

Programme Overview

For 3.5 days, the conference will be a forum to discuss cutting-edge research on heavy metals in the environment. The formal conference activities will start on Monday, September 12 and end on Thursday, September 15 at noon. Top-experts in their field will provide a general view on selected topics in plenary keynote lectures. In up to 4 parallel sessions, specific topics will be discussed based on the oral contributions of participants. Poster sessions will provide ample opportunity to come in direct contact with other researchers, discuss ideas and explore collaboration.

Sunday, 11 September	17:00 - 18:00 Registration 18:00 - 20:00 Welcome Reception
Monday, 12 September	08:00 - 08:45 Registration 08:45 - 09:40 Opening Ceremony 09:40 - 12:10 Plenary Lectures 12:10 - 13:40 Lunch and Poster Sessions 13:40 - 17:10 Parallel Sessions 18:30 - 20:00 Social activity
Tuesday, 13 September	08:30 - 09:10 Plenary Lecture 09:10 - 12:00 Parallel Sessions 12:00 - 13:30 Lunch and Poster session 13:30 - 14:10 Plenary Lecture 14:10 - 17:20 Parallel Sessions 17:00 - 18:15 Interactive Poster Session
Wednesday, 14 September	08:30 - 12:00 Parallel Sessions 12:00 - 13:30 Lunch and Poster Session 13:30 - 14:10 Plenary Lecture 14:10 - 17:20 Parallel Sessions 19:30 - 23:00 Conference Dinner
Thursday, 15 September	08:50 - 10:30 Parallel Sessions 11:00 - 11:30 Plenary Lecture 11:30 - 12:00 Closing Session 12:00 - 13:30 Lunch

Monday, 12 September 2016

Day Schedule

08:00 - 08:45 *Registration*

Opening Session

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

08:45 - 08:50 **Welcome by the Conference Chair**

Filip Tack

08:50 - 09:00 **Welcome by the Dean of the Faculty of Bioscience Engineering**

Marc Van Meirvenne

09:00 - 09:10 **Welcome by the Rector of Ghent University**

Anne De Paepe

09:10 - 09:20 **Welcome by the First Executive Councillor of the City of Ghent**

Matthias De Clercq

09:20 - 09:30 **Welcome by the Flemish Minister of Environment, Nature and Agriculture**

Joke Schauvliege

09:30 - 09:40 **Welcome by the ICHMET Conference Organizing Committee**

Jerome Nriagu

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

09:40 - 10:20 **Fate of Technology-Critical Elements in the Environment, With a Focus on Less-Studied Ones**

Montserrat Filella (Université de Genève, Switzerland)

10:20 - 10:30 *Conference Picture*

10:30 - 10:50 *Refreshment Break and Poster Session*

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

10:50 - 11:30 **Developmental Effects of Metal Neurotoxicity**

Philip Grandjean (University of Southern Denmark, Denmark)

11:30 - 12:10 **Emerging Evidence for Methylation of Mercury in Diverse Environments**

Elsie Sunderland (Harvard T.H. Chan School of Public Health, United States)

12:10 - 13:40 *Lunch and Poster Session*

Parallel Sessions

- 13:40 - 15:00 **Track 1: S01 - Contamination in the Urban Environment**
13:40 - 15:00 **Track 2: S02 - Remediation of Heavy Metal Contamination in Soil, Water and Air**
13:40 - 15:00 **Track 3: S03 - Bioavailability: 21st Century Nexus between Site Characterization, Risk Assessment, and Remediation**
13:40 - 15:00 **Track 4: S04 - Heavy Metals in Terrestrial Ecosystems**
15:00 - 15:30 *Refreshment Break and Poster Session*

Parallel Sessions

- 15:30 - 16:50 **Track 1: S01 - Contamination in the Urban Environment**
15:30 - 17:10 **Track 2: S05 - Heavy Metals in Sediments: Biogeochemistry and Remediation**
15:30 - 17:10 **Track 3: S03 - Bioavailability: 21st Century Nexus between Site Characterization, Risk Assessment, and Remediation**
15:30 - 16:50 **Track 4: S04 - Heavy Metals in Terrestrial Ecosystems**

Social Activity

- 18:00 - 20:00 *Exploring the City of Ghent: Boat Tour and Walk*

Monday, 12 September 2016

Parallel Sessions

Parallel session 1

S01 - Contamination in the Urban Environment

Chair: Gijs Du Laing (Universiteit Gent, Belgium)
Gerald Zagury (Polytechnique Montréal, Canada)
Room: E1.012

- 13:40 - 14:00 **Impact on the Environment from Steel Bridge Paint Deterioration Using Lead Isotopic Tracing, Paint Compositons and Soil Deconstruction**
Brian Gulson (Macquarie University, Australia)
- 14:00 - 14:20 **The Influences of Rainwater and Surfactants on the Desorption Processes of Heavy Metals from Road-Deposited and Sewer Sediments**
Jin Zhang (Technische Universität Dresden, Germany)
- 14:20 - 14:40 **Temporal Dynamics of Urbanization-Driven Environmental Changes Explored by Metal Contamination in Surface Sediments in a Restoring Urban Wetland Park**
Shen Yu (Institute of Urban Environment, Chinese Academy of Sciences, China)
- 14:40 - 15:00 **Sequestration of Traffic Related Heavy Metals in the Leaves of Roadside Plants in a Megacity**
Shidharth Sankar Ram (Institute of Physics, India)
- 15:00 - 15:30 *Refreshment Break and Poster Session*
- 15:30 - 15:50 **Plant-Fungi Association: Track to Dig for Sustainable Agriculture; Beware of Metal Pollutions in Urban Areas**
Antoine Pierart (EcoLab (UPS - CNRS - ENSAT), France)
- 15:50 - 16:10 **Heavy Metals in Site-Specific Urban Runoff in Beijing, China: Occurrence and Partitioning**
Md Tariqul Islam Shajib (University of Copenhagen, Denmark)
- 16:10 - 16:30 **Lead in the Urban Environment: Case Study of Yerevan, Armenia**
Gevorg Tepanosyan (Center for Ecological-Noosphere Studies, Armenia)
- 16:30 - 16:50 **Physico-Chemical Characterization of Manganese-Bearing Particles in an Urban Area Located Close to a Manganese Alloy Production Plant**
Ana Hernández Pellón (University of Cantabria, Spain)

Parallel session 2

S02 - Remediation of Heavy Metal Contamination in Soil, Water and Air

Chair: Nanthi Bolan (The University of Newcastle, Australia)
Dan Tsang (The Hong Kong Polytechnic University, Hong Kong)
Room: E1.015

- 13:40 - 14:00 **Nanoscale Zero-Valent Iron for Metal Sequestration from Fracturing Flowback Water and Wastewater**
Daniel Tsang (Hong Kong Polytechnic University, Hong Kong)
- 14:00 - 14:20 **Prospective Remediation of Antimony Mine Area**
Vladimir Matichenkov (Institute of Basic Biological Problems Russian Academy of Sciences, Russian Federation)

- 14:20 - 14:40 **The Calcareous Deposit Formed Under Cathodic Polarization of a Galvanised Steel Electrode as Metals Remediation Device of Seawater**
Peggy Gunkel Grillon (University of New Caledonia, New Caledonia)
- 14:40 - 15:00 **An Innovative Approach to Bioremediation of Mercury Contaminated Soils**
Damien McCarthy (Macquarie University, Australia)
- 15:00 - 15:30 *Refreshment Break and Poster Session*

S05 - Heavy Metals in Sediments: Biogeochemistry and Remediation

Chair: Anna Knox (Savannah River National Laboratory, United States)
Jörg Rinklebe (Bergische Universität Wuppertal, Germany)

Room: E1.015

- 15:30 - 15:50 **Ecological Risk Assessment of Trace Metal in the Sediments of Hooghly-Matla Estuarine System**
Punarbasa Chaudhuri (University of Calcutta, India)
- 15:50 - 16:10 **Geochemical Fractionation and Risk Assessment of Heavy Metals in Superficial Sediments of Anzali Wetland, Iran**
Samar Mortazavi (Malayer University, Iran)
- 16:10 - 16:30 **Determination of Metal Concentrations in Surface and Trapped Sediment of the Golden Horn Estuary, Istanbul**
Önder Kılıç (Istanbul University, Turkey)
- 16:30 - 16:50 **Acidification and Mechanical Disturbance Induced Metal and Metalloid Release at the Sediment Water Interface**
Lars Duester (Federal Institute of Hydrology, Germany)
- 16:50 - 17:10 **Release of Buried Heavy Metals from Different Depths in Contaminated Sediments by Bioturbation/Bioirrigation**
Bin Men (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China)

Parallel session 3

S03 - Bioavailability: 21st Century Nexus between Site Characterization, Risk Assessment, and Remediation

Chair: Nicholas Basta (Ohio State University, United States)
Lena Ma (Nanjing University, China)

Room: E2.009

- 13:40 - 14:00 **Predicting Arsenic Bioavailability in Contaminated Soils by Using in Vitro Gastrointestinal Bioaccessibility for Site-Specific Risk Assessment**
Nicholas Basta (Ohio State University, United States)
- 14:00 - 14:20 **Deriving Metal Bioavailability Parameters for EU Environmental Compliance Assessment**
Christopher Cooper (International Zinc Association, Belgium)
- 14:20 - 14:40 **The Link Between Soil Geochemistry in South-West England and Human Exposure to Soil Lead**
Joanna Wragg (British Geological Survey, United Kingdom)
- 14:40 - 15:00 **Arsenic, Lead, and Cadmium Bioavailability in Contaminated Soils: Comparison of in Vivo Animal Models and Prediction Using in Vitro Bioaccessibility Assays**
Lena Ma (Nanjing University, China)
- 15:00 - 15:30 *Refreshment Break and Poster Session*
- 15:30 - 15:50 **Comprehensive Evaluation of in Vitro Bioaccessibility Methods to Predict Bioavailability of Arsenic in Contaminated Soils**
Brooke N. Stevens (Ohio State University, United States)

- 15:50 - 16:10 **Independent Measures for More Confident Selection and Application of Arsenic Bioaccessibility Methods to Predict Bioavailability**
Shane Whitacre (Ohio State University, United States)
- 16:10 - 16:30 **In Vitro Assessment of Arsenic Bioaccessibility and Intestinal Transport, Including Gut Microbiota Contribution**
Marta Calatayud (Ghent University, Belgium)
- 16:30 - 16:50 **Speciation and Bioavailability of Lead in Complementary Medicines**
Shiv Bolan (University of Newcastle, Australia)
- 16:50 - 17:10 **Real Metals for the Real World: Mixture Bioavailability & Toxicity in Soils**
Steven Siciliano (University of Saskatchewan, Canada)

Parallel session 4

S04 - Heavy Metals in Terrestrial Ecosystems

Chair: Brett Robinson (Lincoln University, New Zealand)
Filip M. G. Tack (Universiteit Gent, Belgium)
Room: E2.010

- 13:40 - 14:00 **Soil Contamination in the Seine River Basin: an Attempt to Relate Land-Use to Persistent and Emerging Metallic Pollutions**
Sophie Ayrault (Laboratoire des Sciences du Climat et de l'Environnement, France)
- 14:00 - 14:20 **From Old Mines to Brown Trouts - Tracing the Fate of Hg & Pb in a High Mountain Catchment Using Stable-Isotopes**
Sophia V. Hansson (Université de Toulouse; INP, UPS; EcoLab; ENSAT, France)
- 14:20 - 14:40 **Soil Cadmium Uptake by Cocoa in Honduras**
Anja Gramlich (ETH Zurich, Switzerland)
- 14:40 - 15:00 **Soil Organic Matter and Salinity Modify Cadmium Mobility in Soil**
Lana Filipović (Faculty of Agriculture University of Zagreb, Croatia)
- 15:00 - 15:30 *Refreshment Break and Poster Session*
- 15:30 - 15:50 **Barium Leaching from Alluvial Soils and Certified Reference Materials**
Valérie Cappuyens (KU Leuven, Belgium)
- 15:50 - 16:10 **Hexavalent Chromium Dynamics in Acidic and Limed Soils and its Effect on *Origanum vulgare***
Vasileios Antoniadis (University of Thessaly, Greece)
- 16:10 - 16:30 **Modeling Chromate Partition in Soil Minerals/Water Phases**
Xueyuan Gu (Nanjing University, China)
- 16:30 - 16:50 **The Role of Clay Minerals, Hydroxides, and Timing of Dissolved Organic Matter Addition in the Competitive Sorption of Heavy Metals: a Soil Column Approach**
Yasser Refaey (University of Amsterdam, Netherlands)

Monday, 12 September 2016

Poster Contributions

S01 - Contamination in the Urban Environment

- S01-P01 **Heavy Metals in the Finest Size Fractions of Road Dust**
Christof Lanzerstorfer (University of Applied Sciences Upper Austria, Austria)
- S01-P02 **Trace Metals in Topsoils and Street Dust Sampled in the São Paulo University Campus, Brazil**
Christine Bourotte (Geoscience Institute, University of São Paulo, Brazil)
- S01-P03 **Capacity to Accumulate Thallium in Surface Microlayer of Water of Urban Ponds (north Poland)**
Damian Panasiuk (Cardinal Stefan Wyszyński University, Poland)
- S01-P04 **Geochemical Characterization of Road Dust in Urban Environments**
Ewa Adamiec (AGH University of Science and Technology, Poland)
- S01-P05 **Co-Occurrence of Mercury and Carbon in Size-Segregated Particulate Matter in Urban Air**
Halina Pyta (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- S01-P06 **Particulate Mercury and Carbon in Urban and Non-Urban Sites in Poland**
Halina Pyta (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- S01-P07 **Heavy Metals in Urban Dust - Anthropogenic Versus Natural Sources**
Neele van Laaten (Friedrich Schiller University Jena, Germany)
- S01-P08 **Assessment of Composition and Properties of Urban Dust Near Large Cu Smelter**
Yury G. Tatsy (Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Russian Federation)
- S01-P09 **Accumulation of Trace Metals in Leaf Vegetables Cultivated in High Traffic Areas in Ghent, Belgium**
Veronique Troch (University College Ghent, Belgium)

S02 - Remediation of Heavy Metal Contamination in Soil, Water and Air

- S02-P01 **Extraction and Transport of Cd Ions Through a Polymer Inclusion Membrane Containing Tetraalkylphosphonium Ionic Liquid as a Carrier**
Claudia Fontas (University of Girona, Spain)
- S02-P02 **Removal of Metals and Metalloids by Mg-Fe Layered Double Hydroxides**
Barbora Hudcová (Czech University of Life Sciences Prague, Czech Republic)
- S02-P03 **Washing Sludge from Neutralization Cyanide in the Process of Benefit of Gold in a Mine in North of Colombia**
Iván Urango Cardenas (University of Cordoba, Colombia)
- S02-P04 **Immobilization of Co²⁺ and Sr²⁺ on Lesscrystallized Mg-Al Layered Double Hydroxides (LDH)**
Sayo Moriyama (Kyushu University, Japan)
- S02-P05 **Modeling of Cr(VI) Adsorption on Mixtures of Selected Soil Minerals**
Veronika Veselská (Czech University of Life Sciences Prague, Slovakia)

S03 - Bioavailability: 21st Century Nexus between Site Characterization, Risk Assessment, and Remediation

- S03-P01 **Heavy Metals and Gut Microbes Interactions**
Shiv Bolan (University of Newcastle, Australia)
- S03-P02 **Mechanisms and Permanence of Sequestered Pb and as in Soils: Impact on Mobility and Bioavailability**
Nicholas Basta (Ohio State University, United States)

- S03-P03 **Combined Bioassays and X-Ray Spectroscopy for Studying the Bioavailability of Arsenic in Contaminated Soils Using Earthworms**
Gattullo Concetta Eliana (University of Bari, Italy)
- S03-P04 **Modelling the Effect of Sorption Model on pH Buffering and U Retention**
Diederik Jacques (Belgian Nuclear Research Centre, Belgium)
- S03-P05 **Comparison of Bioavailability Measurements Determined Using Juvenile Swine and Adult Mouse Models for Arsenic Contaminated Soils**
Brooke N. Stevens (Ohio State University, United States)
- S03-P06 **Predicting Arsenic Bioavailability in Moderately Contaminated Soils**
Shane Whitacre (Ohio State University, United States)

S04 - Heavy Metals in Terrestrial Ecosystems

- S04-P01 **Cumulative Distribution Functions to Describe Uranium Solid-Liquid Distribution Coefficients in Soils**
Anna Rigol (University of Barcelona, Spain)
- S04-P02 **A Generic Reactive Transport Model to Simulate the Fate of Heavy Metals in Soils: Mercury as a Case Study**
Diederik Jacques (Belgian Nuclear Research Centre, Belgium)
- S04-P03 **Heavy Metal Bioaccumulation in the Spider *Xerolycosa nemoralis* (Lycosidae) from Various Polluted Areas**
Elżbieta Szulińska (University of Silesia, Poland)
- S04-P04 **Coordination Chemistry of Selenate in Ettringite**
Binglin Guo (Kyushu University, Japan)
- S04-P05 **Vegetative Parameters and Mineral Components of Salt-Sensitive Strawberry Exposed to Combined Salt Stress and Cadmium Contamination**
Gabrijel Ondrasek (University of Zagreb, Croatia)
- S04-P06 **Canopy Influence on Trace Metal Dynamics of Snowfall, Snowpack, and Snowmelt**
Yannick Agnan (Desert Research Institute, United States)
- S04-P07 **Solubility of As and Sb in Soils Enriched from Various Sources in Lower Silesia, Poland**
Katarzyna Szopka (Wrocław University of Environmental and Life Sciences, Poland)

S05 - Heavy Metals in Sediments: Biogeochemistry and Remediation

- S05-P01 **Arsenic Speciation in Surface Sediments of Marque River (Northern France)**
Josselin Gorny (Université de Lille 1, France)
- S05-P02 **Resuspension of Metal Contaminated Sediments and Caged Gammarid Responses in Navigated Channelized Rivers**
Dumoulin David (LASIR - Université Lille 1, France)
- S05-P03 **Concentration of Zr, Cr, Cu, Zn and Fe, Mn in River Sediments and Soils of Different Types of Southern Baltic Catchment**
Saniewska Dominika (University of Gdańsk, Poland)
- S05-P04 **Major and Trace Elements Distribution in Sediments of a Southeastern Brazilian Coastal Environments**
Eduardo Schettini Costa (Federal University of Espírito Santo, Brazil)
- S05-P05 **Temporal Changes of Metal Contamination of Marine Sediments Due to an Industrial Plant**
Elena Romano (ISPRA, Italy)
- S05-P06 **Surface Geochemical Provinces of the Espírito Santo Basin, Southeast Brazil.**
Fabian Sá (Federal University of Espírito Santo, Brazil)
- S05-P07 **Total Mercury Distribution in Organic Matter Extracted from Sources of Sediment Samples With Different Types of Water in the Amazon Basin**
Luiz Fabricio Zara (University of Brasília, Brazil)
- S05-P08 **Which Is the Influence of Anthropogenic Inputs on Metal Contamination Pattern in Surface Bottom Sediments from a Urban River Catchment?**
Jon Garcia Garcia (University of Basque Country, Spain)
- S05-P09 **Temporal Trends of Thallium Pollution in Fluvial Sediments of the North River, South China**
Juan Liu (Guangzhou University, China)
- S05-P10 **Mercury Remobilization from Marine Sediment and from Soil**
Bełdowska Magdalena (University of Gdansk, Institute of Oceanography, Poland)

- S05-P11 **Metal Features in Sediment from a Mediterranean River Basin (Tafna River, Algeria): Hydrological and Anthropogenic Influences**
Benabdelkader Amine (EcoLab/Legen, Algeria)
- S05-P12 **Trace Metals Remobilization During Resuspension of Contaminated Sediment from a Dam Reservoir**
Monnin Lucie (CEREGE UM34, France)
- S05-P13 **Sediment Quality, Metal Bioaccumulation and Antimicrobial Properties of Mangroves of Sundarban, India**
Punarbasa Chaudhuri (University of Calcuta, India)

S11 - Bioremediation of Metal Contamination

- S11-P01 **Environmental Metabarcoding Reveals Contrasting Microbial Communities at Two Poplar Phytomanagement Sites**
Michel Chalot (Université de Bourgogne Franche-Comté, France)
- S11-P02 **Rhizoremediation of Co-Contaminants Using Australian Native Vegetation**
Nanthi Bolan (University of Newcastle, Australia)
- S11-P03 **Combined Approach to Assisted Phytoextraction: Influence of Chelators, Microbial Consortium and Co-Planting**
Agnieszka Kutrowska (Adam Mickiewicz University in Poznań, Poland)
- S11-P04 **Phytoremediation of Pb-Contaminated Soils Using Vetiver Grass**
Behnaz Attaeian (Malayer University, Iran)
- S11-P05 **Phytoremediation and the Fate of Heavy Metals in Digestated Pulp**
Isaias Emilio Paulino do Carmo (Poznan University of Life Sciences, Brazil)
- S11-P06 **Phytoextraction of Mercury, Arsenic and Lead in Constructed Wetlands Planted With *Juncus effusus*, *Typha Latifolia* and *Cyperus alternifolius***
Siday Marrugo (University of Cordoba, Colombia)
- S11-P07 **Phytochem: Developing Eco-Innovative Chemical Processes to Valorise Phytoremediation-Borne Biomasses**
Michel Chalot (Université de Bourgogne Franche-Comté, France)
- S11-P08 **Mercury Uptake Into Poplar Leaves**
Mohamad Assad (Université de Bourgogne Franche-Comté, France)
- S11-P09 ***Arundo Donax L.* for Phytostabilization of an Industrial Polluted Soil: Plant Performance and Variations in Soil Biological Fertility**
Nunzio Fiorentino (Universita' degli Studi di Napoli Federico II, Italy)
- S11-P10 **Effects of Mixed Cropping Four Herbaceous Plants on the Phytoremediation of Combined Heavy Metal Contamination**
Dong Ying Bo (University of Science and Technology Beijing, China)
- S11-P11 **Enhancing Phytoremediation Technique in Contaminated Soils Using Novel Biotechnology**
Alaa El-Din Mohamed Zaghoul (National Research Center, Egypt)

Tuesday, 13 September 2016

Day Schedule

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

08:30 - 09:10 **Current Status, Gaps and Needs in Sustainable Treatment and Management of Metal Contaminated Sediments**
Anna Knox (Savannah River National Laboratory, United States)

Parallel Sessions

09:10 - 10:10 **Track 1: S06 - Contamination from Long-range Atmospheric Transport of Heavy Metals**
09:10 - 10:10 **Track 2: S07 - Risk Based Management of Heavy Metal Contaminated Soils**
09:10 - 10:10 **Track 3: S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment**
09:10 - 10:10 **Track 4: S09 - Heavy Metals in the Aquatic Environment**
10:10 - 10:40 *Refreshment Break and Poster Session*

Parallel Sessions

10:40 - 12:00 **Track 1: S06 - Contamination from Long-range Atmospheric Transport of Heavy Metals**
10:40 - 12:00 **Track 2: S07 - Risk Based Management of Heavy Metal Contaminated Soils**
10:40 - 12:00 **Track 3: S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment**
10:40 - 12:00 **Track 4: S09 - Heavy Metals in the Aquatic Environment**
12:00 - 13:30 *Lunch and Poster Session*

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

13:30 - 14:10 **Analytical Results on Heavy Metals in Environmental Samples – Fit for Taking Decisions?**
Hendrik Emons (Institute for Reference Materials and Measurements, Belgium)

Parallel Sessions

14:10 - 15:10 **Track 1: S10 - Diffuse Contamination and Contamination over Large Areas**
14:10 - 15:10 **Track 2: S11 - Bioremediation of Metal Contamination**
14:10 - 15:10 **Track 3: S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment**
14:10 - 15:10 **Track 4: S09 - Heavy Metals in the Aquatic Environment**
15:10 - 15:40 *Refreshment Break and Poster Session*

Parallel Sessions

- 15:40 - 17:00 **Track 1: S10 - Diffuse Contamination and Contamination over Large Areas**
- 15:40 - 17:20 **Track 2: S11 - Bioremediation of Metal Contamination**
- 15:40 - 17:00 **Track 3: S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment**
- 15:40 - 17:20 **Track 4: S12 - Fate of Emerging Elements and Nanoparticles in the Environment**

Tuesday, 13 September 2016

Parallel Sessions

Parallel session 1

S06 - Contamination from Long-range Atmospheric Transport of Heavy Metals

Chair: Claude Boutron (Joseph Fourier University, France)
Eiliv Steinnes (Norwegian University of Science and Technology, Norway)
Room: E1.012

- 09:10 - 09:30 **Chemical Cycling and Deposition of Atmospheric Mercury in Polar Regions: New Insights and Remaining Research Gaps**
Hélène Angot (Laboratoire de Glaciologie et Géophysique de l'Environnement, France)
- 09:30 - 09:50 **Soil and Plant Hg Dynamics in the Arctic Tundra**
Christine Hedge (Desert Research Institute, United States)
- 09:50 - 10:10 **Atmospheric Mercury Across the Australian Continent**
Dean Howard (Macquarie University, Australia)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **Atmospheric Transport of Metals to Norway 1975-2015**
Eiliv Steinnes (Norwegian University of Science and Technology, Norway)
- 11:00 - 11:20 **Heavy Metals in Precipitation and in Aerosols in Sweden and in Northern Finland**
Ingvar Wängberg (IVL Swedish Environmental Research Institute, Sweden)
- 11:20 - 11:40 **Trends in Forest Soil Heavy Metal Concentrations at Swedish ICP IM Sites: Responses to Reductions in Atmospheric Deposition**
Staffan Åkerblom (Swedish University of Agricultural Sciences, Sweden)
- 11:40 - 12:00 **Mercury Stable Isotope Compositions in Airborne Particulate Matter in Ambient Air of China**
Xinbin Feng (Institute of Geochemistry, Chinese Academy of Sciences, China)
- 12:00 - 13:30 *Lunch and Poster Session*

S10 - Diffuse Contamination and Contamination over Large Areas

Chair: Xinbin Feng (Institute of Geochemistry, Chinese Academy of Sciences, China)
Irena Twardowska (Polish Academy of Sciences, Poland)
Room: E1.012

- 14:10 - 14:30 **Sources Contribution to Metal Concentrations in PM_{2.5} in a Coastal Industrialized Area**
Pascal Flament (Université du Littoral Côte d'Opale, France)
- 14:30 - 14:50 **Inventory of Mercury Emission to Air, Water and Soil in Poland for Year 2014**
Damian Panasiuk (Cardinal Stefan Wyszyński University, Poland)
- 14:50 - 15:10 **Historical Variations of Mercury Stable Isotope Ratios Recorded in High Arctic Snow.**
Christian Zdanowicz (Uppsala University, Sweden)
- 15:10 - 15:40 *Refreshment Break and Poster Session*

- 15:40 - 16:00 **Role of Forests in the Global Biogeochemical Cycling of Mercury**
Che-Jen Lin (Lamar University, United States)
- 16:00 - 16:20 **Landuse Impact on Metals in Stormwater: Mass Loads and Size Fractionation**
Erica R. McKenzie (Temple University, United States)
- 16:20 - 16:40 **Assesment of Temporal Trends of Trace Metals Over France Between 1996 and 2011: How to Include the Effects of the Protocol and the Geographical Variations?**
Emeline Lequy (Museum National d'Histoire Naturelle, France)
- 16:40 - 17:00 **The Impact of Military Activities on the Concentration of Mercury in Marine Sediments and Soils of Military Training Grounds**
Jacek Beldowski (Institute of Oceanology, Polish Academy of Sciences, Poland)
- 17:00 - 18:15 *Interactive Poster Session*

Parallel session 2

S07 - Risk Based Management of Heavy Metal Contaminated Soils

Chair: Jayanta Kumar Biswas (University of Kalyani, India)

Erik Meers (Universiteit Gent, Belgium)

Room: E1.015

- 09:10 - 09:30 **Bioretransformation of Heavy Metal(loid)s in Relation to Bioavailability and Remediation**
Nanthi Bolan (University of Newcastle, Australia)
- 09:30 - 09:50 **Impact of Emerging and Low Cost Alternative Amendments on the (im)mobilization and Phytoavailability of Cd, Cu, Ni, Pb, and Zn in a Contaminated Floodplain Soil**
Sabry Mohamed Shaheen (University of Kafrelsheikh, Egypt)
- 09:50 - 10:10 **Mobility and Toxicity of Heavy Metal(loid)s Arising from Contaminated Wood Ash Application to a Pasture Grassland Soil.**
Luke Beesley (James Hutton Institute, United Kingdom)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **Reduction of Cd Plant-Availability on Paddy Soil**
Elena Bocharnikova (Institute of Physicochemical and Biological Problems of Soil Science of the RAS, Russian Federation)
- 11:00 - 11:20 **Liming Effects on Heavy Metal Bioavailability in Acid Soils**
Niklas Lehto (Lincoln University, New Zealand)
- 11:20 - 11:40 **Heavy Metal Cycling in Former Industrial Land: Implications for Safe and Effective Urban Renewal**
Emily Hepburn (RMIT University, Australia)
- 11:40 - 12:00 **Alkaline Hydrothermal Stabilization of Cr(VI) in a Sandy Soil**
Gattullo Concetta Eliana (University of Bari, Italy)
- 12:00 - 13:30 *Lunch and Poster Session*

S11 - Bioremediation of Metal Contamination

Chair: Franz Jirsa (University of Vienna, Austria)

Lena Ma (Nanjing University, China)

Room: E1.015

- 14:10 - 14:30 **Endophytic Rhizobacteria and Companion Planting Influence on Efficiency of Assisted Phytoextraction**
Agnieszka Kutrowska (Adam Mickiewicz University in Poznań, Poland)
- 14:30 - 14:50 **Isolation and Characterization of Dark Septate Endophytes: Towards Their Use in the Phytomanagement of Metal-Contaminated Sites?**
Damien Blaudez (Universite de Lorraine, France)

- 14:50 - 15:10 **Gentle Remediation Options of Copper Contaminated Soils: Aided Phytostabilisation and Phytoextraction**
Lydie Le Forestier (Institut des Sciences de la Terre d'Orléans, France)
- 15:10 - 15:40 *Refreshment Break and Poster Session*
- 15:40 - 16:00 **Application of a Red Mud Derivate in the Phytostabilisation of Mine Tailings: Effects on Trace Elements Solubility, Speciation and Plant Accumulation**
Rafael Clemente (CEBAS-CSIC, Spain)
- 16:00 - 16:20 **Phytoextraction of Trace Metals With *Noccaea caerulea* for Urban Agriculture Development**
Arnaud Jacobs (Université Libre de Bruxelles, Belgium)
- 16:20 - 16:40 **The Use of Energy Crop Species for Phytoremediation of Heavy Metal Contaminated Sites**
Jacek Krzyżak (Institute for Ecology of Industrial Areas, Poland)
- 16:40 - 17:00 **An Ecotechnological Tool for Cadmium Sequestration Using Waste Stabilization Ponds in India**
Jayanta Kumar Biswas (University of Kalyani, India)
- 17:00 - 17:20 **Biological Treatments of Cadmium Contamination Continental Waters With *Spirulina platensis* (Nordst.) Geitl. Immobilized in Na-Alginate Beads**
Popescu Tudor (Université de Science et Technologies de Lille, France)

Parallel session 3

S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment

Chair: Nanthi Bolan (The University of Newcastle, Australia)
Daeseon Kim (National Institute of Environmental Research, Republic of Korea)
Jerome Nriagu (University of Michigan, United States)

Room: E2.009

- 09:10 - 09:30 **Cadmium and Mercury Levels in the Urine of a Belgian Adult Population**
Pirard Catherine (Centre Hospitalier Universitaire de Liège, Belgium)
- 09:30 - 09:50 **The Relationship Between Urinary Metals Concentrations and Oxidative Stress in a Cohort of School Age Children.**
Andrea Hinwood (Edith Cowan University, Australia)
- 09:50 - 10:10 **To What Extent Agrochemicals Exposure Affects Male Gonads?**
Armindo Rodrigues (University of the Azores, Portugal)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **Chronic Exposure to Indoor Radon in a Hydrothermal Area and DNA Damage in Oral Epithelial Cells**
Patrícia Garcia (University of the Azores, Portugal)
- 11:00 - 11:20 **Lung Bioaccessibility of Metals in Particulate Matter obtained from Geological Samples**
Gerald Zagury (Institut de Recherche en Mines et Environnement, Canada)
- 11:20 - 11:40 **Arsenic Induced Skin Lesions and its Association to Inflammatory Cytokines**
Muntasha Quddus (University of Chicago, United States)
- 11:40 - 12:00 **Could Consumption of Tea from Street Vendors Pose a Risk for Aluminium Accumulation: a Pilot Study**
Sharda Shah Peshin (All India Institute of Medical Sciences, New Delhi, India)
- 12:00 - 13:30 *Lunch and Poster Session*
- 14:10 - 14:30 **Site-Specific Risk Assessment of Lead in Surface Waters With BLM-Tool PNEC-pro V6.**
Jos P.M. Vink (Deltares, Netherlands)
- 14:30 - 14:50 **Relative Risk Approach: a Methodology for the Ecological Risk Classification of Inorganic Substances**
Marie-Claude Sauvé (Environment and Climate Change Canada, Canada)
- 14:50 - 15:10 **Trace Elements in Commercial Infant Food: a Simplified Risk Assessment**
Miguel Izquierdo (Universidad Politecnica de Madrid, Spain)

- 15:10 - 15:40 *Refreshment Break and Poster Session*
- 15:40 - 16:00 **Combining Risk Assessment and Life Cycle Assessment to Derive Remediation Standards for Soil Contaminated by Heavy Metals**
Deyi Hou (Tsinghua University, China)
- 16:00 - 16:20 **Multi-Metal Investigation in Groundwater and Saliva in an Area of West Bengal, India**
Subhamoy Bhowmick (University of Kalyani, India)
- 16:20 - 16:40 **Water Quality and Metal Exposure Assessment in the Krka River, Karstic Phenomenon and National Park in Croatia**
Vlatka Filipović Marijić (Ruđer Bošković Institute, Croatia)
- 16:40 - 17:00 **Hazard Traffic Lights and Total Hazard Points: Two Legislation-Based Methodologies for Risk Assessment of Materials**
Gonzalo Rodriguez Garcia (Helmholtz Institute Ulm for Electrochemical Energy Storage, Germany)

Parallel session 4

S09 - Heavy Metals in the Aquatic Environment

Chair: Bruce Fowler (Emory University Rollins School of Public Health, United States)
Anna Knox (Savannah River National Laboratory, United States)

Room: E2.010

- 09:10 - 09:30 **Metal Pollution Status of Suspended Particulate Matter and the Influence of Anthropogenic Activities of the Deba River Urban Catchment**
Jon Garcia-Garcia (University of Basque Country, Spain)
- 09:30 - 09:50 **Impact of Marine Mercury Cycling on Coastal Atmospheric Mercury**
Johannes Bieser (Helmholtz Zentrum Geesthacht, Germany)
- 09:50 - 10:10 **Global Patterns of Mercury Contamination in Cetaceans**
Maike Sabel (Leibniz Center for Tropical Marine Ecology, Germany)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **Mercury Concentration Variation in Different Fish Species of the Gulf of Riga and the Baltic Sea**
Natalija Suhareva (Latvian Institute of Aquatic Ecology, Latvia)
- 11:00 - 11:20 **Influence of Mercury Concentration on Methylation in Freshwater Sediments from Scottish Canals**
Olga Cavoura (National School of Public Health, Greece)
- 11:20 - 11:40 **Biotic Mercury Methylation in Settling Particles from the Water Column of an Oxidic Freshwater System**
Elena Gascon Diez (University of Geneva, Switzerland)
- 11:40 - 12:00 **Methylmercury Production by the Gut Microbiota of Herbivorous and Piscivorous Freshwater Fishes from Cazaux-Sanguinet Lake (South-Western France)**
Elisabeth Carlier (Université de Pau et des pays de l'Ardour, France)
- 12:00 - 13:30 *Lunch and Poster Session*
- 14:10 - 14:30 **Molecular Organic Matter Composition Controls Mercury Methylation in Boreal Lake Sediments**
Andrea Garcia Bravo (Uppsala University, Sweden)
- 14:30 - 14:50 **The Impacts of Nutrient Supply on Aquatic Mercury Dynamics and Plankton Methylmercury Concentrations**
Anne Soerensen (Stockholm University, Sweden)
- 14:50 - 15:10 **Impacts of Environmental Change on Methylmercury Bioaccumulation in Marine Ecosystems**
Amina Schartup (Harvard T.H. Chan School of Public Health, United States)
- 15:10 - 15:40 *Refreshment Break and Poster Session*

S12 - Fate of Emerging Elements and Nanoparticles in the Environment

Chair: Gijs Du Laing (Universiteit Gent, Belgium)
Dan Tsang (The Hong Kong Polytechnic University, Hong Kong)
Room: E2.010

- 15:40 - 16:00 **Should nanoparticles be used in sunscreens**
Brian Gulson (Macquarie University, Australia)
- 16:00 - 16:20 **Effects of Nanoscale Zero-Valent Iron (nZVI) and Fe₂O₃ Nanoparticles on Root Hydraulic Conductivity of *Solanum Lycopersicum***
Domingo Martínez-Fernández (Czech University of Life Sciences Prague, Czech Republic)
- 16:20 - 16:40 **Dispersion and Mobility of Technology-Critical Elements in the Aquatic Environment and Sediments of the Flanders Scheldt Estuary**
Folens Karel (Ghent University, Belgium)
- 16:40 - 17:00 **Distribution and Speciation of Rare Earth Elements in Coal Combustion Byproducts**
Mengling Stuckman (National Energy Technology Laboratory - Department of Energy, United States)
- 17:00 - 17:20 **Interactions Between Terrestrial Plants and Rare Earth Oxide Nanoparticles**
Zhiyong Zhang (Institute of High Energy Physics, Chinese Academy of Sciences, China)

Tuesday, 13 September 2016

Poster Contributions

S07 - Risk Based Management of Heavy Metal Contaminated Soils

- S07-P01 **Potential Value of Synthetic and Natural Phosphate Compounds in Enhancing Immobilization and Reducing Bioavailability of Mixed Heavy Metal Contaminants**
Nanthi Bolan (University of Newcastle, Australia)
- S07-P02 **Effect of Alkaline Amendments on Solubility and Phytoavailability of Zinc and Copper in Abattoir Wastewater Water Irrigated Soil**
Balaji Seshadri (University of Newcastle, Australia)
- S07-P03 **Derivation of Soil Criteria for Cadmium Applying Species Sensitivity Distribution**
Changfeng Ding (Institute of Geochemistry, Chinese Academy of Sciences, China)
- S07-P04 **Effect of Organic and Inorganic Amendments on the Arsenic and Cadmium Bioavailability in Soils**
Claudia Rocco (Università degli Studi di Napoli Federico II, Italy)
- S07-P05 **Sulphur Supply Increases the Potential of Massai Grass for Cadmium Phytoextraction**
Flávio Henrique Silveira Rabêlo (University of São Paulo, Brazil)
- S07-P06 **Stability of Heavy Metals (Cd, Pb and Zn) in Contaminated Soil Upon Treatment With Calcined Clam Shell**
Mohammad Nazrul Islam (Chonnam National University, Republic of Korea)
- S07-P07 **Risk Element Sorption Characteristics in Soil Treated by Biologically Transformed Dry Olive Residue (DOR)**
Jiřina Száková (Czech University of Life Sciences Prague, Czech Republic)
- S07-P08 **Assessment of Activated Carbon and Compost for the Remediation of a Mine Impacted Soil**
Teresa Fresno (Universidad Autónoma de Madrid, Spain)
- S07-P09 **How Soil Amendments Affect Toxic Elements Mobility and Willow Growth in Highly Multi-Contaminated Soil**
Stanislava Vondráčková (Czech University of Life Sciences Prague, Czech Republic)
- S07-P10 **Various Mechanisms and Effects of Cu and as Release from Strongly Polluted Amended With Sewage Sludge**
Katarzyna Szopka (Wrocław University of Environmental and Life Sciences, Poland)

S08 - Risk Assessment and Health Impact: Pathways, Transformation, Bioavailability, Toxicity and Clinical Treatment

- S08-P01 **Characteristics of Pollution and Ecological Risks Associated With Heavy Metals in the Fuyang River in China**
Yuxi Gao (Institute of High Energy Physics, Chinese Academy of Sciences, China)
- S08-P02 **Heavy Metal Contents of Food Seasonings and Bouillon Cubes from Aba, Abia State Nigeria**
Alisachristopher Onyemeziri (Federal University of Technology Owerri, Nigeria)
- S08-P03 **Heavy Metal Contents of Tobacco Leaves and Snuff Products from Southeastern Nigeria**
Alisachristopher Onyemeziri (Federal University of Technology Owerri, Nigeria)
- S08-P04 **Assessment of Pollution Levels and Human Health Risk of Heavy Metals in Snow Dust (Case Study, Yerevan)**
Nairuhi Maghakyan (Center for Ecological-Noosphere Studies, Armenia)
- S08-P05 **Study on the Solid-Phase Fractionation of Potentially Toxic Elements in House Dust Within the Human Health Framework**
Paula Marinho Reis (Universidade de Aveiro, Portugal)

- S08-P06 **Korea National Survey for Environmental Pollutants in the Human Body 2008: Heavy Metals in the Blood Or Urine of the Korean Population**
Jin Heon Lee (Kongju National University, Republic of Korea)
- S08-P07 **Mercury Exposure Levels Among Schoolchildren and Related Factors and Health Effect in High Mercury Exposure Areas in Korea**
Daeseon Kim (National Institute of Environmental Research, Republic of Korea)
- S08-P08 **Effects of Blood Lead on Intelligence and Personality in Schoolchildren**
Daeseon Kim (National Institute of Environmental Research, Republic of Korea)
- S08-P09 **Serum Heavy Metal Levels of Residents in the Vicinity of a Petrochemical Complex in Taiwan**
Tzu-Hsuen, Yuan (National Taiwan University, Taiwan)

S09 - Heavy Metals in the Aquatic Environment

- S09-P01 **Function of the Hyporheic Zone in the Cd and Zn Transfer in the Biała Przemsza River Valley**
Urszula Aleksander-Kwaterczak (AGH University of Science and Technology, Poland)
- S09-P02 **Heavy Metal Contents in Deep Aquifers from the Republic of Moldova**
Barbara Nisi (CNR-IGG Institute of Geosciences and Earth Resources, Italy)
- S09-P03 **Mercury in Fish from Brazilians River and Reservoirs Hydroelectric Power Plant**
Luiz Fabricio Zara (University of Brasília, Brazil)
- S09-P04 **Estimated Loads and Geochemical Baselines of Heavy Metals in Sediments in a Watershed of Northeastern Brazil**
Francisco Jose de Paula Filho (Federal University of Cariri, Brazil)
- S09-P05 **Concentrations and Loads of Metals (V, Cr, Mn, Fe, Cu, Zn, As, Rb, Y, Zr) from the Cliff Erosion to the Gulf of Gdansk**
Jacek Bełdowski (Institute of Oceanology, Polish Academy of Sciences, Poland)
- S09-P06 **Mercury in the Zoobenthos of the Coastal Zone of the Puck Bay (Southern Baltic Sea)**
Bełdowska Magdalena (University of Gdansk, Institute of Oceanography, Poland)
- S09-P07 **Metals Forms Distribution in the Surface Waters of the Kola North Under Different Atmospheric Precipitation**
Marina Dinu (Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Russian Federation)
- S09-P08 **Monitoring Heavy Metals in Water, Suspended Particulates, Sediment and Clam Flesh at Clam Farms in Coastal Area of Ho Chi Minh City, Vietnam**
Nguyen Phuoc Dan (Ho Chi Minh City University of Technology, Viet Nam)
- S09-P09 **Zinc in an Oligotrophic Patagonic Lake: Response to a Natural Environmental Disaster in Low Trophic Levels**
Sergio Ribeiro Guevara (LAAN-CNEA, Argentina)
- S09-P10 **Methylmercury Production and Associated Microbial Diversity Within an Oligotrophic Temperate Freshwater Lake (Cazaux-Sanguinet Lake, South-Western France)**
Elisabeth Carlier (Université de Pau et des pays de l'Ardour, France)

S10 - Diffuse Contamination and Contamination over Large Areas

- S10-P01 **Does Nitrogen Supply Impact the Cadmium Fluxes to Developing Durum Wheat Grains?**
Bofang Yan (French National Institute for Agricultural Research, France)
- S10-P02 **First Investigations of Metal Contents and Pb Isotopes in Protected Salt Marsh Sediments (NORTH Sea Coast of France)**
Françoise Henry (Université du Littoral Côte d'Opale, France)
- S10-P03 **Assessment of Anthropogenic Trace Metals and Rare Earth Elements in a Subtropical Urban Area (The Danshui System, Taiwan)**
Lerat Antoine (University of Bordeaux, France)
- S10-P04 **Spatial Distribution and Contamination of Heavy Metals in Soils of Arzew Algeria**
Boudia Hayat (University of Science and Technology of Oran, Algeria)
- S10-P05 **Effects of Annual Precipitation on Heavy Metals in Runoff from Soils in the US Great Plains**
Moustafa A. Elrashidi (National Soil Survey Center, United States)
- S10-P06 **Grapevine Accumulation of Potentially Toxic Elements from Vineyard Soil**
Tijana Milićević (University of Belgrade, Serbia)

- S10-P07 **Cadmium Level in Soil, Coarse Fodder, Organs and Tissue of Cattle in West Siberia**
Valeriy Petukhov (Novosibirsk State Agrarian University, Russian Federation)
- S10-P08 **Can Diffuse Source Analysis Help to Prioritise Chemicals Risk Management for Metals?**
Hugo Waeterschoot (Eurometaux- European Association of Metals, Belgium)
- S10-P09 **Radioisotopes as Indicators of Heavy Metals Translocation in the Environment**
Piotr Godyń (University of Opole, Poland)
- S10-P10 **Mass-Dependent and -Independent Mercury Isotope Fractionation During Gas-Phase Oxidation of Elemental Mercury Vapor by the Atomic Halogens Cl and Br**
Jonas Sommar (Institute of Geochemistry, Chinese Academy of Sciences, China)
- S10-P11 **Source Identification Using Pb Isotopic Composition: Contamination Fingerprinting in City of Ostrava, Czech Republic**
Anna Kunčíková (Czech University of Life Sciences Prague, Czech Republic)
- S10-P12 **Optimization of Lead (Pb) Isotopes Measurement Using Quadrupole-Inductively Coupled Plasma Mass Spectrometer (Q-ICP-MS).**
Abida Usman (University of Nottingham, Pakistan)
- S10-P13 **Systematic Study of Stable Isotope (Hg, C & N) in Bivalves Along the French Coastline: Preliminary Results from the Trococo Project**
Briant Nicolas (Institut Français de Recherche pour l'Exploitation de la Mer, France)
- S10-P14 **Lead Chemical and Isotope Characterisation in the Upper Loire River Basin, France**
Romain Nigris (Université du Québec à Montréal, Canada)
- S10-P15 **Distribution and Isotopic Signature of Pb in the Environment of Arctic Norway**
Hana Šillerová (Czech University of Life Sciences Prague, Czech Republic)
- S10-P16 **Spatial and Temporal Trends of the Contamination in an Urban Catchment: Coupling Metal Isotope Geochemistry and Radionuclide Chronometers.**
Claire Froger (Laboratoire des Sciences du Climat et de l'Environnement, France)
- S10-P17 **Atmospheric Mercury Measurements at Cape Point, South Africa: Latest Trends and Findings**
Lynwill Martin (SA Weather Service, South Africa)

S12 - Fate of Emerging Elements and Nanoparticles in the Environment

- S12-P01 **The Influence of Synthesis Washing Specimen on the Microstructure of Titanate Nanomaterial and its Adsorption Property of Lead(II)**
Jin Zhang (Technische Universität Dresden, Germany)
- S12-P02 **Adsorption Characteristics of Hazardous Oxoanions on HDPy-Modified Montmorillonite**
Wuhui Luo (Kyushu University, Japan)

S17 - Interactions of Plants with Metals

- S17-P01 **Effects of Selenium on the Uptake and Speciation of Mercury in Plants and Further in the Food Chains**
Anja Kavcic (University of Ljubljana, Slovenia)
- S17-P02 **The Cell Wall as Shield Against Cadmium Toxicity: Proteome Changes in Alfalfa Stems Exposed to Cadmium**
Annelie Gutsch (Luxembourg Institute of Science and Technology, Luxembourg)
- S17-P03 **Bioconcentration of Mercury by Oyster Mushroom (*Pleurotus ostreatus*) from Southern Nigeria**
Nnorom Innocent Chidi (Abia State University Uturu, Nigeria)
- S17-P04 **Effect of Sulfur Application on Soil Copper Forms**
Christos Tsadilas (Hellenic Agricultural Organization "Demeter", Greece)
- S17-P05 **Multivariate Data of Trace Elements in Mushroom *Sarcodon imbricatus***
Martyna Saba (University of Gdańsk, Poland)
- S17-P06 **Some Metallic Elements and Arsenic in Medicinal *Wolfiporia extensa* from Polymetallic Soils**
Martyna Saba (University of Gdańsk, Poland)
- S17-P07 **Radioactive Caesium in *Cortinarius caperatus* Mushrooms**
Jerzy Falandysz (University of Gdańsk, Poland)
- S17-P08 **Mercury in Unprocessed and Household Processed Mushrooms**
Jerzy Falandysz (University of Gdańsk, Poland)
- S17-P09 **Cadmium Leaching from a Household Treated Chantharells and Cadmium Uptake from the Chantharells in a Meal**

- S17-P10 Jerzy Falandysz (University of Gdańsk, Poland)
Trace Elements Composition of Boletus Mushrooms from the Province of Yunnan, China
Martyna Saba (University of Gdańsk, Poland)
- S17-P11 **Variability in Grain Cadmium Concentration Among Durum Wheat Cultivars: Impact of Aboveground Biomass Partitioning**
Cornu Jean-Yves (Institut National de Recherche Agronomique, France)
- S17-P12 **Imaging Radiocesium Movements in Intact Plants**
Naoki kawachi (National Institutes for Quantum and Radiological Science and Technology, Japan)
- S17-P13 **The Ros-Meditated Copper Toxicity in Rye Varieties**
Krzysztof Gediga (Wrocław University of Environmental and Life Sciences, Poland)
- S17-P14 **The Accumulation of Compounds Heavy Metal by Fussy Mathematic Evaluation and the Antioxidant Enzymes Activities in Five Species of Terrestrial Plants**
Hai Lin (University of Science and Technology Beijing, China)
- S17-P15 **Heavy Metal Effects on the Green Alga *Chlamydomonas reinhardtii*: a Gene Transcription Study**
Nikos Lydakis-Simantiris (Technological Educational Institute of Crete, Greece)
- S17-P16 **Accumulation of Mercury in Different Rice Genotypes Cultivated in Soils from the Region of La Mojana, Colombia**
Siday Marrugo (University of Cordoba, Colombia)
- S17-P17 **Noninvasive Imaging of Zinc Movement in an Intact Plant Using ⁶⁵Zn**
Nobuo Suzui (National Institutes for Quantum and Radiological Science and Technology, Japan)
- S17-P18 **Effects of the Exogenous Glycinebetaine on Photosynthetic Apparatus in Cucumber Leaves Challenging AI Stress**
Piotr Stepień (Wrocław University of Environmental and Life Sciences, Poland)
- S17-P19 **Unraveling Aspects Related To Tolerance Of Tomato Accessions Under Cadmium-Induced Stress**
Marcia Carvalho (University of São Paulo, Brazil)
- S17-P20 **An Empirical Model To Predict Cadmium Concentrations in Cultivated Spinach**
Filip M. G. Tack (Ghent University)

Wednesday, 14 September 2016

Day Schedule

Parallel Sessions

- 08:30 - 10:10 **Track 1: S13 - Geophysical/geochemical Methods of Soil Pollution Assessment with Airborne Potentially Toxic Elements in problematic areas**
- 08:30 - 10:10 **Track 2: S14 - Heavy Metals and Biochar Interactions**
- 08:30 - 10:10 **Track 3: S15 - Records of Anthropogenic Contamination**
- 08:30 - 10:10 **Track 4: S16 - Interactions of Biota with Metals**
- 10:10 - 10:40 *Refreshment Break and Poster Session*

Parallel Sessions

- 10:40 - 12:00 **Track 1: S13 - Geophysical/geochemical Methods of Soil Pollution Assessment with Airborne Potentially Toxic Elements in problematic areas**
- 10:40 - 12:00 **Track 2: S14 - Heavy Metals and Biochar Interactions**
- 10:40 - 12:00 **Track 3: S15 - Records of Anthropogenic Contamination**
- 10:40 - 12:00 **Track 4: S17 - Interactions of Plants with Metals**
- 12:00 - 13:30 *Lunch and Poster Session*

Parallel Sessions

- 14:10 - 14:50 **Track 1: S13 - Geophysical/geochemical Methods of Soil Pollution Assessment with Airborne Potentially Toxic Elements in problematic areas**
- 14:10 - 15:10 **Track 2: S19 - Waste Streams and Secondary Resources**
- 14:10 - 15:10 **Track 3: S15 - Records of Anthropogenic Contamination**
- 14:10 - 15:10 **Track 4: S17 - Interactions of Plants with Metals**
- 15:10 - 15:40 *Refreshment Break and Poster Session*

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

- 15:40 - 16:20 **New concepts and upcoming challenges in the environmental risk assessment of metals**
Koen Oorts (Arche-consulting, Belgium)

Parallel Sessions

- 16:20 - 18:00 **Track 1: S18 - Advances in Analytical Tools and Speciation Analysis**
- 16:20 - 17:40 **Track 2: S19 - Waste Streams and Secondary Resources**

Conference Dinner

- 19:30 - 23:00 *Conference Dinner in Handelsbeurs, Kouter 29 9000 Gent*

Wednesday, 14 September 2016

Parallel Sessions

Parallel session 1

S13 - Geophysical/geochemical Methods of Soil Pollution Assessment with Airborne Potentially Toxic Elements in problematic areas

Chair: Tadeusz Magiera (Polish Academy of Sciences, Poland)
Irena Twardowska (Polish Academy of Sciences, Poland)
Room: E1.012

- 08:30 - 08:50 **Tracing Metals in Soil by Magnetic Parameters**
Karl Fabian (Geological Survey of Norway, Norway)
- 08:50 - 09:10 **Cross-Variograms of Geochemical, Vertical and Surface Magnetometric Measurements in Areas With Strong Anthropogenic Pressure**
Piotr Fabijańczyk (Warsaw University of Technology, Poland)
- 09:10 - 09:30 **Endmember Analysis of Magnetic Properties of Soils from Norway and Poland**
Karl Fabian (Geological Survey of Norway, Norway)
- 09:30 - 09:50 **Discrimination Between Different Sources of Soil Pollutants Using Magneto-Geochemical Data Set**
Marcin Szuszkiewicz (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- 09:50 - 10:10 **Enhancement of Magnetic Susceptibility of Soil Resulting from Resuspension of Dust from a Metallurgical Slag Heap**
Małgorzata Wawer (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **Mapping Heavy Metal Distribution Around the Kozani-Ptolemais Power Plants (Northern Greece) Using Magnetic Parameters of Soils**
Simo Spassov (Royal Meteorological Institute of Belgium, Belgium)
- 11:00 - 11:20 **Impact of Iron Mining and Nickel-copper Metallurgy on Surface Soil Magnetic Susceptibility in Pasvik Valley (Northern Norway)**
Tadeusz Magiera (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- 11:20 - 11:40 **Assessment of Transboundary Metal Deposition from a Copper-Nickel Smelter Complex Using Peat from an Ombrotrophic Bog**
Sebastian Stefaniak (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- 11:40 - 12:00 **Ombrotrophic Peatlands as a Tool for Evaluation of Cumulative Anthropogenic Trace Element Deposition from Long-Range Transport**
Irena Twardowska (Institute of Environmental Engineering of the Polish Academy of Sciences, Poland)
- 12:00 - 13:30 *Lunch and Poster Session*
- 13:30 - 13:50 **Poland as a Source Region of Heavy Metal Deposition in Norway as Assessed by Analysis of Peat Cores**
Eiliv Steinnes (Norwegian University of Science and Technology, Norway)
- 13:50 - 14:10 **Determination of Atmospheric Deposition of Arsenic and Selenium Across King George Island (Antarctica) Using Neutron Activation Analysis**
Tomasz Mróz (Pedagogical University in Cracow, Poland)
- 14:10 - 14:30 **Transfer of an Industrial Marker, from Atmosphere to Life**
Sophie Ayrault (Laboratoire des Sciences du Climat et de l'Environnement, France)

14:30 - 14:50 **Evidencing Distant and Local Influences of Industrial and Other Metal Sources in PM_{2.5} in a Medium City**
Dominique Courcot (Université du Littoral Côte d'Opale, France)

15:10 - 15:40 *Refreshment Break and Poster Session*

S18 - Advances in Analytical Tools and Speciation Analysis

Chair: Hendrik Emons (Institute for Reference Materials and Measurements, Belgium)

Filip M. G. Tack (Universiteit Gent, Belgium)

Room: E1.012

16:20 - 16:40 **Advancement in Single Particle ICP-MS - From Femtogram Detection Limits to Single Cell Analysis**
Chady Stephan (Perkin Elmer)

16:40 - 17:00 **Mercury Isotopic Analysis Via Cold Vapor Generation - Multi-Collector-ICP-Mass Spectrometry as a Key Tool for Evaluating Pollution in Marine Ecosystems**
Ana Rua Ibarz (Ghent University, Belgium)

17:00 - 17:20 **Exploring New Sensors Based on Functionalized Membranes for Mercury Monitoring in Aquatic Environments**
Claudia Fontas (University of Girona, Spain)

17:20 - 17:40 **Tandem ICP-Mass Spectrometry With Chemical Resolution: an Ideal Tool for the Determination of Ultra-Trace Concentrations of Metals and Metalloids in Environmental Samples**
Eduardo Bolea Fernandez (Ghent University, Belgium)

17:40 - 18:00 **Effects of Selective Extraction Schemes on Redox-Sensitive Sb: Implications for Environmental Quantitative Sb Radionuclide Dispersion Scenarios**
Teba Gil-Díaz (University of Bordeaux, France)

Parallel session 2

S14 - Heavy Metals and Biochar Interactions

Chair: Jörg Rinklebe (Bergische Universität Wuppertal, Germany)

Filip M. G. Tack (Universiteit Gent, Belgium)

Room: E1.015

08:30 - 08:50 **Copper-Accumulation in Vineyard Soils as Consequence of Fungicide Applications - Biochar as Rescue?**
Gerhard Soja (AIT Austrian Institute of Technology GmbH, Austria)

08:50 - 09:10 **Biochar and Iron Sulfate as Amendments for an As and Cu Contaminated Soil**
Teresa Fresno (Universidad Autónoma de Madrid, Spain)

09:10 - 09:30 **Potential of Biochar Derived from Pig Manure for Cd Stabilization and Improved Plant Yield**
Christophe Loix (Centre for Environmental Sciences, Belgium)

09:30 - 09:50 **Biochar Reduces the Release of Heavy Metals Under Dynamic Redox Conditions in Contaminated Wetland Soils**
Joerg Rinklebe (University of Wuppertal, Germany)

09:50 - 10:10 **Biochar as an Amendment for the Remediation of Heavy Metal Contaminated Soil**
Reinhart Van Poucke (Universiteit Gent, Belgium)

10:10 - 10:40 *Refreshment Break and Poster Session*

10:40 - 11:00 **Effect of Different Biochar to Reduce Metal(loid)s Availability in Contaminated Mining Soils and to Promote Poplar Growth**
Bourgerie Sylvain (University of Orléans, France)

11:00 - 11:20 **Application of a British Hardwood Biochar in Soil Remediation**
Zhengtao Shen (University of Cambridge, United Kingdom)

11:20 - 11:40 **Remediation of Extremely Contaminated Soil With Cd, Pb and Zn Using Biochar – 3 Years Experiment**
Katerina Brendova (Czech University of Life Sciences Prague, Czech Republic)

11:40 - 12:00 **Removing of Metal(loid)s from Aqueous Solution Using Biochar and its Modifications**
Lukas Trakal (Faculty of Environmental Sciences, CULS Prague, Czech Republic)

12:00 - 13:30 *Lunch and Poster Session*

S19 - Waste Streams and Secondary Resources

Chair: Gijs Du Laing (Universiteit Gent, Belgium)
Gerald Zagury (Polytechnique Montréal, Canada)
Room: E1.015

13:30 - 13:50 **Heavy Metals and the Beneficial Reuse of Biowastes**
Brett Robinson (Lincoln University, New Zealand)

13:50 - 14:10 **Life Cycle Assessment of Waste from Electric and Electronic Equipment: a Review**
Gonzalo Rodriguez-Garcia (Helmholtz Institute Ulm for Electrochemical Energy Storage, Germany)

14:10 - 14:30 **Effect of Energy Grass Additions on Methane Production and Heavy Metal Fractionation During Anaerobic Digestion of Sewage Sludge**
Changming Yang (Tongji University, China)

14:30 - 14:50 **Shape-dependent Adsorption of Selenium and Tellurium by MIIFe₂O₄**
Weiyi Pan (Peking University, China)

14:50 - 15:10 **Magnetic Chrysotile Nanotubes Modified With pH-Sensitive Poly(methacrylic Acid) for Enhanced Uptake of Cu(II) Ions**
Simo Pehkonen (University of East Finland, Finland)

15:10 - 15:40 *Refreshment Break and Poster Session*

16:20 - 16:40 **Heavy Metal Extraction from Aqueous Solutions Using Ionic Liquids Immobilized in Polypropylene and Polyvinyl Alcohol Beads**
Marko Klaic (University of Vienna, Austria)

16:40 - 17:00 **Properties of Mercury in Gypsum Studied by Mass Spectrometry Technique in Development of Methodologies for Safe Secondary Use Or Disposal of Gypsum**
Majda Pavlin (Jožef Stefan Institute, Slovenia)

17:00 - 17:20 **Increasing Phytomining Efficiency on Waste Incineration Bottom Ash**
Theresa Rosenkranz (University of Natural Resources and Life Sciences, Vienna, Austria)

17:20 - 17:40 **Studying Zn Sorption on Clays in the Context of Geological Disposal of Radioactive Waste**
Liesbeth Van Laer (SCK-CEN, Belgium)

17:40 - 18:00 **Bioremediation of Soil Irrigated With Sewage Effluent Benefitting New Kinetic Tactics**
Alaa El-Din Mohamed Zaghoul (National Research Center, Egypt)

Parallel session 3

S15 - Records of Anthropogenic Contamination

Chair: Sophie Ayrault (Laboratoire des Sciences du Climat et de l'Environnement, France)
Claude Boutron (Joseph Fourier University, France)
Sophia Hansson (ENSAT in Toulouse, France)
Room: E2.009

08:30 - 08:50 **Assessment of Historical Trace Metals Contamination Along a River-Estuarine-Coastal Gradient in Sediment Cores from the Garonne-Gironde System (France)**
Guia Morelli (University of Bordeaux, France)

08:50 - 09:10 **Mercury Contamination and Bacterial Activity Downstream of a Chlor-Alkali Plant in the Ölt River**
Andrea Garcia Bravo (Uppsala University, Sweden)

09:10 - 09:30 **Novel EDTA-Based Method of Washing Pb Contaminated Soils: Hazard Mitigation and Sustainable Soil Use**
Domen Lestan (University of Ljubljana, Slovenia)

- 09:30 - 09:50 **Historical Perspective on the Hazards of Environmental Heavy Metals Contamination of Sediments of the Odra River Valley (Poland/Germany)**
Aleksandra Ibragimow (Polish-German Research Institute, Poland)
- 09:50 - 10:10 **Distribution of Sediment-Associated Metals in a Relatively Pristine Watershed Following the Catastrophic Failure of a Mine Tailings Storage Facility in British Columbia, Canada**
Philip N. Owens (University of Northern British Columbia, Canada)
- 10:10 - 10:40 *Refreshment Break and Poster Session*
- 10:40 - 11:00 **The Worst Brazilian Environmental Disaster Altered the Distribution of Metals in Water at the Doce River Estuary and Marine Region**
Renato Neto (Universidade Federal do Espírito Santo, Brazil)
- 11:00 - 11:20 **Chromium Contamination of Water Due to Ni Mines, New-Caledonia**
Peggy Gunkel-Grillon (University of New-Caledonia, New Caledonia)
- 11:20 - 11:40 **Distribution of Mercury, Antimony and Arsenic in the Shallow Groundwater System from the Former Hg-Mining Areas of Abbadia San Salvatore (Tuscany, Central Italy)**
Orlando Vaselli (University of Florence, Italy)
- 11:40 - 12:00 **Control of Metals from Energy and Industrial Sources**
Jozef M. Pacyna (NILU - Norwegian Institute for Air Research, Norway)
- 12:00 - 13:30 *Lunch and Poster Session*
- 13:30 - 13:50 **Assessment of Vertical Contamination of Cd, Pb and Zn in Soils Around a Former Ore Smelter in Wallonia, Belgium**
Amandine Liénard (Université de Liège - Gembloux Agro-Bio Tech, Belgium)
- 13:50 - 14:10 **Surficial Soil Contamination Around a Zinc Processing Factory**
Dumoulin David (LASIR - Université Lille 1, France)
- 14:10 - 14:30 **Transfer of Trace Metals Between Air, Soil and Cacao Beans in Areas Impacted by Oil Activities in Ecuador**
Fiorella Barraza (Geosciences Environnement Toulouse (GET). Université Paul Sabatier, France)
- 14:30 - 14:50 **Chronology of Metal Pollution in Golden Horn Estuary Istanbul, Derived from ²¹⁰Pb and ¹³⁷Cs Dating**
Murat Belivermiş (Istanbul University, Turkey)
- 14:50 - 15:10 **From Iron Ore to Ecotoxicological Impacts: One Thousand Years of Manganese History**
Quentin Petitjean (University of Franche-Comté, France)
- 15:10 - 15:40 *Refreshment Break and Poster Session*

Parallel session 4

S16 - Interactions of Biota with Metals

Chair: Kevin Francesconi (University of Graz, Austria)

Franz Jirsa (University of Vienna, Austria)

Room: E2.010

- 08:30 - 08:50 **Heavy Metals in the Mallard *Anas platyrhynchos* from Eastern Austria**
Christof Plessl (University of Vienna, Austria)
- 08:50 - 09:10 **Accumulation of Heavy Metals in Samples of Biota Growing in the Forest Areas of Southern and North Eastern Poland in the Years 2014-2015**
Maria Zielińska (University of Opole, Poland)
- 09:10 - 09:30 **Combined Exposure to Metal Mixtures and Predator Stress: Sublethal Effects on *Asellus aquaticus***
Marjolein Van Ginneken (University of Antwerp, Belgium)
- 09:30 - 09:50 **Isotope Ratio Indicators for the Source of Lead Poisoning in Mute Swans**
Łukasz Binkowski (Pedagogical University of Cracow, Poland)
- 09:50 - 10:10 **A Report of Heavy Metal and Porphyrins Levels in Penguins**
Winfred E. Espejo (University of Concepción, Chile)

10:10 - 10:40 Refreshment Break and Poster Session

S17 - Interactions of Plants with Metals

Chair: Jayanta Kumar Biswas (University of Kalyani, India)
Erik Meers (Universiteit Gent, Belgium)

Room: E2.010

- 10:40 - 11:00 **Localization and Bioavailability of Mercury and Selenium in Edible Mushrooms *Boletus edulis* and *Scutiger pes-caprae***
Katarina Vogel-Mikus (University of Ljubljana, Slovenia)
- 11:00 - 11:20 **Increased Temperature Enhances Photosynthesis and Inhibits Copper Uptake in *E. siliculosus***
Alex Santillan-Sarmiento (Plymouth University, United Kingdom)
- 11:20 - 11:40 **Demethylation of Methylmercury in Growing Rice: an Evidence of Rice Self-Detoxification for Hg Pollution?**
Jiating Zhao (Institute of High Energy Physics, Chinese Academy of Sciences, China)
- 11:40 - 12:00 **Root-Applied Glutathione Inhibits Cadmium Translocation from Roots to Shoots Selectively in Oil Seed Rape Plants**
Shin-ichi Nakamura (Akita Prefectural University, Japan)
- 12:00 - 13:30 Lunch and Poster Session
- 13:30 - 13:50 **Cadmium-Induced Effects on Endoreduplication in Leaves of *Arabidopsis thaliana***
Sophie Hendrix (Hasselt University, Belgium)
- 13:50 - 14:10 **Plant-Microbe Symbiotic System Based on Cadmium Tolerant Pea Mutant, Mycorrhizal Fungus, Rhizobia and PGPR**
Andrey Belimov (All-Russia Research Institute for Agricultural Microbiology, Russian Federation)
- 14:10 - 14:30 **Multi-Metal Resistance and Plant Growth Promotion Potential of a Wastewater Bacteria and its Synergistic Benefits**
Jayanta Kumar Biswas (University of Kalyani, India)
- 14:30 - 14:50 **Desferrioxamine B vs. EDTA for Improving the Phytoextraction of Metals by Sunflower**
Cornu Jean-Yves (Institut National de Recherche Agronomique, France)
- 14:50 - 15:10 **Spatio-Temporal Analyses of 100 Year Heavy Metals Pollution in the Watarase River and Biological Responses of Japanese Dace, *Tribolodon hakonensis***
Shosaku Kashiwada (Toyo University, Japan)
- 15:10 - 15:40 Refreshment Break and Poster Session

Wednesday, 14 September 2016

Poster Contributions

S13 - Geophysical/geochemical Methods of Soil Pollution Assessment with Airborne Potentially Toxic Elements in problematic areas

- S13-P01 **Geostatistical Assessment of the Risk of Soil Contamination Using Soil Magnetometry**
Piotr Fabijańczyk (Warsaw University of Technology, Poland)
- S13-P02 **Application of Soil Magnetometry for the Soil Pollution Study in Upper Silesia (Southern Poland) in Two Different Scenarios**
Tadeusz Magiera (Institute of Environmental Engineering, Polish Academy of Sciences, Poland)
- S13-P03 **Discriminant Analysis of Heavy Metal Contamination in the Depth Soil**
Young-Tae Jo (Chonnam National University, Republic of Korea)
- S13-P04 **Juxtaposing recent and sub-recent magnetic impact records of air pollution – bio- and soil magnetic monitoring in a Belgian harbour area**
Ynse Declercq (Ghent University, Belgium)

S14 - Heavy Metals and Biochar Interactions

- S14-P01 **Valorisation of By-Products and Biochar to Reduce Arsenic and Copper Mobility in Contaminated Soils**
Rebeca Manzano (Universidad Autonoma de Madrid, Spain)
- S14-P02 **Sorption of Heavy Metals on Modified Biochars for Soil Remediation**
Reinhart Van Poucke (Ghent University, Belgium)
- S14-P03 **Effects of a Biochar Amendment to Improve the Physicochemical Characteristics of a Former Mine Extraction Soil Contaminated Mainly by Pb and As and to Enhance the Growth of Three Willow Species**
Bourgerie Sylvain (université d'Orléans, France)

S15 - Records of Anthropogenic Contamination

- S15-P02 **Main Source and Sink of Mercury in a Catchment of Wanshan Hg Mining Area, Guizhou**
Zhihui Dai (Institute of Geochemistry, Chinese Academy of Sciences, China)
- S15-P03 **Research on the Migration Simulation of Heavy Metal Cr, Pb and Zn in Soil of Mining Area**
Jihong Dong (China University of Mining & Technology, China)
- S15-P04 **Trace Metals in Mangrove Soils in the Subaé River Basin, Bahia, Brazil**
Jorge Antonio Gonzaga Santos (Universidade Federal do Recôncavo da Bahia, Brazil)
- S15-P05 **Adsorption of Heavy Metals on Road-Deposited Sediment: Kinetic and Isotherm Investigations**
Jin Zhang (Technische Universität Dresden, Germany)
- S15-P06 **Natural Attenuation of Arsenate-Contaminated River Impacted by Acid Mine Drainages: Characterization of Suspended Particulate Matters**
Keiko Sasaki (Kyushu University, Japan)
- S15-P07 **Leaching of Lead (Pb) in Abandoned Mine Soil in Column Leaching Experiment**
Nguyen Xuan Phuc (Chonnam National University, Democratic People's Republic of Korea)
- S15-P08 **Integrated Assessment of Lead in Soil from a Battery-Disposal Site Before Remediation**
Paola Adamo (Universita' degli Studi di Napoli Federico II, Italy)
- S15-P09 **Heavy Metals Distribution of Artemisia argyi Grown in Indigenous Zinc Smelting Slag**
Yishu Peng (Guizhou University, China)
- S15-P10 **Potentially Harmful Elements in Breakages of Glazed Tiles from Three Sites in Lithuania**
Ričardas Taraškevičius (Nature Research Centre, Lithuania)

- S15-P11 **Acid Rains and Behavior of Heavy Metals in Geochemical Technogenic Area**
Yury G. Tatsy (Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Russian Federation)
- S15-P12 **Distribution of Thallium in Scots Pine from a Pyrite Mining and Smelting Area, South China**
Juan Liu (Guangzhou University, China)
- S15-P13 **5500 Years of Lead Deposition Recorded in Staroselskii Moch, an Ombrotrophic Peat Bog in Nw Russia**
Tatiana Pampura (Institute of Physicochemical and Biological Problems of Soil Science of the RAS, Russian Federation)

S16 - Interactions of Biota with Metals

- S16-P01 **Trace Metals Enroute Wastewater and Their Toxicity to Marine Fish Using Gaussian Model**
Ah Bu-Olayan (Kuwait University, Kuwait)
- S16-P02 **Arsenic Biotransformation by Microcystis Aeruginosa Under Different Nitrogen and Phosphate Levels**
Changzhou Yan (Institute of Urban Environment, Chinese Academy of Sciences, China)
- S16-P03 **Silver Accumulation in Chironomid Larvae in Relation to Their Ecological Preferences in an Ultraoligotrophic Lake**
Sergio Ribeiro Guevara (LAAN-CNEA, Argentina)
- S16-P04 **Calcium Concentration in Muscle *Longissimus thoracis* and Meat Tenderness of Nellore Cattle**
José Cavalcante Souza Vieira (Sao Paulo State University, Brazil)
- S16-P05 **Mercury Fractionation in Tucunaré (*Cichla spp*) and Filhote (*Brachyplatystoma filamentosum*) from Brazilian Amazon**
José Cavalcante Souza Vieira (Sao Paulo State University, Brazil)
- S16-P06 **Metallic Study of Hg in Muscle Tissue of Jaraqui**
João Vitor de Queiroz (UNESP Botucatu, Brazil)
- S16-P07 **Effects of Spinosad on Vitellogenin Expression in the Cadmium-Selected Beet Armyworm Strain**
Maria Augustyniak (University of Silesia, Poland)
- S16-P08 **Evaluation of the Immune System of Female *Steatoda grossa* (Theridiidae) Spider Exposed to Food Contaminated With Copper**
Monika Stalmach (University of Silesia, Poland)
- S16-P09 **Stress Markers in the Beet Armyworm from Control and Cadmium Starins Exposed to Additional Stressors**
Monika Tarnawska (University of Silesia, Poland)
- S16-P10 **Mercury Cadmium and Selenium in Liver and Muscle of Mediterranean Spearfish**
Stefania Ancora (University of Siena, Italy)
- S16-P11 **Heavy Metal Resistance in Bacteria Isolated from Humboldt Penguin (*Speniscus humboldti*) Excreta**
Winfred E. Espejo (University of Concepción, Chile)

S18 - Advances in Analytical Tools and Speciation Analysis

- S18-P01 **Task Specific Ionic Liquids for Solvent Bar Micro-Extraction of Heavy Metals**
Jose Antonio Lopez-Lopez (University of Cádiz, Spain)
- S18-P02 **A New Approach for Sampling and Monitoring of Dissolved Heavy Metals in Urban Runoff by Means of Passive Sampler Sorbicell**
Md Tariqul Islam Shajib (University of Copenhagen, Denmark)
- S18-P03 **Factorial Design for Method Development Aiming at Selenium Determination in Broccoli Parts by GFAAS**
Daiane Placido Torres (Embrapa Clima Temperado, Brazil)
- S18-P04 **Analysis of Selected Mercury Compounds in Environmental Samples Using Thermo-Desorption Technique**
Saniewska Dominika (University of Gdańsk, Poland)
- S18-P05 **Determination of Trace Elements in the Open Ocean: Method Validation**
Emiliya Vasileva-Velva (IAEA Environment Laboratories, Monaco)
- S18-P06 **Factors That Influenced Drying Procedure of the Samples Intended for Trace Metals Analyses.**
Magdalena Semla (Pedagogical University of Cracow, Poland)
- S18-P07 **High Resolution ICP-OES: a Powerful Diagnostic Tool for Nuclear Forensic Studies**

Krachler Michael (European Commission-Joint Research Centre-Institute for Transuranium Elements, Germany)

S18-P08 **Application of APDC for Separation of Chromium, Thallium and Arsenic Forms from Water Samples - Preliminary Results**

Natalia Ospina-Alvarez (Universität Potsdam, Germany)

S19 - Waste Streams and Secondary Resources

S19-P01 **The Fate of Heavy Metals in Anaerobic Digestion Process**

Ivona Sigurnjak (Ghent University, Belgium)

S19-P02 **The Analysis of the Transition Metal Contents of Leached Out Bottom Ash**

Tom de Wolf (University of Technology Eindhoven, Netherlands)

S19-P03 **Grouping of Radionuclides in the Belgian Geological Disposal Concept for Radioactive Waste**

Benny de Blohouse (ONDRAF/NIRAS, Belgium)

S19-P04 **Trace Metal Distribution and Mobility in Drill Cuttings from Marcellus Shale Gas Extraction**

Mengling Stuckman (National Energy Technology Laboratory - Department of Energy, United States)

S19-P05 **Stability and Immobilizing Potential of Novel Surface-Modified Amorphous Manganese Oxide**

Zuzana Michalkova (Czech University of Life Sciences Prague, Czech Republic)

S19-P06 **Impact of Scrap Tyre Dumps on Soil Contamination**

Inmaculada Valverde-Asenjo (Universidad Complutense de Madrid, Spain)

S19-P07 **Thermodynamic Study of Mercury Containing Waste by Pyrolysis**

Yailen Busto Yera (Technological University of Israel, Ecuador)

S20 - Bioindication and Biomonitoring (B&B) Technologies for Observing the Environment

S20-P01 **Concentrations of Heavy Metals in Moss as Indicators for Atmospheric Deposition**

Winfried Schröder (Universität Vechta, Germany)

S20-P02 **Investigating Role of *Phragmites australis* as Heavy Metals Pollution Indicator in Dez River, Iran**

Farzad Veysanlu (Islamic Azad University, Iran)

S20-P03 **Integrative Assessment of Data Measured by Biomonitoring and Calculated by Use of Models Indicating Atmospheric Deposition of Heavy Metals**

Stefan Nickel (Universität Vechta, Germany)

S20-P04 **Building a Monitoring System for Metals in Wild Commercial Fish in the North East Atlantic**

Amund Maage (NIFES, Norway)

S20-P05 **Biomonitoring of Metals by Using Mussel *Mytilus galloprovincialis* in Rehabilitated Estuary: Golden Horn**

Murat Belivermiş (Istanbul University, Turkey)

Thursday, 15 September 2016

Day Schedule

Parallel Sessions

- 08:50 - 10:30 **Track 1: S20 - Bioindication and Biomonitoring (B&B) Technologies for Observing the Environment**
08:50 - 10:30 **Track 2: S21 - Spatial and Temporal Changes in Environmental Contamination**
10:30 - 11:00 *Refreshment Break*

Plenary Lecture

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

- 11:00 - 11:30 **Green Revolution and Worldwide Decline in Concentration of Trace Metals in Our Food Supply**
Jerome Nriagu (University of Michigan, United States)

Closing Session

Chair: Filip M. G. Tack (Universiteit Gent, Belgium)
Room: Oehoe

- 11:30 - 12:00 **Closing Session**
12:00 - 13:30 *Lunch*

Thursday, 15 September 2016

Parallel Sessions

Parallel session 1

S20 - Bioindication and Biomonitoring (B&B) Technologies for Observing the Environment

Chair: Bernd Markert (International Graduate School Zittau, Germany)
Simone Wünschmann (Environmental Institute of Scientific Networks, Germany)
Room: E1.012

- 08:50 - 09:10 **The Biological System of Elements - Beneficial, Essential and Toxicological Effects of Chemical Elements Revisited**
Simone Wünschmann (Environmental Institute of Scientific Networks, Germany)
- 09:10 - 09:30 **Biomonitoring Long-Term and Large-Scale Deposition of Pollutants Based on Moss Analyses**
Marina Frontasyeva (Joint Institute for Nuclear Research, Russian Federation)
- 09:30 - 09:50 **Metal Contamination Monitoring With Aquatic Bryophytes: Impact of an Abandoned Mine Site on the River Merse (Central Italy)**
Fabrizio Monaci (University of Siena, Italy)
- 09:50 - 10:10 **Urban Green as Indicator of Metal Pollution**
Ana Castanheiro (University of Antwerp, Belgium)
- 10:10 - 10:30 **Microscopical Analysis of Particulate Matter Intercepted by Moss-Bags in Urban, Industrial and Agricultural Areas of Three EU Countries**
Simonetta Giordano (Università di Napoli Federico II, Italy)
- 10:30 - 11:00 *Refreshment Break*

Parallel session 2

S21 - Spatial and Temporal Changes in Environmental Contamination

Chair: Sophie Ayrault (Laboratoire des Sciences du Climat et de l'Environnement, France)
Kevin Francesconi (University of Graz, Austria)
Room: E1.015

- 08:50 - 09:10 **Trends of Atmospheric Trace Elements at a Sub-Arctic Site Pallas in Finland in 1996-2014**
Katriina Kyllönen (Finnish Meteorological Institute, Finland)
- 09:10 - 09:30 **Emissions, Controls and Isotope Signatures of Hg from Coal-Fired Power Plants in Southern China**
Zhonggen Li (Institute of Geochemistry, Chinese Academy of Sciences, China)
- 09:30 - 09:50 **Sedimentary Record of Anthropogenic Metal Inputs in the Tuzla Shipyard (Turkey)**
Erol Sari (Istanbul University, Turkey)
- 09:50 - 10:10 **Quantifying Present and Future Mercury Deposition and Bioaccumulation to Rice in China**
Sae Yun Kwon (Massachusetts Institute of Technology, United States)
- 10:10 - 10:30 **Atmospheric Speciation of Mercury at Ny-Ålesund**
Torunn Berg (Norwegian University of Science and Technology, Norway)
- 10:30 - 11:00 *Refreshment Break*