

Fortezza da Basso • FLORENCE (Italy)  
30<sup>th</sup> September • 2<sup>nd</sup> October 2019



37<sup>TH</sup> INTERNATIONAL  
**NO-DIG**  
FLORENCE 2019

JOIN THE INTERNATIONAL  
NO-DIG FLORENCE!



PRELIMINARY  
PROGRAMME

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## SCIENTIFIC COMMITTEE

### Samuel Ariaratnam

Construction Engineering Program Chair, past ISTT Chairman and Arizona State University Professor, USA

### Wout Broere

NSTT Board Member and Delf University of Technology Professor (Geo engineering session), Netherlands

### Edoardo Cottino

ITU (International Telecommunication Union) Study Group 15 Vice Chairman and Sirti Innovation Director, Italy

### Feliciano Esposto

IATT Technical Committees Coordinator, Italy

### Roberto Frassine

Uniplast Chairman and Politecnico di Milano Professor (Industrial Chemistry and Chemical Engineering Department), Italy

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GSTT Chairman and University of Hochschule Wismar Professor (Construction Management and Construction Technologies), Germany

### Tom Iseley

Director International Operations at UNITRACC and Louisiana Tech University Professor (Civil Engineering, Construction Engineering Technology), USA

### Matthew Izzard

UKSTT Chairman, United Kingdom

### Henk Kruse

Deltares Senior Geotechnical Consult, Holland

### Stefano Mambretti

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### John Matthews

Director of the Trenchless Technology Center Louisiana and Louisiana Tech University Associate Professor (Civil Engineering, Construction Engineering Technology), USA

### Valeria Mezzanotte

Bicocca University of Milan Researcher and Professor (Department of Earth and Environmental Sciences), Italy

## SCIENTIFIC COMMITTEE

### Quintilio Napoleoni

University of Rome La Sapienza Associate Professor (Department of Civil, Constructional and Environmental Engineering), Italy

### Francesco Napolitano

Head of Hydraulics and Hydraulic engineering committee, Association of engineers of Rome and University of Rome La Sapienza Professor (Department of Civil, Constructional and Environmental Engineering), Italy

### Alessandro Olcese

IATT Scientific Director, Italy

### Jo Parker

UKSTT Co-opter members, United Kingdom

### Marco Raffaldi

IATT Past Vice Chairman, Italy

### Luca Rossi

Department of Technological Innovations and Safety of Plants, Products and Anthropic Settlements INAIL, Italy

### Marc Schnau

DCA-Europe (Drilling Contractor Association) Chairman, Germany

### Keh-Jian Albert Shou

CTSTT Chairman and National Chung-Hsing University Civil Engineering Professor, Taiwan

### Volker Wagner

DWA (German Association for water management, wastewater and waste) and Wismar University Professor (Department of Civil Engineering and Urban Water Management and Waste Management), Germany

### Antonino Valenza

University of Palermo Professor (Civil, Environmental, Aerospace, Materials Engineering department), Italy

**PROGRAM AT A GLANCE**

The scientific program is subject to changes

**30<sup>th</sup> SEPTEMBER 2019**

	Technical Session Room A	Parallel Session Room B	Parallel Session Room C	Parallel Session Room D
09.30	Welcome coffee			
10.00 12.00	Opening Ceremony			
12.00	Exhibition Area			
13.00 14.00	Lunch break			
14.00 14.20	Panel Event 1 Samuel Ariaratnam - Arizona State University	Research & Development 1	Mapping and Inspection of Underground Utilities 1	14.00-15.00 Industry Session EKSO srl
14.20 16.00	Microtunneling Pipe Jacking Auger Boring 1			15.00-18.00 Short Course
16.00 16.20	Coffee break			Le tecnologie di risanamento e rinnovamento del sistema idrico integrato
16.20 18.00	Horizontal Directional Drilling 1	Trenchless Technology Case Studies 1	Mapping and Inspection of Underground Utilities 2	

**1<sup>st</sup> OCTOBER 2019 - MORNING**

	Technical Session Room A	Parallel Session Room B	Parallel Session Room C	Parallel Session Room D
09.15 09.40	Panel Event 2 Standardization by UNI (Italian National Standard Body)	Pipe lining & Coatings 1	Research & Development 2	
09.40 11.00	International Standards			10.00-11.00 Industry Session Anese srl
11.00 11.20	Coffee break			
11.20 11.40	Trenchless Technology by CIGRE Study Committee B1	Round Table Water and Wastewater	Research & Development 3	11.00-12.00 Industry Session Saint-Gobain PAM Italia
11.40 13.00	Mapping and Inspection of Underground Utilities 3			12.00-13.00 Industry Session Danphix spa
13.00 14.00	Lunch break			

- Technical Sessions will be in English and open only to delegates regularly registered to the congress
- The short courses will be in Italian and have a special registration fee
- Industry Sessions and the Exhibition area are open to anyone and free of charge

**PROGRAM AT A GLANCE**

The scientific program is subject to changes

**1<sup>st</sup> OCTOBER 2019 - AFTERNOON**

	Technical Session Room A	Parallel Session Room B	Parallel Session Room C	Parallel Session Room D
14.00 16.00	Microtunneling Pipe Jacking Auger Boring 2	Trenchless Pipe replacement 1  Trenchless Technology Case Studies 2	14.00-14.20 Panel Event 3 Risk Assesment in excavation works - INAIL (National institute for occupational accident insurance)  14.20-15.20 Environmental & Sustainability Benefits of Trenchless 1  15.20-16.00 Research & Development 4	14.30-15.30 Industry Session EKSO srl
16.00 16.20	Coffee break			
16.20 18.00	Horizontal Directional Drilling 2	Pipe lining & Coatings 2	16.20-17.20 Environmental & Sustainability Benefits of Trenchless 2  17.20-18.00 Research & Development 5	15.30-18.30 Short Course Microtunneling e direct pipe

**2<sup>nd</sup> OCTOBER 2019**

	Technical Session Room A	Parallel Session Room B	Short Courses Room C	Parallel Session Room D
09.15 11.00	Panel Event 4 Worldwide Trenchless Market	Trenchless Pipe replacement 2	09.30-10.30 Industry Session EKSO srl	09.30-15.30 Short Course
11.00 11.20	Coffee break		10.30-13.30 Short Course	Tecnologie di trivellazione orizzontale controllata - TOC
11.20 13.00	Panel Event 4 Worldwide Trenchless Market	Trenchless Technology Case Studies 3	Le tecnologie di indagine conoscitiva e dimostrazione live	Dimostrazione live
13.00 14.00	Lunch break			
14.00 16.00	Research & Development 6	Pipe lining & Coatings 3		
16.00	Mapping and Inspection of Underground Utilities 4			
16.00	Closing Ceremony			

30<sup>th</sup> September

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
09.30	Welcome coffee			
10.00 12.00	<p><b>Opening Ceremony</b>  <b>Dario Nardella</b> - Major of Florence  <b>Jari Kaukonen</b> - ISTT Chairman  <b>Paolo Trombetti</b> - IATT Chairman  <b>Piero Petrucco</b> - Vice Chairman ANCE (Builders National Association)</p>			
12.00	Exhibition Area			
13.00 14.00	Lunch break	Lunch break	Lunch break	Lunch break
	<b>Microtunnelling/Pipe Jacking/Auger Boring I</b>	<b>Research &amp; Development I</b>	<b>Mapping and Inspection of Underground Utilities I</b>	<b>Industry Session</b>
14.00 16.00	<p><b>Panel Event 1</b>  <b>Samuel Ariaratnam</b> (Arizona State University - USA)</p> <p>E-Power Pipe®: jet pump technology for long-distance drives in small diameters  <b>Marc Peters</b> (Herrenknecht AG - Germany)</p> <p>Stability of surrounding soil by using underpinning pipe jacking method  <b>Hideki Shimada</b> (Kyushu University, Department of Earth Resources Engineering - Japan)</p> <p>A microtunnel with a very little radius for a big pipeline  <b>Ugo Lazzarini</b> (Max Streicher spa - Italy)</p> <p>TUnIS Navigation E-Power Pipe® - Precise guidance of small diameter tunnelling machines  <b>Hähnle Torben</b> (VMT GmbH - Germany)</p> <p>Short-segment jacking of water main for realignment under limited space in urban area  <b>Wu Shihchi</b> (Taipei Water Department - Taiwan)</p>	<p>Hydrostatic strength of HI-PVC pipe  <b>Chiwan Hsieh</b> (National Pingtung University of Science and Technology - Taiwan)</p> <p>FITT bluforce rj is a range of polymer alloy pipes with joint restraint system  <b>Francesco Faedda</b> (FITT - Italy)</p> <p>New battery powered drill rig  <b>Raffaele Savi</b> (E.G.T. srl - Italy)</p> <p>Sprayed polymer liners for maintenance holes: resistance to external groundwater  <b>Ian Moore</b> (Queen's University, Kingston - Canada)</p> <p>The design and application of PE100 pipe in trenchless technologies for new installation and rehabilitation - Aspects of new materials and support via online guide and tool  <b>Andrew Wedgner</b> (PE100+ Association - Germany)</p> <p>RedEx® internal sealing collars - Partial repair and liner end sealing for sewage and drinking water pipes  <b>Susanne Leddig-Bahls</b> (IQS Engineering AG - Germany)</p>	<p>How can sewer and water companies deal with hundreds of kilometers of plugged interceptors?  <b>Sergio Palazzo</b> (ABRATT - Brasil)</p> <p>WRC's use of focused electrode leak location (FELL) to assess gravity sewers in the UK and Germany, before and after rehabilitation  <b>Peter Henley</b> (WRC plc - USA)</p> <p>From hades to heaven? Developments in integrated buried asset information systems in the UK  <b>Jo Parker</b> (Watershed Associates - United Kingdom)</p> <p>Leak detection using Helium as a tracer gas and the primus line solution for pipe rehabilitation  <b>Avishay Schnaidman</b> (D-I Development and Implementation Ltd - Israel)</p> <p>Increased automation and accuracy in sewer and water main inspections  <b>Tiia Lampola</b> (WSP Finland Oy - Finland)</p> <p>A novel cyber-monitoring based asset management scheme for water distribution networks using evolutionary optimization and neural networks  <b>Kalyan Piratlai</b> (Clemson University, Glenn Department of Civil Engineering - USA)</p>	<p>14.00 - 15.00  <b>EKSO srl</b></p> <p>15.00 - 18.00  <b>Short course</b></p> <p><b>Le tecnologie di risanamento e rinnovamento del sistema idrico integrato</b></p> <p>La regolamentazione vigente  <b>Prof. Francesco Napolitano</b> (Università degli Studi di Roma La Sapienza - Dipartimento di Ingegneria Civile, Edile ed Ambientale)</p> <p>Disciplinare tecnico  <b>Ing. Stefano Tani</b> (MM spa - Responsabile Servizi Divisione Servizio Idrico)</p> <p>Progettazione di un intervento senza scavo: ispezioni iniziali, scelta della tecnologia e controllo di qualità cantiere  <b>Prof. Stefano Mambretti</b> (Politecnico di Milano Dipartimento di Ingegneria Civile ed Ambientale)</p> <p>Approfondimenti sulle tecnologie trenchless per il risanamento e rinnovamento del Sistema Idrico Integrato e presentazione di case history  <b>Ing. Stefano Tani</b> (MM spa - Responsabile Servizi Divisione Servizio Idrico)</p>
16.00 16.20	Coffee break	Coffee break	Coffee break	

30<sup>th</sup> September

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	<b>Horizontal Directional Drilling 1</b>	<b>Trenchless Technology Case Studies 1</b>	<b>Mapping and Inspection of Underground Utilities 2</b>	
16.20 18.00	<p>HDD drilling in hard and hardest rock in Europe - Examples of job sites <b>Hans - Joachim Bayer</b> (TRACTO-TECHNIK - Germany)</p> <p>Marsdiep crossing between Den Helder and Textel, length 4.600 m <b>Ernst Fengler</b> (LMR Drilling GmbH - Germany)</p> <p>The Cornegliano Laudense natural gas storage project: HDD as solution for pipeline installation in urban areas <b>Vincenzo Nisii</b> (SAIPEM Engineering &amp; Construction Onshore Division - Italy)</p> <p>Replacing a penstock pipe using directional drilling :chronicle of a non-standard jobsite <b>Paul Cavillon</b> (FOREXI - France)</p> <p>Steering the HDD <b>Hans Block</b> (Brownline - Netherlands)</p> <p>Smart technologies for the enhancement of productivity, digital integration and safety in HDD projects <b>Jasper Van't Westende</b> (VERMEER EMEA - Netherlands)</p>	<p>Unconventional methods of trenchless pipeline installation and replacement using conventional direct PipeA® and HDD Equipment <b>Jwala Sharma</b> (Mears Group Inc - USA)</p> <p>No-dig renovation of pressure pipelines, re-connection techniques and case studies <b>Firmino Pires Barbosa</b> (Relineurope AG - Germany)</p> <p>Installation of pre-support steel pipes to protect \r\nan historical building by a retractable MTBM <b>Riccardo Miotto</b> (Pato srl - Italy)</p> <p>Unique horizontal drain installation under a building using\r\n pilot tube guided Auger Bore methods <b>Michelle Macauley</b> (Macauley Trenchless - USA)</p> <p>A Large U.S. City Conducts a 30,000LF (9,284m) Legacy CIPP assessment project after not achieving anticipated reductions in infiltration resulting in new testing &amp; acceptance standards <b>Chuck Hansen</b> (Electro Scan Inc. - USA)</p>	<p>The cadastre of underground infrastructure networks: the model of Lombardy Region <b>Chiara Dell'Orto</b> (Lombardy Region - Italy)</p> <p>A pipe detecting project and technical assistance in Bangladesh <b>Kito Kazuki</b> (TEPCO Power Grid - Japan)</p> <p>DEMDY"Deep Electromagnetic Detection"\r\n <b>Jean Francois Maregiano</b> (JFM Conseils - France)</p> <p>Assessing the underworld - a three-infrastructure approach to remote sensing <b>Christopher Rogers</b> (University of Birmingham, Department of Civil Engineering - United Kingdom)</p> <p>An automated leakage detection technique for water pipeline systems <b>Kalyan Piratla</b> (Clemson university, Glenn Department of Civil Engineering - USA)</p>	

1<sup>st</sup> October

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	International Standards	Pipe Lining and Coatings I	Research & Development 2	Industry Sessions
09.15 11.00	<p><b>Panel Event 2</b> Standardization (UNI, Italian National Standard Body - Italy)</p> <hr/> <p>ITU-T standardization activities related to trenchless technologies <b>Edoardo Cottino</b> (ITU Study Committee - Italy)</p> <p>AWWA watermain rehabilitation initiatives <b>Marc Knight</b> (University of Waterloo - Russia)</p> <p>UNI/PdR-guideline on low environmental impact underground infrastructure technology <b>Feliciano Esposto</b> (IATT - Italy)</p> <p>Status and application of international standards for trenchless technology <b>John Gumbel</b> (JG Pipeline Consultancy - United Kingdom)</p>	<p>Advances in CIPP pressure pipe liner testing and design <b>Mark Knight</b> (University of Waterloo - Russia)</p> <p>Design of liners for circular &amp; non-circular shapes according to the new French ASTEE 3R-2014 V2.0 method - Influence of geometrical imperfections of host pipe &amp; liner <b>Olivier Thepot</b> (Eau de Paris - France)</p> <p>Relining of a DN 300 steel water pipe anchored under the ancient Bridge of the Academy in the historic center of Venice <b>Gianluca Paro</b> (Risanamento Fognature spa - Italy)</p> <p>Taking the mystery out of trenchless repair of pressure pipes with carbon FRP <b>Mo Eshani</b> (PipeMedic by QuakeWrap - USA)</p> <p>Design &amp; building contracts as a performing opportunity to CIPP sewers rehabilitation- Brianzacque case study <b>Simone Cellitti</b>, (Brianzacque srl - Department of Engineering and Spatial Planning - Italy)</p>	<p>Numerical analysis of the behavior of pressurized underground pipelines rehabilitated by cure-in-place-pipe method <b>Keh-Jian Albert Shou</b> (National Chung-Hsing University - Taiwan)</p> <p>A novel iot system development of using wearable ppg monitor devices to improve safety management for shield tunnel construction project <b>Josh Huang</b> (Gini Biotech Corporation Limited - Taiwan)</p> <p>Development and use of robots for trenchless work inside pipelines <b>Michael Sedler</b> (St. Peterburg Polytechnic University - Russia)</p> <p>Digitization in the field of sewer rehabilitation <b>Thomas Ludewig</b> (Ludewig Evaluation GmbH - Germany)</p> <p>The DLT-Method: Stress Test for Pressure Pipes <b>Andreas Haacker</b> (Siebert-Knipschild GmbH - Germany)</p>	<p>10.00 - 11.00 <b>ANESE srl</b></p> <p>11.00-12.00 <b>SAINT GOBAIN PAM Italia</b></p> <p>12.00-13.00 <b>DANPHIX spa</b></p>
11.00 11.20	Coffee break	Coffee break	Coffee break	

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
			<b>Research &amp; Development 3</b>	
	<p><b>11.20-11.40</b> <b>Trenchless Technology</b> Sergio Chinosi (CIGRE - Study Committee B1 (International Council on Large electric system)</p>	<p><b>Round Table - Water and Wastewater</b></p>	<p>Innovative monitoring of railway tracks during trenchless crossings <b>Jack Butterworth</b> (Lynx+ - France)</p> <p>Investigation of cracks found in the circumferential direction on jacking pipes <b>Yuki Kaneshiro</b> (TEPCO Power Grid-Japan)</p> <p>Increased efficiency in renovation planning <b>Sari Pietilä</b> (WSP Finland Oy - Finland)</p> <p>Contact mechanics and its normalized indices for trenchless cutting associated with machine learning <b>Li-Hsien Chen</b> (National Taipei University of Technology-Taiwan)</p> <p>New performance of a NO-DIG technology <b>Christian Noll</b> (Pipetronics GmbH &amp; Co. KG - Germany)</p>	
	<p><b>Mapping and Inspection of Underground Utilities 3</b></p> <p>The Italian solution on the Cadastre of technological infrastructures <b>Fulvio Ananasso</b> (Associazione Stati Generali dell'Innovazione - Italy)</p> <p>Osaka gas' GPR and cable &amp; pipe locator <b>Takaharu Nakauchi</b> (Osaka Gas Co - Japan)</p> <p>Condition monitoring of excavated CIPP-liners to ensure lifespan <b>Love Pallon</b> (RISE Research Institutes of Sweden - Sweden)</p> <p>Safety measures for reducing asset strikes <b>Scott Landes</b> (Infrastructure Resources Rhino Marking and Protection Systems - USA)</p>			
<p><b>11.20</b> <b>13.00</b></p>				
<p><b>13.00</b> <b>14.00</b></p>	Lunch break	Lunch break	Lunch break	

1<sup>st</sup> October

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	<b>Microtunnelling/Pipe Jacking/Auger Boring 2</b>	<b>Trenchless Pipe Replacement 1</b>	<b>Environmental and Sustainability Benefits of Trenchless 1</b>	<b>Industry session</b>
14.00 16.00	How to choose the best technology for laying an underground pipeline <b>Enzo Rizzi</b> (ICOP spa - Italy)	The path forward for pipe bursting asbestos cement pipe in the United States while meeting existing US regulations <b>Edward Alan Ambler</b> (AM Trenchless - USA)	<b>Panel Event 3</b> Risk assessment in excavation works <b>Luca Rossi</b> INAIL (National institute for occupational accident insurance)	14.30-15.30 <b>EKSO srl</b>
	Microtunneling projects for power-transmission pipes-sharp curves at alignment changes and steep slope <b>Shinjiro Nakamura</b> (TEPCO Power Grid Inc. - Japan)	The use of new condition assessment technologies for selecting trenchless rehabilitation of wastewater networks in Ras al Khaimah, UAE <b>Abdul Qadir Malik</b> (Ras Al Khaimah Wastewater Agency - UAE)	New technical solutions for the burial of distribution networks: benefits and reasons why <b>Luca Venturi</b> (Langmatz GmbH - Germany)	15.30-18.30 <b>Short course</b>
	Selection criteria of tunneling boring machines (TBM) for hard and soft grounds <b>Niyazi Bilim</b> (Konya Technical University - Turkey)	Design and installation of water pipeline renewals <b>Houming Ni</b> (Asoe Hose Manufacturing Inc - USA)	Trenchless solutions for the installation of gas distribution networks <b>Thorsten Schulte</b> (Tracto-Technik - Germany)	<b>Microtunnelling e direct pipe</b> La normativa vigente: UNI/PdR 26.2:2017 Tecnologia di realizzazione delle infrastrutture interrate a basso impatto ambientale - Posa di tubazioni a spinta mediante perforazioni orizzontali La fattibilità dei Microtunnel, indagini preventive geognostiche ed indagini sui sottoservizi esistenti <b>Prof. Quintilio Napoleoni</b> (Università degli Studi di Roma La Sapienza - Ingegneria Civile, Edile ed Ambientale)
	Tight curved microtunnel in Auckland; New Zealand <b>Yann Rouillard</b> (Bessac - France)		Criteria to evaluate environmental sustainability and applicability of no-dig technologies for the installation of new pipes and the in situ rehabilitation of existing pipes <b>Martina Ferrini</b> (University of Milan, Bicocca, DISAT - Italy)	Elementi di progettazione, materiali e modalità di esecuzione del microtunnelling rettilineo e curvilineo <b>Ing. Ugo Lazzarini</b> (Consultant)
	Study on rectangular pipe jacking and pipe shield <b>Trisha Minmin Sun</b> (SGSTT - Syngapore)	<b>Trenchless Technology Case Studies 2</b>	<b>Research &amp; Development 4</b>	Elementi di progettazione e modalità di esecuzione del direct pipe <b>Prof. Quintilio Napoleoni</b> (Università degli Studi di Roma La Sapienza - Ingegneria Civile, Edile ed Ambientale)
	Successful challenge for the construction by microtunning of a sub-river utility tunnel! <b>Rémi Subra</b> (SADE - France)	A New FRP Solution for Reconstruction of Deteriorated Pipes and Culverts <b>Mo Eshani</b> (PipeMedic by QuakeWrap - Usa)	Recent advances to understanding of cured in place pipe liner performance within water pipes <b>Ian Moore</b> (Queen's University, Kingston - Canada)	I fanghi di perforazione Presentazione di case history <b>Ing. Ugo Lazzarini</b> (Consultant)
		Utilisation of microtunneling technology for construction of the new gas pipeline between Azerbaijan and Europe <b>Yann Rouillard</b> (Bessac - France)	Evaluating hydraulic fracture risk in layered soil systems <b>Andrew Sparks</b> (Laney Group Inc - USA)	
		Palermo renovates water main to cope with seismic activity <b>Arnold Cerkodhima</b> (Danphix spa - Italy)		
16.00 16.20	Coffee break	Coffee break	Coffee break	



	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	<b>Horizontal Directional Drilling 2</b>	<b>Pipe Lining and Coatings 2</b>	<b>Environmental and Sustainability Benefits of Trenchless 2</b>	
16.20 18.00	<p>The Drilling Contractors Association (DCA-Europe). A European organisation for quality and education in HDD <b>John Stoelinga</b> (Drilling Contractors Association, DCA-Germany)</p> <p>The development of real-time detection and wireless transmission system of drilling parameters in HDD reaming hole <b>Xuming Zhu</b> (China University of Geosciences - China)</p> <p>Experimental study on pullback loads for steel pipelines installed by horizontal directional drilling <b>Ashkan Faghih</b> (University of Alberta - Canada)</p> <p>HDD for connection in gas storage field - Annulus filling <b>Marcello Viti</b> (Anese srl - Italy)</p> <p>Horizontal directional drilling, pipeline installation by pulling or pushing <b>Henk Kruse</b> (Deltares - Netherlands)</p> <p>The role of torque in the reaming process in HDD applications <b>Renzo Chirulli</b> (Vermeer EMEA - Netherlands)</p>	<p>Renovation of sewerage networks under pressure with cured-in-place pipes; RSV leaflet 1.2 <b>Susanne Leddig-Bahls</b> (IQS EngineeringAG - Germany)</p> <p>CIPP   Advantages, risks and potentials of LED curing <b>Nitlas Ernst</b> (Bluelight GmbH-Germany)</p> <p>Pipe rehabilitation systems - How do you ensure that the system will withstand the rigors of day to day operation and maintenance <b>Richard David Swan</b> (Picote Solutions OY Ltd - United Kingdom)</p> <p>A renewed approach to internal reinstatement of services in CIPP lined water mains <b>Ian Andrew Lancaster</b> (Aegion Corporation - USA)</p> <p>Quality control factors of CIPP Construction Management On Water Main Rehabilitation <b>Wei Cheng Cheng</b> (Taipei Water Department - Taiwan)</p>	<p>Novel business models in support of trenchless cities <b>Christopher Rogers</b> (University of Birmingham-United Kingdom)</p> <p>Innovation for the environment: the experience of Marche Multiservizi s.p.a <b>Nitro Bruni</b> (Marche Multiservizi spa - Italy)</p> <p>Business and the SDG's <b>Per Holm</b> (BlueKoldings - Denmark)</p>	
			<b>Research &amp; Development 5</b>	
			<p>Pipe-filling method for stabilizing empty ducts from the manhole <b>Kenjii Hiyoshi</b> (Nippon Telegraph and Telephone Corporation - Japan)</p> <p>Application of solubilizing surfactant in trenchless drilling fluid <b>Lanbo Xu</b> (China University of Geosciences - China)</p>	



2<sup>nd</sup> October

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	Panel 4 - Worldwide Trenchless Market	Trenchless Pipe Replacement 2	Industry Session	Short Course
09.15 11.00	<p>Presentation by: ISTT Societies</p>	<p>Geopolymer lining system used for difficult deep manhole and brick sewer rehabilitation <b>Karl Bissinger</b> (Vortex Europe AG - Germany)</p> <p>Water main rehabilitation with inserted hoses: considerations on design and installation <b>Andreas Gross</b> (Raedlinger primus line GmbH - Germany)</p> <p>Sharing perspective - How bid items effect the cost and construction for a pipe bursting project <b>Edward Alan Ambler</b> (AM Trenchless, Sanford - USA)</p> <p>Experiences with rehabilitation of potable water pipes in Norway <b>Hendrik Panman</b> (Kjeldaas AS - Norway)</p> <p>Critical analysis of pipe ramming behavior and factors that impact predictive models <b>Kimberlie Staheli</b> (Staheli Trenchless Consultants, Inc - USA)</p>	<p>09.30-10.30 <b>EKSO srl</b></p> <p>10.30-13.30 <b>Short Course</b></p> <p><b>Le tecnologie di indagine conoscitiva</b></p> <p>La normativa vigente: -UNI/PdR 26.1:2017 - Tecnologia di realizzazione delle infrastrutture interrate a basso impatto ambientale - sistemi per la localizzazione e mappatura delle infrastrutture nel sottosuolo -UNI/PdR 38:2018 - Marcatura elettronica di reti interrate e infrastrutture nel sottosuolo</p> <p>Le tecniche di investigazione non distruttive: telecamere e video ispezioni, ricerca perdite e localizzatori elettromagnetici. <b>Dott. Geol. Paolo Papeschi</b> (IDS Georadar, GEO Business Unit director)</p> <p>Le indagini geognostiche <b>Dott. Geol. Riccardo Martelli</b> (Presidente Ordine dei Geologi della Toscana)</p> <p>Metodo GPR (Ground Probing Radar): un aiuto per la progettazione degli interventi Il Radar Interferometrico Terrestre per il monitoraggio statico e dinamico di versanti, frane e strutture <b>Dott. Geol. Paolo Papeschi</b> (IDS Georadar, GEO Business Unit director)</p> <p>Dimostrazione live</p>	<p>09.30-15.30</p> <p><b>Tecnologie di trivellazione orizzontale controllata - TOC</b></p> <p>La normativa vigente: UNI/PdR 26.3:2017 - Tecnologia di realizzazione delle infrastrutture interrate a basso impatto ambientale - Sistemi di perforazione guidata: Trivellazione Orizzontale Controllata (TOC)</p> <p>La fattibilità TOC, indagini preventive geognostiche ed indagini sui sottoservizi esistenti. <b>Dott. Geol. Alessandro Olcese</b> Direttore Scientifico IATT</p> <p>La TOC: elementi di progettazione e modalità di esecuzione in ambito urbano ed extraurbano</p> <p>Tipologia di tubazioni e materiali utilizzati nella posa tramite TOC <b>Prof. Quintilio Napoleoni</b> (Università degli Studi di Roma La Sapienza - Ingegneria Civile, Edile ed Ambientale)</p> <p>Dimostrazione live (trasferimento A/R da Fortezza da Basso)</p>
11.00 11.20	Coffee break	Coffee break		



2<sup>nd</sup> October

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	<b>Panel 4 - Worldwide Trenchless Market</b>	<b>Trenchless Technology Case Studies 3</b>		
11.20 13.00	Presentation by: ISTT Societies	<p>Rehabilitation in Spain of a 10 km long asbestos cement drinking water main with flexible relining technology <b>Jorge Lamazares</b> (Sinzatec Canalizaciones - Spain)</p> <p>Recent developments of GRP solutions in the booming transportation market <b>Laurent Hesters</b> (Amiblu France - France)</p> <p>A case study in successful sewer network rehabilitation with uv cured cipp &amp; traditional/ non-traditional survey technologies <b>Jan Börje Persson</b> (BKP Berolina Polyester GmbH &amp; Co - Germany)</p> <p>Consideration in planning successful trenchless utility installations <b>Karina Buus</b> (Department of Water and Nature Aalborg Cowi - Denmark)</p> <p>Successful Installation of CFRP and GFRP on Pipe Bridges in Scotland, UK <b>Amber Jasmine Wagner</b> (Aegion Corporation - USA)</p>		
13.00 14.00	Lunch break	Lunch break		



2<sup>nd</sup> October

	TECHNICAL SESSION - ROOM A	PARALLEL SESSION - ROOM B	PARALLEL SESSION - ROOM C	PARALLEL SESSION - ROOM D
	<b>Research &amp; Development 6</b>	<b>Pipe Lining &amp; Coatings 3</b>		
<b>14.00</b> <b>16.00</b>	<p>Experimental characterization of micro-trenches on road pavements <b>Alessandro Corradini</b> (University of Perugia - Department of Civil and Environmental Engineering - Italy)</p> <p>A numerical study for the analysis of micro-trenching performance <b>Diana Salciarini</b> (University of Perugia - Department of Civil and Environmental Engineering - Italy)</p> <p>A novel monitoring procedure for assess the correct road pavement restoration after the One-Day-Dig micro-trenching installation <b>Evelina Volpe</b> (University of Molise, Department of Biosciences and Territory - Italy)</p>	<p>New UV Felt CIPP for the Rehabilitation of Underground Pipelines <b>Ian Andrew Lancaster</b> (Aegion Corporation - USA)</p> <p>Pipe Preservation during Trenchless Installations: No Need to Take Unnecessary Risks <b>Cristian Grecco</b> (TDC International AG - Switzerland)</p> <p>A unique example of close fit lining technology for the renewal of water pipes along the bridge "Ponte Punta Penna" in Taranto <b>Gianluca Casamassima</b> (Acquedotto Pugliese - Italy)</p> <p>Joining methods for CIPP products in pressure pipe systems <b>Jens Wahr</b> (D&amp;S - Germany)</p>		
	<b>Mapping and Inspection of Underground Utilities 4</b>	Hydroelectric pipeline rehabilitation, BlueLine - uv liner system <b>Matteo Vicentini</b> (ENEL - Italy)		
	<p>No-dig investigation around Palazzo Vecchio, Florence <b>Massimo Coli</b> (University of Florence, DST-Italy)</p> <p>Damage Prevention: OneCall solutions to protect underground utilities <b>Jan-Willem Nijman</b> (PelicanCorp / BeforeUDig - Italy)</p> <p>Small or Big - we don't mind! <b>Piero Salvo</b> (GAME Consultants - Canada)</p>	<p>Hoselining pipe rehabilitation, Acqualatina SpA experience <b>Daniele Verde</b> (Acqualatina spa - Italy)</p> <p>Sensors monitoring and trenchless technologies: two essential keystones toward a deep innovation of smart pipes backbones <b>Costantino Giaconia</b> (University of Palermo-Dept of Engineering Italy)</p>		
<b>16.00</b> <b>16.45</b>	<b>Closing Ceremony</b>			
<b>18.00</b>	<b>Exhibition Closing</b>			

## GENERAL INFORMATION

### Congress Venue

Fortezza da Basso  
Viale Filippo Strozzi, 1 - 50129 Florence (Italy)

### Organizing Committee



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For information on sponsorship please contact [industrynodig@oic.it](mailto:industrynodig@oic.it)  
For information on registrations and hotel reservation please contact [registrationnodig2019@oic.it](mailto:registrationnodig2019@oic.it)

### Registrations and Hotel Reservations

Registration fees to attend the Scientific sessions are in Euro (VAT 22% included) and will be adjusted according to VAT charge alignment.

	Within July 5 <sup>th</sup> , 2019	From July 6 <sup>th</sup> , 2019
DELEGATE ISTT Members	€ 450,00	€ 530,00
DELEGATE Non ISTT Members	€ 550,00	€ 650,00
STUDENT *	€ 50,00	€ 50,00
SHORT COURSES	€ 200	
GALA DINNER	€ 100,00	

\*Application as Student should be certified by a valid student ID to be up-loaded in the on-line platform directly (pdf format is required)

## GENERAL INFORMATION

### Delegate and student registration fee includes:

- Attendance to all Scientific sessions
- Conference kit
- Free entrance to exhibition
- Certificate of attendance
- Catering service as per programme
- Welcome ceremony

### Short courses registration fee includes:

- Attendance to the Short Course selected
- Conference kit
- Free entrance to exhibition
- Certificate of attendance

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