

REMTECH Europe

Provisional Programme International Conference and Exhibition



Organizzazione
della Nazioni Unite
per l'Educazione
la Scienza e la Cultura



Ferrara, città del
rinascimento
e il suo Delta del Po

19, 20, 21 September 2018, FERRARA (North East ITALY)

www.remtechexpo.com



REMTECH EXPO

REMTECH Europe

GENERAL PROGRAMME

19 SEPTEMBER WEDNESDAY 12.30

RemTech Expo Opening Ceremony

19 SEPTEMBER WEDNESDAY 14.00 - 19.30

Getting together Meeting

(Reserved to subscribed attendees - [download the program](#))

Poster Session is available all days at the FerraraFiere venue

20 SEPTEMBER THURSDAY 9.30 - 12.30

Thermal Alliance



Regulatory Framework and best practices for risk management

Coordinators: Scientific Committee RemTech Europe

Plenary session and Opening by JRC Director of Sustainable Resources. Dr. Ing. Giovanni di Santi*

Speakers presentations and Round table discussions with panellist speakers

20 SEPTEMBER THURSDAY 14.30 - 17.30



Innovative Methods and Technologies

Coordinators: Scientific Committee RemTech Europe

Speakers presentations and Round table discussions with panellist speakers

RemTech Europe 2018 "Live Demonstrations" *

Poster Session is available all days at the FerraraFiere venue

21 SETTEMBRE VENERDI' 9.00 - 13.00

Sustainable soil and groundwater remediation

Coordinators: Scientific Committee RemTech Europe

Speakers presentations and Round table discussions with panellist speakers

Poster Session is available all days at the FerraraFiere venue

Closure session, Conclusions and Instant Report by RemTech Europe Scientific Committee



REMTECH EXPO

REMTECH Europe

Getting together Meeting – Artistic experience
Wednesday 19 September 2018
2.00 p.m. to 7.30 p.m

PALAZZO TASSONI Via della Ghiara n. 36, Ferrara

2.00 p.m. Welcome to Getting Together Meeting

2.15 p.m. Indoor experience and photography course “Through the streets of Ferrara” by Arch. Laura Abbruzzese, in collaboration with the University of Ferrara, Architecture Department

3.30 p.m. Outdoor experience and photography guided tour by Arch. Laura Abbruzzese* Plenary discussion and pictures selection * you will use your own camera or smartphone

7.30 p.m. “Through the streets of the World” National Photography Exhibition Opening Ceremony “Through the streets of Ferrara” Pictures Projections Parallel Session Getting together Cocktail and Greetings by the Major of Ferrara



REMTECH EXPO

REMTECH Europe

Thursday 20 September 2018

9.00-9.30 - Registration

Opening Session: Regulation, Management Approaches, Financing and Best Practices

Chaired by Ana Paya Perez (Joint Research Centre)

9.30-9.45 - Introduction and greetings

Fulvia Raffaelli (tbc) Head of the Clean Technologies and Products at the European Commission's DG GROW Internal Market, Industry, Entrepreneurship and SMEs

9.45-10.00 - Status of Local Soil Contamination in Europe and outlook

Ana Payá Pérez, Joint Research Centre JRC-Ispra (Italy), European Commission

10.00-10.15 - Harmonization of human health-based risk assessment tools revisited

Frank A Swartjes, National Institute of Human Health and the Environment (RIVM) The Netherlands

10.15-10.30 - The Finnish Clean Soil Program. A national state-funded program to investigate and remediate sustainably the significant risks to human health and the environment due to land contamination

Jarno Laitinen, Centre for Economic Development, Transport and the Environment- Finland

10.30-10.45 - How to obtain the most economical solution and create political willingness to solve the EU and global problem of HCH-waste from Lindane production? - An old problem in need of innovative and sustainable approaches

Vijgen John, International HCH & Pesticides Association, Holte, DK-2840, Denmark

Session 1: Regulation, Management Approaches, Financing and Best Practices

Chaired by Frank Swartjes (RIVM-The Netherlands) and Jussi Reinikainen (Finnish Environment Institute (SYKE))

11.00-11.15 POSIDON PCP: POLLuted Site DecontaminatiON Pre-Commercial public Procurement action

Sara Bedin (European Expert on Innovation Public Procurement). Area Science Park Trieste (Italy)

11.15-11.30 UN Environment supports Serbian Environmental Protection Agency in the management of contaminated sites

Filippo Montalbetti (UNEP), Dragana Vidojevic (SEPA), Michele Fratini (ISPRA)



REMTECH EXPO

REMTECH Europe

11.30-11.45 - LAND STEWARDSHIP, Investing in the Natural, Societal and Economical capital of Industrial Land

Claudio Albano, NICOLE Network for Industrially Co-ordinated Sustainable Land Management in Europe

11.45-12.00 - In-situ source zone remediation using electrical resistance heating on a project site – near Troyes, France

Amy Wagner, Project Engineer, TRS Europe, (stand by)

12.00-12.15 - Comparison Of Different Approaches For Removal Of PFC/PFAS In Water

Jurgen Buhl, Geologist, Cornelsen Umwelttechnologie GmbH, Essen, Germany (Stand by)

12.15-12.30 – Integrated multidisciplinary approach for reusing mining waste as resource

Girolamo Belardi^a, Daniela Guglietta^a, Francesca Trapasso^a, Rosamaria Salvatori^b, Barbara Casentini^c, Shalini Dhyan^d, Nihar Sahoo^f, Paras Pujari^d and Parikshit Verma^{d&e}

^aInstitute of Environmental Geology and Geoengineering, Italian National Research Council, Montelibretti, Rome, Italy

12.30-13.00 - Round table discussion by *Ana Paya Perez (JRC), Frank Swarties and Jussi Reinikainen with panelist speakers*

LUNCH TIME

Poster Session is available all days at the FerraraFiere (PAV.3)



REMTECH EXPO

REMTECH Europe

Session 2: Innovative Technologies in site characterization and site remediation

Chaired by Mike Summersgill (CL:AIRE), and Claudio Albano (NICOLE, Jacob)

14.30 -14.45 - Enhanced Reductive Dechlorination – Methods for Process Control and Comparison of in-situ- remediation projects of DNAPL sites with and without active hydraulic management
Stephan Hüttmann, Sensatec GmbH, Kiel/Berlin - Germany

14.45-15.00 – Spin® injection: a solution for accurate injection of reagents in heterogeneous soils
Jeroen Vandenbruwane, Injectis BVBA, Belgium

15.00-15.15 - GeoForm: an innovative biogeochemical Treatment of CVOCs
Scott Steffl, PeroxyChem LLC

15.15-15.30 - Innovative Use of Standard Analytical Data Sets from a Comingled Groundwater Plume Setting to Locate Source Areas, Define Plume Boundaries, and Monitor Remediation Progress
Craig A. Cox, Cox-Colvin & Associates, Inc. Plain City, Ohio, USA

15:30-15:45 - Assessment of a new foam-based technology for enhanced reagent delivery in unsaturated anisotropic hydrocarbon-contaminated soils
Nicolas Fatin-Rouge University of Bourgogne Franche-Comté. Institute UTINAM (UMR CNRS 6213) Team "Nanosciences, Contaminants, Membranes". France

15:45-16:00 Innovative passive sampling technology for improved groundwater and surface water monitoring
Hubert de Jonge, Peter B. Mortensen, EUROFINS Environment Denmark

16.00-16.15 Evaluation of a Potential Dredging Disposal Site: The case of Rio de Janeiro Port
Monique de Farias Marins¹, Uirá Cavalcante Oliveira² Marcelo Pompermeyer de Almeida³, Ministry of Transport, Ports and Civil Aviation - National Secretariat of Ports - Department of Port Infrastructure and Environmental Management Centro Empresarial VARIG- Brasília

16.15-16.30 New PFAS Treatment Technology DE-FLUOROTM
Rick Parkman (AECOM, Manchester, Shangtao Liang, Ph.D. (AECOM, Atlanta, USA , Rachael Casson (AECOM, Sydney, AU

16.30-16.45 The use of Geosynthetic cementitious composite mats (GCCM's: the case of Pongo Mine (Alaska) and Athens (Greece)
Flavio Cosma, Concrete Canvas Ltd

16.45-17.15 Round table discussion chaired by Mike Summersgill (CL:AIRE) and Claudio Albano (NICOLE, Jacob) with panellist speakers



REMTECH Europe

PARALLEL SESSION AND LIVE DEMONSTRATIONS

Campus of Ferrara Fiere **From 14:30 to 17:30**

With the active participation of Companies: BAW, I FLUX, SGM Geologia & Ambiente, Petroltecnica, Syndial, Vaporpin

Opening

- 14:15** Meeting of attendants and companies involved at the entrance of FerraraFiere
Marco Falconi - ISPRA
- 14:30** Geoprobe drilling and 2-inch piezometer installation
Marco Lupi (SGM Geologia), Mario Sunseri (SGM Ingegneria)
- 15:00** Technologies “No Man Entry” for remediation of Underground Storage Tanks. Technological evolution and new prototypes: Bruco 3.0 and Camaleonte
Gianlorenzo Minarini (Petroltecnica)
- 15:30** Surfactant enhanced remediation of soil and groundwater
Bud Ivey (Ivey), Claudio Sandrone (BAW)
- 16:00** Application of passive samplers to soils and sediments
Luciano Zaninetta (Syndial), Raffaella Borrelli (ENI)
- 16:30** Application of iFLUX Samplers
Tim Op 't Eyndt, (iFLUX)
- 17:00** Temporary and permanent installation of Vapor Pin in concrete and asphalt
Laurie Chilcote (Vapor Pin Enterprise)
- 17:30** Questions and answers session
- 17:45** Live Demonstrations closure

In case of bad weather conditions, this session may be postponed to Friday 21st, morning starting from 9:30 a.m.

Poster Session is available all days at the FerraraFiere (PAV.3)



REMTECH EXPO

REMTECH INTERNATIONAL CONFERENCE Europe

Friday 21st September 2018 (9h30–13h30)

Session 3: Sustainable remediation and innovative technologies

Chaired by Christiane Wermeille* (Swiss Federal Environment Agency BAFU), Paul Nathanail (Land Quality Management Ltd & INSPIRATION4EU) and Elena Bradiakova (SAZP) *(tbc)

9:00-9:15- Finding ways to implement sustainability in remediation through procurement. Experiences from stakeholder engagement in a complex multisite 'design-build' tender for CHC contaminated urban groundwater remediation

Jarno Laitinen, Centre for Economic Development-, Transport and the Environment- Finland

9:15-9:30 - Approach on soil pollution by fluorine and possible soil remediation technologies

Jozef Kobza, National Agricultural and Food Centre - Soil Science and Conservation Research Institute Bratislava

9:30-9:45 - Testing the phytotechnology with *Miscanthusxgiganteus* at the military contaminated sites: field stage

Valentina Pidlisnyuk, Jan Evangelista Purkyně University, Czech Republic

9:45- 10:00 - The new generation of autonomous data logger: WiSens

Goulven Prud'homme, NKE Instrumentation, Lorient, France

10:00-10.15 - EHC Plus: Securing rapid contaminant reduction and accelerated bioremediation using an activated carbon based injectable reagent

Scott Steffl, Alberto Leombruni, Michael Mueller - PeroxyChem LLC

10:15-10:30 Use of an existing surface water fire-fighting basin at a chemical facility as a sustainable nature-based improvement to a large groundwater containment system.

Nicoletta Cavaleri, Olivier Maurer, CH2M HILL Srl, Italy

Session 4: Innovative technologies for decontamination of groundwater and sediments

Chaired by Prof. Nicola Fatin – Rouge Université de Bourgogne, France with Prof. Grzegorz Malina AGH University of Science and Technology Krakow (Poland)

10.30-10.45 - Innovative Colloidal Zero Valent Iron for effective In Situ Groundwater Remediation

John Freim, Regenesis, California, USA.

10.45-11.00 -Enhanced Sparging Technology using Surfactant and Foam for Groundwater Remediation

Julien Maire, University of Bourgogne Franche-Comté, FRANCE

11:00 -11:15 -Organic Pollution in the Aquatic Environment Caused by Environmental Burdens from the Chemika and Gumon Plants in the Area of the Former Apollo Refinery in Bratislava (Slovakia): An evaluation and assessment of the monitoring results.

Nora Jantáková, Department of Hydrogeology, Faculty of Natural Sciences, Comenius University in Bratislava (Slovakia)

REMTECH

INTERNATIONAL CONFERENCE

Europe

11:15-11:30 - Methodological optimization of The Effective Microorganisms (Em) Technology For Water Bioremediation

Mirian Crapez(1), Nuno Cunha e Silva(1), Gilberto Tavares de Macedo Dias(1), Estefan Monteiro da Fonseca(2) NuPECTE – Núcleo de Pesquisa Científica em Tratamento de Efluentes, Instituto de Geociências, Universidade Federal Fluminense, Campus da Praia Vermelha, Niterói/RJ, Brasil,

11:30 – 11:45 Application of Nanoremediation for Groundwater Decontamination: A Case study at a former industrial facility contaminated by chlorinated solvents

J. Bosch, J. Bruns, H. Noll, E. Brunetti, INTRAPORE, Essen, Germany

11:45-12:00 - New Antimethanogenic Reagents (AMRs)

Jim Mueller, Greg Booth, Claudio Sandrone, Bernd Rehm, Angela Hassell, Kevin Baker Jim Mueller Provectus Environmental Products, Inc

12:00 -12:15 - Surfactant Enhanced Extraction to Expedite Remediation of a Carbon Tetrachloride Source Zone at an Active Grain Elevator Facility

George (Bud) Ivey, Claudio Sandrone, Eric Dulle, Ivey International Inc. Surrey, BC, Canada

12:15-12:30 -Microbial Database Percentile Rankings and Stable Isotope Probing to Evaluate MNA

Sam Rosolina, Microbial Insights, Inc., Knoxville, Tennessee, USA

12:30 -13:00 - Round table discussion chaired by *Christiane Wermeille** (Swiss Federal Environment Agency BAFU), *Paul Nathanail* (Land Quality Management Ltd & INSPIRATION4EU), *Dietmar Müller Grabherr* (Environment Agency Austria and COMMON FORUM), *Elena Bradiakova* (SAZP) (*tbc) with panelist speakers

13:00 - Conclusions by *Ana Paya Perez* - Joint Research Centre JRC

Poster Session is available all days at the FerraraFiere (PAV.3)

REMTECH INTERNATIONAL CONFERENCE Europe POSTER SESSION

The posters will be displayed during all three conference days. The organizers intend to organize poster discussions on Thursday morning (10.45-11.00) with a limited number of poster authors. The decision of having poster discussions will depend on the poster authors registered for the conference. During the poster discussions, the selected poster authors will be near their posters, and explain briefly the main findings. There will be a discussion with the poster authors and delegates facilitated by a discussion leader. At the conference, delegates and poster authors can submit issues they would like to discuss during the poster discussions.

Advancements to the EZVI Technology: Optimization of Biotic and Abiotic Processes and Improved Implementability for in situ DNAPL Destruction

Jim Mueller, Greg Booth (Provectus Environmental Products, Inc - Freeport, IL) Claudio Sandrone (BAW s.r.l. – Manta (CN) - Italy) Bernd Rehm, Angela Hassell, Kevin Baker (ReSolution Partners, LLC - Madison, WI) John Haselow (Redox-Tech, LLC – Cary, NC) Kevin Finneran (Clemson University – Clemson, SC

Integrated multidisciplinary approach for reusing mining waste as resource.

Girolamo Belardi, Institute of Environmental Geology and Geoengineering, Italian National Research Council, Montelibretti, Rome, Italy

Remediation of weathered oil contaminated soil generated from oil refinery of Kuwait National Petroleum Company (KNPC)

Dr. Meshari Almutairi, Kuwait City

Qualitative and Quantitative Composition of the Phytoplankton and the Zooplankton of Debar Lake in Macedonia

Katerina Belichovska, Daniela Belichovska, Suzana Duraku, Faculty of Agricultural Sciences and Food, Ss. Cyril and Methodius University in Skopje, Republic of Macedonia

Physical and Chemical Characteristics of the Perlite from Macedonia and their Usage for Improving the Properties of the Soil

Vesna Markoska, Petar Petrov, Daniela Belichovska, Bojan Mitrovski Faculty of Environmental Resources Management, MIT University in Skopje, Republic of Macedonia

The transport of dangerous goods and road traffic safety in the Republic of Macedonia

Kire Babanoski, Faculty of security studies MIT University – Skopje, Republic of Macedonia

A field comparison of a novel rain measurement system based on earth-to-satellite microwave links at the urban scale

M. Colli(1), A. Caridi(2)M.Stagnaro(3,4), D. D. Caviglia(1,2), A. Delucchi(2), L.G. Lanza(3,4), (1) University of Genova, Dep. of Electrical, Electronics and Telecommunication Engineering and Naval Architecture (DITEN), Genoa, Italy,

The effect of amendments to the productivity of Miscanthus × giganteus grown at the post- mining land in Ukraine

Kharytonov Mykola, Pidlisnyuk Valentin, Stefanovska Tatyana, Babenko Mikhaylo, Martynova Nadiya, Rula Irina, National University of Life & Environmental Sciences, Kyiv, Ukraine*

The Impact of Soil Fertility and Effective Microorganisms on the Soybean Yield (Glycine Max L. Merrill) in Gevgelija Region

Petar Petrov, Lenka Cvetanovka, Faculty of Natural Sciences and Mathematics, Institute of Biology – Skopje Republic of Macedonia

GreenerSites Project - Test of an environmental friendly and cost effective way to provide the capping.

Erika Rizzo, Marta Citron, Autorità di Sistema Portuale del Mare Adriatico Settentrionale - North Adriatic Sea Port Authority. Santa Marta, Venezia, Italy.

The increasing the fertility and productivity of dark chestnut soils in rice irrigation systems

Morozov O.V., Vorozov V.V., Polukhov A.J. Kherson State Agricultural University, Ukraine

Formation of fertility and productivity indices of reclaimed soils under conditions of regional climate change (on the example of Kherson region)

Morozov O.V., Vorozov V.V., Beznitska N.V. Kherson State Agricultural University, Ukraine

Remediation Effect of Different Fractions of Humic Substances

Perelomov Leonid, Perelomova Irina, Chilachava Kakhaber, Shvikin Andrey, Atroshchenko Yury - Tula State Pedagogical University, Lenin Avenue, 125, Tula, Russia

The Efficiency Of Heavy Metals Adsorption By Goethite In The Presence Of Organic Substances

Perelomova Irina, Perelomov Leonid, Violante Antonio-Tula State University, Lenin Avenue, 92, Tula, Russia

Microbiological Quality Of Commercial Fish Feeds

Daniela Belichovska, Bojan Mitrovski, Petar Petrov, Vesna Markoska, Faculty of Environmental Resources Management, MIT University in Skopje, Republic of Macedonia

Properties And Heavy Metal Concentrations of Soils From The Mitidja Plain, Algeria

Abdelkader Laribi a, d, Charles Shand b, Renate Wendler b, Brahim Mouhouche c, Gilles Colinet d, b The James Hutton Institute, Aberdeen, UK, c Rural Engineering Department, Ecole Nationale Supérieure d'Agronomie (ENSA), El Harrach, Algiers, Algeria. University of Liège, Gembloux Agro Bio-Tech, BIOSE Dpt, Gembloux, Belgium.

Features of Formation of Humus Condition of Soils Under Different Cultivation Systems

Morozov O.V., Isachenko S.O., Kherson State Agricultural University, Ukraine

Use of Local Vaccumbinary Departments For Chemical Melioration Of Solar Soils

R.O.Babushkina, Kherson State Agricultural University, Ukraine

REMTECH INTERNATIONAL CONFERENCE Europe

The number and weight of earthworms as an indicator of the biological state of soils in the conditions of drilling and hydrocarbon extraction

D.O. Semenov, A.I. Fateev, K.B. Smirnova, A.M. Shemet, O.V. Kucheriavenko, National Scientific Center Institute for Soil Science and Agrochemistry Research, Kharkiv, Ukraine

The impact of perennially rice growing on the soil salt regime

Dudchenko K., Institute of rice NAAS, Ukraine

Microbiological Analysis Of Fish Pond Water

Bojan Mitrovski, Daniela Belichovska, Petar Petrov, Vesna Markoska, Faculty of Environmental Resources Management, MIT University in Skopje, Republic of Macedonia

Pollution of Croatian Mediterranean soil with sulfur from high-S coal: soil and coal sulfur speciation (XANES) and soil bioremediation (bacterial biomass)

Gordana Medunić^{1}, Iva Božičević Mihalić^{2,3}, Magdalena Janeš¹, Giuliana Aquilanti², Mateusz Czyżycki², Asha Lata Singh⁴, Prakash K. Singh⁴, Shweta Rai⁴*

1 University of Zagreb, Faculty of Science, Department of Geology, Zagreb, Croatia, 2 Elettra, Trieste, Italy, 3 Ruđer Bošković Institute, Zagreb, Croatia, 4 Banaras Hindu University, Varanasi, India

Is radiochemistry the solution to most micropollutants removal problems?

Andrea G. Capodaglio. Dept. of Civil Engineering & Architecture- University of Pavia, Italy