROVEMENT	SAFETY IN UNDEGROUND CONSTRUCTION SAFETY DURING CONSTRUCTION	URBAN TUNNELS MECHANIZED TUNNELLING	16.20-17.30	Bourbon Tunnel Visit
	chair Donato Ludovici (Italy)	chair Vittorio Manassero (Italy)	chair Lorenzo Brino (Italy)	chair Roberto Crova (Italy)	17.30-18.00	Travel from Palazzo Serra di Cassano to Meeting points
	chair Anna Barra Caracciolo (Italy)	chair Paolo Gazzarini (Canada)	chair Achille Sorlini (Italy)	chair Markus Thewes (Germany)		
15.40-16.00	Tunnel excavation material –waste or valuable mineral resource?– European research results on resource efficient tunnelling R. Galler Montanuniversität, Leoben, Austria	Brenner Base Tunnel & Isarco River Underpass Section: several technical and operational solutions P. Lunardi Lunardi Geo-Engineering, Milan, Italy G. Cassani, M. Gatti & L. Bellardo Rocksoil S.p.A., Milan, Italy	Practical guidelines for shotcrete work close to blasting and vibration in hard rock A. Ansell KTH Royal Institute of Technology, Stockholm, Sweden	Construction Methods, Monitoring and Follow-Up of TBM Tunnelling Beneath an Operating Metro Station in Bucharest B. Bitetti, F. Valdemarin & C. Leguet Systra, Paris, France M. Masci & G. Martire Astaldi, Rome, Italy A. Stematiu Metroul, Bucharest, Romania		
16.00-16.20	Management of the muck produced by EPB TBM tunnel excavation: environmental aspects and consistency control for efficient handling E. Dal Negro, A. Boscaro, A. Picchio & E. Barbero Underground Technology Team Mapei Spa, Milan, Italy	The technical management of the permeation grouting works in the execution of the new Milan Metro Line 4 A. Pettinaroli & P. Caffaro Studio Ing. Andrea Pettinaroli s.r.l., Milan, Italy M. Lodico & A. Carrettucci MetroBlu s.c.r.l., Milan, Italy	Pavoncelli Bis water tunnel: Tunnel Boring Machine selection and safety standards for excavating in presence of methane R. d’Angelis, M. Maffucci, G. Giacomini & M. Secondulfo Ghella S.p.A., Rome, Italy F. Cichello Tunnel Engineer, CMI JV, Buenos Aires, Argentina	Did the selection of TBMs for the excavation of the Folio Line project tunnels satisfy the expectations? A.K. Kalager & B. Gammelsæter Bane NOR, Oslo, Norway		
16.20-16.40	Environmental reclamation for the Gotthard Base Tunnel Effects of spoil management on landscape P. Lanfranchi & E. Catelli Pagani + Lanfranchi SA, Bellinzona, Switzerland T. Bühler AlpTransit Gotthard Ltd, Bellinzona, Switzerland	Centrifuge model tests on shallow overburden tunnels with pre-ground improvement to clarify seismic behavior Y. Sawamura, K. Konishi, K. Kishida & M. Kimura Kyoto University, Kyoto, Japan	Excavation through contaminated ground by gasoline with EPB-TBM H.A. Yazici, M.B. Okkerman & C. Budak Aga Enerji, Istanbul, Turkey	Twin tunnels excavated in mixed face conditions M.A.A.P. Silva & F.L. Gonçalves Andrade Gutierrez Engenharia S.A., São Paulo, Brazil A.A. Ferreira & H.C. Rocha Cia. do Metropolitano de São Paulo Metrô - SP, São Paulo, Brazil		
16.40-17.00	Environmental risk assessment of conditioned soil: some Italian case studies S. Padulosi, F. Martelli, A. Sciotti, D. F. Putzu & M. Filippone Italferr S.p.A., Rome, Italy G. Mininni CNR Water Research Institute, Monterotondo, Rome, Italy	Stockholm Bypass Project – Passage under the Lake Mälaren B. Stille AECOM Nordic AB, Stockholm, Sweden F. Johansson & F. Ríos Bayona AECOM Nordic AB, Stockholm, Sweden KTH, Royal Institute of Technology, Stockholm, Sweden R. Batres Estrada AECOM Nordic AB, Stockholm, Sweden M. Roslin Swedish Transport Administration, Stockholm, Sweden	Excavation with traditional methods through geological formations containing asbestos N. Meister, F. Poma, U. Russo, F. Ruggiero & C. D’Auria COCIV, Consorzio Collegamenti Integrati Veloci, Genova, Italy	Effects of construction and demolition of a TBM excavated tunnel inside existing diaphragm walls S. Autuori, M.V. Nicotera & G. Russo University of Napoli Federico II, Naples, Italy A. di Luccio & G. Molisso Ansaldo S.T.S., Naples, Italy		
17.00-17.20	Online identification of the excavation materials on the Saint Martin La Porte site A. Barrel Spie batignolles GC, Boulogne Billancourt, France C. Salot TELT-SAS, Le Bourget du lac, France	Influence of the fibreglass reinforcement stiffness on the mechanical response of deep tunnel fronts in cohesive soils under undrained conditions C. di Prisco & L. Flessati Politecnico di Milano, Milan, Italy G. Cassani Rocksoil S.p.A., Milan, Italy R. Perlo Officine Maccaferri S.p.A., Zola Predosa, Italy	A novel watcher system for securing works at tunnel face T. Tani & Y. Koga Taisei Corporation, Tokyo, Japan T. Hayasaka & N. Honma Nikko Denki Tsushin, Tokyo, Japan	Grand Paris Express Ligne 15 sud T2C : TBM driving parameters and complex passing of critical zones S. Cavagnet, A. Giammarino, L. Mancinelli & C. Crémer Lombardi Ingegneria S.r.l., Milan, Italy		

	PALACONGRESSI OLTREMARE			PALAZZO MEDITERRANEO	
HRS	EUROPA	ISCHIA	EOLIE	ITALIA	MEDITERRANEO
08.30-10.30					WG & COMMITTEES REPORT PRESENTATION + OPEN SESSION
10.30-11.00	coffee break AM	coffee break AM	coffee break AM	coffee break AM	coffee break AM
11.00-13.00					OPEN SESSION
13.00-14.00	lunch	lunch	lunch	lunch	lunch
	LONG & DEEP TUNNELS TRANSALPINE TUNNELS	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT TUNNEL REFURBISHMENT	RISK MANAGEMENT, CONTRACTS AND FINANCIAL ASPECTS THE EMERALD BOOK: THE NEW FIDIC-ITA CONTRACT	  SAFETY IN UDEGROUND CONSTRUCTION ITA-COSUF & IRF SESSION Operational Safety of Underground Transportation Facilities	URBAN TUNNELS MECHANIZED TUNNELLING
	chair Andrea Pigorini (Italy) chair Gérard Seingre (Switzerland)	chair Paola Firmi (Italy) chair Monika Mitew-Czajewska (Poland)	chair Matthias Neuenschwander (Switzerland) chair Raffaele Zurlo (Italy)	chair Eric Premat (France) chair Luigi Carrarini (Italy)	chair Piergiorgio Grasso (Italy) chair Werner Burger (Germany)
	Numerical back-analysis of the Fréjus road tunnel and of its safety gallery M. de la Fuente Ecole des Ponts ParisTech, Île-de-France, Champs-sur-Marne, France & Tractebel ENGIE, Île-deFrance, Gennevilliers, France J. Sulem Ecole des Ponts ParisTech, Île-de-France, Champs-sur-Marne, France R. Taherzadeh Tractebel ENGIE, Île-de-France, Gennevilliers, France D. Subrin Centre d'Etudes des Tunnels (CETU), Auvergne-Rhône-Alpes, Bron, France	Refitting strategies for Italian historical railway tunnels A.R. Fava, M. Ghidoli, L. Carli & P. Galvanin Alpina S.p.A., Milan, Italy	Risk allocation in the FIDIC Forms of Contract, and the Emerald Book's place in the Rainbow Suite H. Ertl D2 Consult International, Linz, Austria	INVITED LECTURE NEC vechicles in underground transportation facilities: ITA-COSUF White paper workshop & expert group meeting results M. Wietek ITA-COSUF, Austria	Soft ground tunneling below a mixed foundation building D. Simic & B. Martínez-Bacas Geotechnical Area Ferrovial-Agroman Engineering Services, Madrid, Spain
14.00-14.20					
14.20-14.40	Brenner Base Tunnel – Interaction between underground structures, complex challenges and strategies R. Insam BBT SE, Innsbruck, Austria R. Wahlen & G. Wieland Amberg Engineering AG, Regensdorf-Watt, Switzerland	The use of artificial intelligence for a cost-effective tunnel maintenance O. Schneider & A. Prokopová Amberg Technologies AG, Regensdorf-Watt, Switzerland F. Modetta & V. Petschen Amberg Engineering AG, Regensdorf-Watt, Switzerland	Contractual Time for Completion Adjustment in the FIDIC Emerald Book A. Marulanda Ingetec, Bogotá, Colombia M. Neuenschwander Neuenschwander Consulting Engineers Ltd, Bellinzona, Switzerland	INVITED LECTURE Operational safety from first responders perspectives U. Lundstrom ITA-COSUF, Swedish Road Administration, Sweden	North East Boundary Tunnel: Applied Lessons learned from the Anacostia River Tunnel Project, Washington, USA M. Pescara & N. Della Valle Tunnelconsult Engineering SL, Sant Cugat del Vallés, Barcelona, Spain D. Nebbia Salini Impregilo Lane, Washington, USA M. Gamal Brierley Associates Corporation, Denver, USA
14.40-15.00	The Montcenis base tunnel: how to turn project environmental constraints into opportunities S. Lione, L. Brino, P. Grieco & L. Pinchiaroglio TELT-SAS, Turin, Italy A. Mordasini LOMBARDI.SA, Minusio, Switzerland	Tunnels widening and renewal using precast lining: the Swiss Rhaetian railway construction method applied to tunnel Mistail D. Fortunato & G. Barbieri AF TOSCANO AG, Zürich, Switzerland	The role of the Engineer in the Emerald book J.Maclure Consultant, Durham, UK	INVITED LECTURE New IT systems in road tunnels O. Landolfi IRF, TTS Italia, Italy	The challenging yet successful excavation of the TBM tunnel for the Athens Metro Line 3, Extension Haidari-Piraeus G. Giacomini Ghella S.p.A., Roma, Italy P. Pediconi & D. Goudelis Ghella S.p.A., Athens, Greece
15.00-15.20	Brenner Base Tunnel, Italian Side: construction methods for a railway 22 km long tunnel S. Fuoco & R. Zurlo BBT SE, Bolzano, Italy M. Moja & E.M. Pizzarotti Pro Iter, Milan, Italy	Tunnels damage management system: an application for Italian railways tunnels I.Firmi, F.Iacobini, A.Pranno & C. Matera Rete Ferroviaria Italiana, Rome, Italy	The claims, dispute avoidance and dispute resolution procedure in the new FIDIC Emerald Book C. Nairac White & Case LLP, Paris, France	INVITED LECTURE Risk diagnostic - monitoring tools in road tunnels M. van Gils IRF, RWS, The Netherlands	TBM Selection for tunneling beneath urbanized areas at shallow depth. A practical case: the machine selection for the excavation of Metro Gran Paris Line 15 Section 2C M. Concilia Impresa Pizzarotti & C. S.p.A., Parma, Italy
15.20-15.40	coffee break PM	coffee break PM	coffee break PM	coffee break PM	coffee break PM

	PALAZZO SERRA DI CASSANO
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
	 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION / STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES AAA & itacus SESSION chair Livio Sacchi (Italy)
14.00-14.45	Travel from Mostra d'Oltremare to Palazzo Serra di Cassano
14.45-15.20	KEY NOTE LECTURE E. Wifstrand
15.20-15.40	The outlets of the Albano and Fucine lakes and their influence from Roman times up to the birth of modern tunnel engineering C. Callari University of Molise, Campobasso, Italy
15.40-16.00	The new Lugano tram underground station: an example to combine architectural requirements, serviceability and challenging geotechnical conditions G. Barbieri, P. Bassetti & A. Galli AF Consult, Zürich, Switzerland
16.00-16.20	coffee break

TUESDAY 07 MAY 2019					
	PALACONGRESSI OLTREMARE			PALAZZO MEDITERRANEO	
HRS	EUROPA	ISCHIA	EOLIE	ITALIA	MEDITERRANEO
	LONG & DEEP TUNNELS - TRANSALPINE TUNNELS	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT INNOVATION IN MECHANIZED TUNNELS	RISK MANAGEMENT, CONTRACTS AND FINANCIAL ASPECTS	 SAFETY IN UNDEGROUND CONSTRUCTION ITA-COSUF & IRF SESSION Operational Safety of Underground Transportation Facilities	URBAN TUNNELS DESIGN AND MONITORING
	chair Andrea Pigorini (Italy) chair Gérard Seingre (Switzerland)	chair Moreno Pescara (Italy) chair Jairo Pascoal Junior (Brasil)	chair Matthias Neuenschwander (Switzerland) chair Patrizio Torta (Italy)	chair Goetz Vollmann (Germany) chair Luigi Carrarini (Italy)	chair Claudio Di Prisco (Italy) chair Ed Taylor (Australia)
15.40-16.00	Presentation of the successful crossing by the “Federica” TBM of a geological accident in Saint-Martin-la-Porte construction site F. Gamba Alpina S.p.A./Egis, Milan, Italy E. Hugot, P. Gilli & C. Salot TELT-SAS, Turin, Italy G. Giacomini Ghella S.p.A., Rome, Italy	Riachuelo Lote 3 – Innovative method for the construction of the sea outfall N. Valiante Salini Impregilo S.p.A., Milan, Italy M. Martini JV Salini Impregilo S.p.A. – J.J. Chediack, Buenos Aires, Argentina L. Gaggioli Palmeri Group, Gaggio Montano, Italy	ROUND TABLE / DISCUSSION ON THE EMERALD BOOK chaired by M. Neuenschwander & Zurlo	Ventilation of tunnels and cross-passages of the Ceneri Base Tunnel and similar projects S. Nyfeler & P. Reinke HBI Haerter AG, Bern, Switzerland	Ground movement problems in EPB tunneling through confined station boxes T. Babendererde, L. Babendererde & R. Hasanpour BabEng GmbH, Lübeck, Germany
16.00-16.20	Mechanized tunnel excavation of lot KAT2 of the KoralmTunnel, Austria: achievements and lessons learned D. Fabbri & R. Crapp Engineering Joint-Venture PG KAT / Lombardi Engineering Ltd., Minusio, Switzerland H. Hölzl Engineering Joint-Venture PG KAT / Geoconsult Consulting Engineers, Wals/Salzburg, Austria H. Wagner ÖBB Infrastruktur AG, Graz, Austria	Key technologies of double shield TBM for urban metro tunnel with small radius curve F. He, X.J. Zhuo & L.H. Jia China Railway Engineering Equipment Group Co., Ltd., Zhengzhou, Henan, China	Transposition into national law of the new EU public procurement directives and the impact on subsurface construction contracts - the Portuguese case G. Diniz-Vieira CML Lisbon General Drainage Plan, Lisboa, Portugal R. Pistone COBA, Lisboa, Portugal F. Melâneo Ferconsult, Lisboa, Portugal C. Baião TPF Planège, Lisboa, Portugal	Reducing the monotonous design in the worlds deepest and longest sub-sea road tunnel Rogfast, Norway T. Andersen, & J. Braa Norconsult AS, Sandvika, Norway	The construction of the tunnel Kennedy in Santiago de Chile. A major challenge of an urban tunnel in soils J. Kuster & R. Núñez Costanera Norte, Santiago de Chile, Chile E. Chávez, JM. Galera & D. Santos Subterra Ingeniería, Madrid, Spain
16.20-16.40	Tunnel costs related to the quality of the rock mass R. Zurlo, S. Fuoco, M. Loffredo & A. Marottoli Brenner BasisTunnel BBT-SE, Bolzano-Fortezza, Italy	Design of the support medium for slurry pressure balance (SPB) shield tunnelling in demanding ground conditions B. Schoesser Ruhr University Bochum, Bochum, Germany M. Straesser Herrenknecht AG, Schwanau, Germany M. Thewes Ruhr University Bochum, Bochum, Germany	Integrating risk management in underground works: the French experience and AFTES Recommendations M. Pré Setec, Paris, France & AFTES Technical Committee E. Chiriotti Incas Patners, Paris, France & AFTES Technical Committee G. Hamaide Cetu, Lyon, France, & AFTES Technical Committee J. Piraud Setec, Paris, France & AFTES Technical Committee	Safety in the Italian railway tunnels P.Firmi, F. Iacobini & A. Pranno Rete Ferroviaria Italiana, Rome, Italy	Embedded barriers as a mitigation measure for tunnelling induced settlements: a field trial for the Line C in Rome N. Losacco Università degli Studi di Roma 'Tor Vergata', Rome, Italy E. Romani Metro C S.c.p.A., Rome, Italy G.M.B. Viggiani University of Cambridge, Cambridge, UK G. Di Mucci formerly Metro C S.c.p.A., Rome, Italy
16.40-17.00	The second Gotthard tunnel tube G.Biaggio & V. Kumpusch Swiss Federal Roads Office (FEDRO), Bern, Switzerland	The Rijnlandroute bored tunnel – continuously improving the mechanized tunneling process H. Mortier Dimco, Zwijndrecht, Belgium M.Brugman Arthe C&S, Houten, The Netherlands B. Peerdeman RHDHV, Rotterdam, The Netherlands T. Schubert Vinci Construction Grand Projets, Rueil-Malmaison, France	Shallow TBM launch – alternative to cut and cover W. Angerer Jacobs, Dubai, United Arab Emirates A.M. Haimoni Dubai Roads and Transport Authority, Dubai, United Arab Emirates A. Ozturk Expolink Alliance, Dubai, United Arab Emirates V. Tellioglu Jacobs, Dubai, United Arab Emirates	How to Refurbish a Tunnel: Shop Open or Closed? B.A. van den Horn, A.M.W. Duijvestijn & C.S. Boschloo-van der Horst Arcadis Netherlands B.V., Amersfoort, The Netherlands	The “CNIT La Défense” railway station in Paris: a large scale underpinning in a constrained environment A.Burdiel, J.Pinto, L.Canolle & M.Pré Setec tpi, Paris, France N.Coquelle & V.Rigoux Vinci Construction, Rueil-Malmaison, France
17.00-17.20	Risk management for the Brenner Base Tunnel K. Bergmeister Brenner Base Tunnel BBT SE, Innsbruck, Austria	Forrestfield Airport Link project – Variable density TBMs to deal with unexpected ground conditions M. Di Nauta, Salini Impregilo, Milan, Italy A. Anders & C. Suarez Zapico SINRW JV, Perth, Western Australia	Risk management process applied on design and construction of deep stations and TBM tunnel: analysis and actions to mitigate potential impacts on buildings during the Line 6 underground metro system works, Naples A. Di Luccio, M. Mele & G. Molisso HITACHI RAIL STS, Naples, Italy	Civil engineering constraints on tunnel ventilation and safety M. Bettelini, A. Arigoni & S.S. Saviani Amberg Engineering Ltd, Regensdorf-Watt, Switzerland	Back analysis of ground settlements induced by TBM excavation for the north extension of Paris metro, line 12 S.Mahdi, O.Gastebled & S.Khodr TRACTEBEL ENGIE, Paris, France
17.20-17.40	Milan to Genoa high speed/capacity railway: the Italian section of the Rhine-Alpine corridor P. Lunardi Lunardi Geo-Engineering, Milan, Italy G. Cassani & A. Bellocchio Rocksoil S.p.A., Milan, Italy N. Meistro COCIV, Genoa, Italy	The role of mechanized shaft sinking in international tunnelling projects S. Frey & P. Schmaeh Herrenknecht AG, Schwanau-Allmannsweiler, Germany	A model for fair compensation of construction costs in TBM tunneling: a novel contribution N. Radončić Amberg Engineering AG, Innsbruck, Austria W. Purrer CCC Purrer, Innsbruck, Austria K. Pichler BBT SE, Innsbruck, Austria	Ventilation applied to fire safety in metro tunnels, Naples line 1 project M. Bramani & P. Fugazza MM S.p.A., Milan, Italy	Monitoring excavation-related ground deformation in London, UK using SqueeSAR™ C.A. Bischoff, P.J. Mason & R.C. Ghail Imperial College London, London, UK C. Giannico & A. Ferretti TRE ALTAMIRA, Milan, Italy
20.00	MEMBER NATIONS' DINNER				

PALAZZO SERRA DI CASSANO	
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
16.20-17.30	Bourbon Tunnel Visit
17.30-18.00	Travel from Palazzo Serra di Cassano to Meeting points

PALACONGRESSI OLTREMARE					
HRS	EUROPA	ISCHIA	EOLIE	EGADI	PALAZZO MEDITERRANEO
	LONG AND DEEP TUNNEL CONVENTIONAL TUNNELING	 INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT ITAttech SESSION SOIL CONDITIONING FOR EPB TUNNELLING AND BACKFILLING	GEOLOGICAL AND GEOTECHNICAL KNOWLEDGE AND REQUIREMENTS FOR PROJECT IMPLEMENTATION GENERAL ASPECTS		 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION AAA & itacus SESSION
08.30-08.50	Brenner Base Tunnel, Lots Mules, 2-3 (Italy): the emergency stop in Trens D. Merlini, M. Falanesca & D. Stocker Pini Swiss Engineers, Lugano, Switzerland A. Voza BBT-SE, Bolzano, Italy	Soil Conditioning for EPB Tunnelling: Relevant Foam Properties and Characterisation M. Galli PORR Deutschland GmbH, Düsseldorf, Germany M. Thewes & S. Freimann Ruhr University Bochum, Bochum, Germany	3D geological modelling for the design of complex underground works F. Giovacchini, M. Vendramini, L. Soldo, M. Merlo, D. Marchisio, G. Ricci & A. Eusebio Geodata Engineering, Turin, Italy		chair Han Admiraal (The Netherlands) chair Alessandra De Cesaris (Italy) itacus SPECIAL REPORT I The next level up is down - working with industry to further an urban underground future H. Admiraal & A. Cornaro
08.50-09.10	Anisotropic convergence of tunnels in squeezing ground: the case of Saint-Martin-la-Porte survey gallery Y. Liu & J. Sulem Laboratoire Navier/CERMES, Ecole des Ponts ParisTech, IFSTTAR, CNRS, Université Paris-Est, Marne-la-Vallée, France D. Subrin Centre d'études des tunnels (CETU), Bron, France E. Humbert Tunnel Euralpin Lyon Turin, Le Bourget du Lac cedex, France	Possibility of using vane shear testing device for optimizing soil conditioning H. Copur, E. Avunduk, S. Tolouei, D. Tumac, C. Balci, N. Bilgin & A.S. Mamaghani Istanbul Technical University, Istanbul, Turkey	Risk Maps for Cutter Tool Wear Assessment and Intervention Planning J.G. Grasmick & M.A. Mooney Colorado School of Mines, Golden, USA		
09.10-09.30	The Genoa Bypass project: The new Highway System to overcome the congestion in the Genoa area. The geological and engineering challenges A.Selleri Autostrade per l'Italia S.p.A., Rome, Italy	EPB excavation of cohesive mixed soils: combined methodology for clogging and flow assessment D.G.G. de Oliveira Herrenknecht AG, Schwanau, Germany M. Diederichs Queens University, Kingston, Canada M. Thewes Ruhr University Bochum, Bochum, Germany	Geotechnical data standardization and management to support BIM for Underground Infrastructures and Tunnels M. Beaufils & S. Grellet BRGM (French Geological Survey), Orléans, France B. Le Hello EGIS SE, Seyssins, France J. Lorentz Geolithe Innov, Crolles, France M. Beaudouin SYSTRA, Paris, France J. Castro Moreno SETEC als, Lyon, France		KEY NOTE LECTURE D.Perrault
09.30-09.50	Key construction technology of Long Metro Subsea Tunnel in Complex Site Conditions W. He, C. Song & B. Du China Railway Liuyuan Group Co.ltd, Tianjin, China	Tilt Sliding Test to assess the behaviour of conditioned soil with large amount of cobbles A. Carigi, A. Luciani, D. Martinelli, C. Todaro & D. Peila Politecnico di Torino, Turin, Italy	The Impact of Saturation on the Mechanical Response of Low Porosity Rocks and Implications for Tunnelling M.T. Ahmed Labeid, E.L. Jaczkowski, W. Dossett & M.S. Diederichs Queen's University, Kingston, Canada J.J. Day University of New Brunswick, Fredericton, Canada		Metro Thessaloniki – Intersecting microtunnels to support archeological findings at Sintrivani Station D. Rizos OMETE S.A., Athens, Greece (currently: Orascom Constructions) G. Vassilakopoulou & P. Foufas OMETE S.A., Athens, Greece G. Anagnostou ETH, Zurich, Switzerland
09.50-10.10	Experimental setup for studying tunnels in squeezing ground conditions K. Arora, M. Gutierrez & A. Hedayat Colorado School of Mines, Golden, USA	Investigation on the geotechnical properties of a chemically conditioned spoil from EPB excavation, a case study P. Tommasi, P. Lollino, A. Di Giulio & G. Belardi Italian National Research Council, Rome, Italy	Geological and geotechnical key-factors for tunnel design of the new Naples-Bari High-Speed railway line in Southern Italy A. Amato, G. Quarzicci, A. Sciotti, A. Pigorini & A. Nardinocchi Italferr S.p.A., Rome, Italy		Interdisciplinary research in geotechnical engineering and geoarchaeology – a London case study F.K. Vonstad, P. Ferreira & D. Sully University College London (UCL), London, UK
10.10-10.30	Experimental determination and plausibility proof of the longitudinal displacement profile for deep tunnels for case studies at the Brenner Base Tunnel T. Cordes, C. Reinhold & K. Bergmeister Brenner Base Tunnel, BBT-SE Innsbruck, Austria B. Schneider-Muntau & I. Bathaeian University of Innsbruck, Innsbruck, Austria	Influence of consistency index on soil conditioning in EPB- TBM tunneling S. Tarigh Azali Tehran Metro and Suburban Railway Group of Companies, Tehran, Iran E. Khorasani & J. Hassanpour University of Tehran, Tehran, Iran	Adapting tunnel construction to hydrogeological conditions in a karst region M. Neukomm & M. Mercier BG Consulting Engineers, Lausanne, Switzerland P.Y. Jeannin, A. Malard, D. Rickerl & E. Weber Swiss Institute for Speleology and Karst Studies, La Chaux-de-Fonds, Switzerland		Integration of archaeology in architectural design of Milan metro connection M2-M4 in st. Ambrogio station M. N. Colombo, A. Bortolussi & E. Noce MM Spa, Milan, Italy
10.30-11.00	coffee break AM	coffee break AM	coffee break AM		coffee break AM

PALAZZO SERRA DI CASSANO	
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
	 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION / STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES AAA & itacus SESSION
09.15-09.45	Travel from Mostra d'Oltremare to Palazzo Serra di Cassano
10.00-10.30	KEY NOTE LECTURE E. Reynolds
10.30-10.50	The Art Stations F. Brenci MC A - Mario Cucinella Architects, Bologna, Italy
10.50-11.10	Genoa underground: solidity, usefulness and beauty of the Grazie Bassa Tunnel during 100 year service life C.Panariello, H. Mohamed Dahir & V. Molinari Italferr S.p.a, Rome, Italy
11.10-11.30	coffee break
11.30-12.40	Bourbon Tunnel Visit

PALACONGRESSI OLTREMARE					
HRS	EUROPA	ISCHIA	EOLIE	EGADI	PALAZZO MEDITERRANEO
	LONG AND DEEP TUNNEL MECHANIZED TUNNELLING - DIFFICULT GROUND AND UNTRAPPING TBMS	 INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT ITAttech SESSION SOIL CONDITIONING FOR EPB TUNNELLING AND BACKFILLING	GEOLOGICAL AND GEOTECHNICAL KNOWLEDGE AND REQUIREMENTS FOR PROJECT IMPLEMENTATION INVESTIGATION AND SURVEYING		 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION AAA & itacus SESSION
	chair Salvatore Miliziano (Italy)	chair Nick Chittenden (UAE)	chair Giovanna Cassani (Italy)		chair Han Admiraal (The Netherlands)
	chair Elena Chiriotti (France)	chair Harald Golser (Austria)	chair Giorgio Piaggio (Chile)		chair Alessandra De Cesaris (Italy)
11.00-11.20	Countermeasure of Jammed TBM in Rock Tunnel Excavation: feedback from two cases study C.H. Lee United Geotech, Inc., Taipei, Taiwan Y.C. Chiu & T.T. Wang National Taiwan University, Taipei, Taiwan	Main advantages and operational aspects of two-components backfilling grout in mechanized tunnelling with hard-rock TBM: Example of the Saint-Martin-La-Porte TBM job-site at Lyon-Turin E. Dal Negro, A. Boscaro, A. Picchio & E. Barbero Underground Technology Team Mapei Spa, Milan, Italy C. Acquista Ghella Spa, Rome, Italy G. Comin Spie-Batignolles, Neuilly-Sur-Seine, France	Salamonde II underground hydroelectric complex in the North of Portugal. Design and construction R. S. Pistone COBA, Lisboa, Portugal N. Plasencia EDP Produção, Porto, Portugal L. Gonçalves EPOS, Lisboa, Portugal		Reflecting the art, culture and history into the interior design of underground metro stations, case study: Dnipro Metro Extension Line B. Avanoğlu-Çetin & Ö.Öztürk Yüksel Proje Uluslararası A.Ş., Ankara, Turkey
11.20-11.40	Brenner Base Tunnel - Challenges of Gripper TBM application for the 15 km long exploratory tunnel Ahrental in challenging rock mass K. Bäßler & M. Flora Herrenknecht AG, Schwanau, Germany	Development of a test setup for the simulation of the annular gap grouting on a semi technical scale C. Schulte-Schrepping & R. Breitenbücher Ruhr-University Bochum, Bochum, Germany	Use of TBM parameters for assessing rock mass conditions during excavation: a feedback from the Tunnel 4, Angat Water Transmission Improvement Project (Philippines) G.W. Bianchi EG-Team STA, Torino, Italy I. Andreis & S. La Valle CMC Group, Ravenna, Italy		The architecture of underground dwellings in Iran S. Hashemi Iranian Tunnelling Association (IRTA), Tehran, Iran
11.40-12.00	Problems associated with an EPB-TBM in a complex geology with serpentinites and peridotites in Turkey M. Sakalli & D. Talu Dogus Construction and Trade Inc., Istanbul, Turkey N. Bilgin & I.H. Aksoy Istanbul Technical University, Istanbul, Turkey	The management of the soil conditioning process for the excavation of the Rome Metro C line M. Pirone, F. Carriero & R. Sorge AstalDI, Rome, Italy D. Sebastiani & S. Miliziano Università degli Studi di Roma "La Sapienza", Rome, Italy V. Foti Metro C, Rome, Italy	Drone based deformation monitoring at the Zentrum am Berg tunnel project, Austria. Results and Findings 2017-2019 K. Chmelina Geodata group, Leoben, Austria A. Gaich 3GSM GmbH, Graz, Austria M. Keuschnig & R. Delleske Georesearch Forschungsgesellschaft mbH, Wals, Austria R. Wenighofer & R. Galler Montanuniversität, Leoben, Austria		Underground car park in the ancient “Morelli” cavern in Naples F. Rossano, A. Bellone & M.A. Piangatelli CIPA S.P.A., Rome, Italy
12.00-12.20	Polcevera Adit – Getting unstuck on EPB-TBM in squeezing rock F. Poma, U. Russo, F. Ruggiero & L. Lampiano COCIV, Consorzio Collegamenti Integrati Veloci, Genova, Italy	Pressure infiltration of sandy foam during EPB shield tunnelling in saturated sand T. Xu Ghent University, Ghent, Belgium A. Bezuijen Ghent University, Ghent, Belgium also Deltares, Delft, The Netherlands Z. Lu Macau University, Macau, China	Geo-mechanical behaviour and monitoring system in the Ceneri Base Tunnel M.Ruggiero AF TOSCANO SA, Lugano, Switzerland A. Malaguti LOMBARDI SA, Minusio, Switzerland F. De Martino AF-CONSULT ITALY S.r.l., Milan, Italy		Line C in Rome: San Giovanni, the first archaeological station E. Romani, M. D'Angelo & V. Foti Metro C, Rome, Italy
12.20-12.40	Challenging mixed face tunneling at India’s Sleemanabad Carrier Canal J. Clark The Robbins Company, New Delhi, India	Soil improvement in tunnel face using foam reagents in EPB TBM S. V. Mazein Russian Tunneling Association, Moscow, Russia A. N. Pankratenko, A. G. Polyankin & E. A. Sharshova National university of science and technology MISiS, Moscow, Russia	Contribution of continuous geophysical measurements to the success of tunnelling T. Dickmann, D. Krueger & J. Hecht-Méndez Amberg Technologies AG, Regensburg, Switzerland		The First World War Military Tunnels of the Italian-Austrian Front S. Pedemonte Military history enthusiast, Isola del Cantone (Ge), Italy E.M. Pizzarotti Pro Iter, Milan, Italy
12.40-13.00	Tuen Mun - Check Lap Kok link in Hong Kong - Innovative solution for construction of an outstanding subsea tunnel A. Schwob & F. Guedon Dragages Hong Kong Ltd, Hong Kong SAR, China B. Combe & T. Lockhart Bouygues Travaux Publics, France	Soil abrasion and penetration test for the evaluation of soft ground TBMS’ excavation performance and cutter life D.Y. Kim, H.B. Kang, Y.J.Shin & J.H.Jung Hyundai Engineering and Construction, Seoul, S. Korea E. Farrokh Amirkabir University of Technology, Tehran, Iran	Countermeasures against the deformation of the pilot tunnel of the Seikan Tunnel, Japan H. Kakinuma & T. Okada Japan railway construction, transport and technology agency, Sapporo, Japan K.Yashiro Railway technical research institute, Kokubunji, Japan Y.Kobara A-Tic Co. LTD, Sapporo, Japan		Tunnel warfare in World War I: The underground battlefield tunnels of Vimy Ridge, France M. Diederichs & D.J. Hutchinson Queens University, Kingston, Canada
13.00-14.00	Lunch	Lunch	Lunch		Lunch

PALAZZO SERRA DI CASSANO	
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
12.40-13.10	Travel from Palazzo Serra di Cassano to Mostra d'Oltremare

	PALACONGRESSI OLTREMARE				PALAZZO MEDITERRANEO
HRS	EUROPA	ISCHIA	EOLIE	EGADI	MEDITERRANEO
	LONG AND DEEP TUNNEL MECHANIZED TUNNELLING	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT ENGINEERING 4.0 - BIM	GEOLOGICAL AND GEOTECHNICAL KNOWLEDGE AND REQUIREMENTS FOR PROJECT IMPLEMENTATION INVESTIGATION AND SURVEYING	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT SEGMENT LININGS AND SHOTCRETE	 STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES itacus SESSION
	chair Antonio Nicola (Italy)	chair Paolo Mazzalai (Italy)	chair Stefano Aversa (Italy)	chair Alberto Meda (Italy)	chair Antonia Cornaro (Switzerland)
	chair Amanda Eliof (USA)	chair Jurij Karlovsek (Australia)	chair Andrea Sciotti (Italy)	chair Karl-Gunnar Holter (Norway)	chair Daniela Boldini (Italy)
14.00-14.20	Back-calculation model for instantaneous TBM cutter wear H.I. Frostad, A. Bruland & P. D. Jakobsen Norwegian University of Science and Technology (NTNU), Trondheim, Norway F.J. Macias JMCConsulting-Rock Engineering AS, Oslo, Norway	BIM implementation – Brenner Base Tunnel project R. Sorge, D. Buttafoco & J. Debenedettì BTC (Brennero Tunnel Construction), Fortezza, Bolzano, Italy A. Menozzi, G. Cimino, F. Maltese & B. Tiberi SWS Engineering spa, Trento, Italy	Application of deflection curves, trend lines and displacement vector orientation in the evaluation of surface displacements in tunneling A.L.C. Rissoli & A.P.de Assis University of Brasilia, Brasilia, Brazil	Hybrid solution with fiber reinforced concrete and glass fiber reinforced polymer rebars for precast tunnel segments B. De Rivat BMUS – Bekaert-Maccaferri Underground Solutions, Erembodegem - Aalst, Belgium N. Giamundo ATP srl, Rome, Italy A. Meda, Z. Rinaldi & S. Spagnuolo University of Rome “Tor Vergata”, Rome, Italy	itacus SPECIAL REPORT II The National Actions Program Think Deep - reported on the national think deep groups A. Cornaro & H. Admiraal
14.20-14.40	Ismailia: the first tunnels to be constructed under the Old and New Suez Canals - A Case History G. L. Menchini & M. Liti CMC Cooperativa Muratori Cementisti, Ravenna, Italy	BIM – Model-based project management for optimizing project development. Insights into the practical application at the “Albvorland Tunnel” project W. Fentzloff & J. Classen Implenla Construction GmbH, Munich, Germany	Case study of tunnel ground reaction modeling in horizontally bedded rock using continuum and fracture network models D. Chesser, M. J. Telesnicki & J. Carvalho Golder Associates Ltd., Mississauga, Ontario, Canada	Sprayed concrete composite tunnel lining design: analytical study on its behaviour at the bond interface C.Green, H.Jung & A. Pillai Arup, London, United Kingdom	Resilient City: The case of Bisagno Diversion Tunnel G. Lunardi, G. Cassani, M. Gatti, B. Spigarelli & C. L. Zenti Rocksoil S.p.A., Milan, Italy
14.40-15.00	The feeder 9, River Humber, replacement pipeline project, United Kingdom S. Jukes PORR UK Ltd., London, United Kingdom	Integrated functional metro station design using BIM tools C.Pallaria, D.Vercellino & A.Bolzonello Geodata Engineering S.p.A., Turin, Italy	Geological and geotechnical main design aspects of two tunnels on Fortezza - Verona High Speed Line in Northern Italy A. Corbo, A. Sciotti, S. Vagnozzi & S. Rodani Italferr S.p.A., Rome, Italy	Durability of Precast Concrete Tunnel Segments M. Bakhshi & V. Nasri AECOM, New York, USA	Shafts and drainage tunnels as a sustainable and preventive measure to mass movements of saturated soils in Bucaramanga, Colombia P.F. Castillo & G. Pardo Colombian Tunnelling and Underground Works Association - ACTOS, Bogotá, Colombia
15.00-15.20	Lining stresses in a TBM-driven tunnel: a comparison between numerical results and monitoring data V. De Gori Geotechnical Design Group, Rome, Italy A. de Lillis & S. Miliziano Sapienza University of Rome, Rome, Italy	Intelligent Attitude Control during Shield Tunneling in Soft Soils based on Big Data B. J. Wu, M. Hu, W. Xu, P. Dong & X. Bai SHU-UTS SILC Business School, Shanghai, China SHU-SUCG Research Centre for Building Industrialization, Shanghai, China	Characterization of underground rock masses employing structure from motion: Application to a real case R. García-Luna, S. Senent, R. Jurado-Piña & R. Jimenez Technical University of Madrid, Madrid, Spain	Advanced constitutive modelling for the approach of real shotcrete performance in tunnels F. A. Sánchez Mexican Association for Tunnelling and Underground Works (AMITOS), Mexico G. G. Saldivar National University of Mexico, Mexico	Conventional Tunneling in urban area N. Munfah AECOM, New York, USA V. Gall, W. Klary & T.M. O'Brien Gall Zeidler Consultants, Ashburn, Virginia, USA
15.20-15.40	coffee break PM	coffee break PM	coffee break PM	coffee break PM	coffee break PM

	PALAZZO SERRA DI CASSANO
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
	 ARCHAEOLOGY, ARCHITECTURE AND ART IN UNDERGROUND CONSTRUCTION / STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES AAA & itacus SESSION
	chair Giulia Viggiani (Italy)
14.00-14.45	Travel from Mostra d'Oltremare to Palazzo Serra di Cassano
14.45-15.20	KEY NOTE LECTURE D. Perraud
15.20-15.40	Moncenisio, from Myth to history TELT–Tunnel Euralpin Lyon Turin and the collection of historic engravings on the Frejus tunnel M. Virano, G. Dati, M. Ricci & G.Avataneo TELT-SAS, Turin, Italy
15.40-16.00	Comparative Analyses of Through - running vs. Dead - end Tunnel to Urban Transit Network Efficiency and Design of Through - running Tunnel in the New York Pennsylvania Station J. C. Venturi Rethink Studio, New York, USA E. Chao University of Pennsylvania, Pennsylvania, USA C. Nicolescu Columbia University, New York, USA
16.00-16.20	coffee break

	PALACONGRESSI OLTREMARE				PALAZZO MEDITERRANEO
HRS	EUROPA	ISCHIA	EOLIE	EGADI	MEDITERRANEO
	LONG AND DEEP TUNNEL SPECIAL PROJECTS	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT ENGINEERING 4.0 - BIM	GEOLOGICAL AND GEOTECHNICAL KNOWLEDGE AND REQUIREMENTS FOR PROJECT IMPLEMENTATION SEISMIC ASPECTS AND ROCKBURTS	INNOVATION IN UNDERGROUND ENGINEERING, MATERIALS AND EQUIPMENT SEGMENT LININGS AND SHOTCRETE	 STRATEGIC USE OF UNDERGROUND SPACE FOR RESILIENT CITIES itacus SESSION
	chair Marco Ranieri (Italy)	chair Klaus Pini (Italy)	chair Emilio Bilotta (Italy)	chair Alberto Meda (Italy)	chair Antonia Cornaro (Switzerland)
	chair Eivind Grøv (Norway)	chair Giuseppe Gaspari (Canada)	chair Mikhail Belenkyy (Russia)	chair Karl-Gunnar Holter (Norway)	chair Sara Venturoni (Italy)
15.40-16.00	Specificities of the underground structure design of Cigéo. Presentation of the constrains and construction phasing stages of “Phase 1” G. Champagne de Labriolle & H. Ouffroukh ARCADIS ESG, Le Plessis Robinson, France E. Boidy Tractebel Engineering, Gennevilliers, France H. Miller Antea Group, Antony, France	Recent developments towards Autonomous Tunneling and Mining Machinery T. Peinsitt, H. Haubmann & H. Kargl Sandvik Mining and Construction G.m.b.H., Zeltweg, Austria C. Kary Geodata ZiviltechnikgesellschaftsmbH, Leoben, Austria	Loading magnitude for rock tunnel during earthquake estimated by dynamic measurement at an actual tunnel A. Kusaka & S. Hara Public Works Research Institute, Tsukuba, Japan N. Isago Tokyo Metropolitan University, Hachioji, Japan (Formerly, Public Works Research Institute)	Steel fibre reinforced concrete for segmental lining – crack mitigation measures at design phase G. Castrogiovanni AECOM, New York, USA G. Busacchi COWI A/S, Doha, Qatar T. Léber COWI A/S, Lyngby, Denmark G. Mariani L.S.A.B JV, Stockholm, Sweden	Extending the urban underground utility network capacity – A long drive large diameter pipe-jacking tunnel A. Koliji Stucky Ltd, Renens, Switzerland - Current: BG Consulting Engineers, Lausanne, Switzerland E. Rascol Swiss Federal Railways, CFF, Lausanne, Switzerland S. Crisinel Stucky Ltd, Renens, Switzerland
16.00-16.20	CERN (HL-LHC): New underground & surface structures at Point 1 & Point 5 A. Canzoneri Rocksoil S.p.A., Milan, Italy J. Amiot Setec, Paris, France F. Rozemberg CSD,Lousannes, Switzerland D. Merlini & F. Gianelli Pini Swiss Engineers, Lugano, Switzerland G. Como & F. De Salvo Lombardi SA, Minusio, Switzerland C. Helou Artelia, Paris, France L. A. Lopez & P. Mattelaer CERN, Geneve, Switzerland	Building Information Modeling in Warsaw metro extension project L.J. Szczepaniak, F. Bizzi & R. Sorge ASTALDI SpA, Rome, Italy	Acoustic emissions from flat - jack test for rock - burst prediction A. Voza, L. Valguarnera & S. Fuoco Brenner Basis Tunnel BBT-SE, Bolzano, Italy G. Ascari Akron S.r.l., Bovisio-Masciago, Italy D. Boldini DICAM, University of Bologna, Bologna, Italy D. Buttafoco B.T.C. Brenner Tunnel Construction, Rome, Italy	The Load-bearing capacity of primary linings, considering time dependent parameters, at the Brenner Base Tunnel T. Cordes & K. Bergmeister Brenner Base Tunnel BBT-SE, Innsbruck, Austria A. Dummer, M. Neuner & G. Hofstetter University of Innsbruck, Innsbruck, Austria	Compound use of underground space for integrated campus-urban development: a case study from Tsinghua University, China WJ. Zhu, Q.C. Bao & S.J. Gai Tsinghua University, Beijing, China
16.20-16.40	A new underground laboratory for exploring the deep Universe: the design of a third generation of a Gravitational Waves Observatory L. Schiavinato & P. Mazzalai SWS Engineering S.p.A., Trento, Italy G. Gemme, G. Losurdo & M.Punturo INFN, Istituto Nazionale di Fisica Nucleare, (Genova, Pisa, Perugia), Italy A. Paoli EGO European Gravitational Observatory, Cascina, Italy F. Ricci INFN and Università di Roma “La Sapienza”, Rome, Italy E. Calloni INFN and Università degli Studi di Napoli “Federico II”, Naples, Italy G.Oggiano Università degli Studi di Sassari, Sassari, Italy M Carpinelli INFN and Università degli Studi di Sassari, Sassari, Italy	The convergence of all communication and data requirements onto a single IP backbone D. Kent & D.Edmonds MST Global, Sydney, Australia	Design of shaking table tests on atrium-style subway station models under seismic excitations Z.M. Zhang Tongji University, Shanghai, China University of Naples Federico II, Naples, Italy Y. Yuan Tongji University, Shanghai, China E. Bilotta University of Naples Federico II, Naples, Italy H.T.Yu Tongji University, Shanghai, China H.L. Zhao Shanghai University, Shanghai, China	Real behavior of shotcrete primary lining in squeezing rock mass: the experience at the Brenner Base Tunnel L. Ziller SWS Engineering Spa, Trento, Italy S. Fuoco BBT-SE, Bolzano, Italy	Investing in urban underground space –maximising the social benefits S. Bricker British Geological Survey, Nottingham, UK L. von der Tann University College London, London,UK E. Reynolds Urban, London, UK C. Bocci WestonWilliamson+Partners, London, UK P.Salak Dr Sauer & Partners, Surbiton, Surrey, UK
16.40-17.00	Challenges of Designing a Tunnel Boring Machine (TBM) for Development of Underground Structures on the Moon J. Rostami & C. Dreyer Colorado School of Mines, Golden, USA R. Duhme Herrenknecht Asia Headquarters, Singapore B. Khorshidi McNally Construction Inc., Toronto, Canada	A fast detection method for tunnel surface defects based on video processing M.Hu,X.W. Zhou &X.W. Gao SHU-SUCG Research Centre for Building Industrialization, Shanghai, China	Experiences of tunnels subject to earthquake in central Italy A. Micheli, L. Cedrone & A. Andreacchio Anas S.p.A., Rome, Italy S. Pelizza Politecnico di Torino, Turin, Italy	The design of a segmentally lined tunnel for a large sewer outfall. Lote 3 - Emisario Planta Riachuelo, Argentina R.D. Aradas & D. Tsingas Jacobs, Buenos Aires, Argentina M. Martini J.V Salini Impregilo SpA – SA Healy Company – Jose J. Chediack SA, Buenos Aires, Argentina	The A2 Maastricht Project: A joint action plan B. Grote & B. Lobbezoo Avenue2, Maastricht, The Netherlands L. Prompers & D. Florie Projectbureau A2 Maastricht, Maastricht, The Netherlands
17.00-17.30					CLOSING CEREMONY
19.30	TRAIN DEPARTURES TO GALA DINNER - PIETRARSA				

PALAZZO SERRA DI CASSANO	
HRS	OFF-SITE SESSION AND BOURBON TUNNEL VISIT
16.20-17.30	Bourbon Tunnel Visit
17.30-18.00	Travel from Palazzo Serra di Cassano to Meeting points