

# **The Thirty-Fourth International Conference on Solid Waste Technology and Management**

**Annapolis, MD (Washington, DC area), USA**

**March 31 – April 3, 2019**

## **AGENDA**

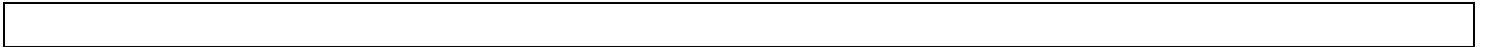
(updated January 9, 2019)

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## **Scientific Committee:**

- Committee Chair: Anita Závodská, Barry University, USA
- Haluk Akgun, Middle East Technical University (METU), Turkey
- Joseph Akunna, Abertay University, Dundee, UK
- Marisa Soares Borges, Federal University of Parana, Brazil
- Giuseppe Bonifazi, Sapienza – Università di Roma – La Sapienza, Italy
- Marta Graciela Caligaris, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, Argentina
- Mervat El-Hoz, University of Balamand, Lebanon
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- Sadhan Kumar Ghosh, Jadavpur University, India
- Serpil Guran, Rutgers EcoComplex, USA
- Yitzhak Hadar, The Hebrew University of Jerusalem, Israel
- Jane J. L. Hao, Xi'an Jiaotong-Liverpool University, China
- Maria Liubarskaia, Saint-Petersburg State University of Economics, Russia
- Masato R. Nakamura, New York City Tech, CUNY, USA
- Sara Ojeda Benitez, Instituto de Ingeniería Universidad Autónoma de Baja California, México
- Chukwu Onu, Southern University and A & M College, USA
- Lakshmi Raghupathy, TERI University, India
- Krishna R. Reddy, University of Illinois, USA
- Masafumi Tateda, Toyama Prefectural University, Japan

# CONFERENCE SUMMARY

## SUNDAY, MARCH 31, 2019

- Pre-Conference Tour of Annapolis
- Opening Reception

## MONDAY, APRIL 1, 2019

Opening Plenary

### Oral Presentations

- 1A Landfill 1
- 1B Waste Generation and Composition
- 1C Use of Wastes in Construction 1
- 1D Public Education and Involvement
  
- 2A Policy and Regulations
- 2B Construction and Demolition Wastes
- 2C Geotechnical Use of Wastes
- 2D Biological Treatment
- 2E Energy Recovery
  
- 3A Agricultural Wastes
- 3B Ash
- 3C Facilities Siting
- 3D Case Studies
- 3E Environmental Assessment 1
  
- 4A Landfill 2
- 4B Use of Wastes in Construction 2
- 4C Electronic Wastes
- 4D Plastics Wastes
- 4E Contaminated Sites 1

Poster Session 1

## TUESDAY, APRIL 2, 2019

### Oral Presentations

- 5A Waste Collection
- 5B Landfill 3
- 5C Policy and Management
- 5D Tire/Rubber Wastes
- 5E Health Care Wastes
  
- 6A Environmental Assessment 2
- 6B Biochemical Treatment
- 6C Contaminated Sites 2
- 6D Special Wastes
- 6E Sludge

Poster Session 2

Closing Reception

## WEDNESDAY, APRIL 3, 2019

Technical Field Trips

# DETAILED AGENDA

## SUNDAY, MARCH 31

12:00 p.m. - 6:00 p.m.

Conference check-in and registration

1:00 p.m. - 5:00 p.m.

Guided Tour of Annapolis  
(additional fee)

1:00 p.m. - 5:00 p.m.

Professional Education Course:

*Details to be posted in January*

5:00 p.m. - 6:00 p.m.

Welcome Reception

## MONDAY, APRIL 1

8:00 a.m. - 5:30 p.m.

Conference check-in and registration

8:00 a.m. – 8:45 a.m.

Coffee

8:45 a.m. – 10:00 a.m.

Opening Plenary

10:05 a.m. – 11:30 a.m.

**Sessions 1**

### SESSION 1A

#### *Landfill 1*

Status of Solid Waste Landfill in Benin Metropolis, Nigeria, *Dennis Iyeke Igbinomwanhia*, University of Benin, *Ohikhokhai Gift Aizebeoje*, University of Benin, *Osaghale Andrew Ehizogie*, University of Benin, **Nigeria**

Impacts of Temperature on Waste Stabilization and Settlement, *Paul Van Geel*, Carleton University, *Courtney Berquist*, Carleton University, **Canada**

The Effect of Landfill Gas on Vegetation in Landfill Biocover Systems, *Dinu Sankalpa Attalage*, University of Calgary, *Joseph Patrick Hettiaratchi*, University of Calgary, *Hiva Jalilzadeh*, University of Calgary, *Erfan Irandoost*, *Eranda Bartholomeuz*, **Canada**

Mitigation of Fugitive Landfill Emissions using BOF Slag in Landfill Cover, *Jyoti Chetri*, University of Illinois at Chicago, *Krishna Reddy*, University of Illinois at Chicago, **USA**

**SESSION 1B**  
***Waste Generation and Composition***

Comparative Study of Solid Waste Characteristics and Management Practices in Two Towns of Punjab Province of Pakistan, *Khalid Iqbal*, Office of Research, Innovation and Commercialization (ORIC), University of Gujrat, Gujrat (50700), Punjab, Pakistan, *Madeeha Rafi*, Bloomfield Hall School, Bhimber Road, Near Government Postgraduate Zamindar College, Star Colony, Gujrat (50700), Punjab, Pakistan, *Tayyaba Noreen*, Department of Geography, University of Gujrat, Gujrat (50700), Punjab, Pakistan, **Pakistan**

Grain-Class-Specific Water Contents of Different Waste Streams, *Kay Johnen*, RWTH Aachen University - Department of Processing and Recycling, *Alexander Feil*, RWTH Aachen University - Department of Processing and Recycling, **Germany**

Generation and Characterization of Solid Waste in a Peri-Urban Community in Sub-Saharan Africa, *Olubunmi Mokuolu*, University of Ilorin, *Medinat Abdulsalam*, University of Ilorin, **Nigeria**

Weekly Yard Waste Prediction Models Using Ann and Anfis, *Hoang Lan Vu*, University of Regina, Engineering, *Kelvin Tsun Wai Ng*, University of Regina, Engineering, *Bahareh Fallah*, University of Regina, Engineering, **Canada**

The Impact of Tourism on Solid Waste Generation in the Brazilian Municipality of Florianópolis, *Julio Dias*, Santa Catarina State University - UDESC, *Carlos De Rolt*, Santa Catarina State University - UDESC, *Adriano Amarante*, Santa Catarina State University - UDESC, **Brazil**

**SESSION 1C**  
***Use of Wastes in Construction I***

Structural Performance of Concrete Elements Constructed Using Recycled Concrete Aggregate and Recycled Tyre Steel Fibres, *Hynda Aoun-Klalib*, Nottingham Trent University, *Nicholas Barnes*, Waldeck, Digital Strategy Consultancy Solutions, *Bahareh Kaveh*, Nottingham Trent University, **UK**

Viscosities of Waste Modified Trinidad Asphaltic Materials, *Rehana Ali*, The University of Trinidad and Tobago, *Rean Maharaj*, The University of Trinidad and Tobago, *Nazim Mohamed*, The University of Trinidad and Tobago, **Trinidad and Tobago**

Durability Performance of Flat Panel Display Glass Concrete, *Grady Mathews IV*, Penn State Harrisburg, *Robert Bylone Jr.*, Pennsylvania Recycling Markets Center Inc., *Harry Nash*, High Concrete Group, LLC, *Dr. Shirley Clark*, **USA**

Utilization of Industrial By-Products in Self-Compacting Concrete, *Nikita Gupta*, Thapar Institute of Engineering & Technology, *Rafat Siddique*, Thapar Institute of Engineering & Technology, **India**

**SESSION 1D**  
***Public Education and Involvement***

Evaluation of Swachh Bharat Mission Slogan on Solid Waste Management in India, *Ashootosh Mandpe*, Csir-National Environmental Engineering Research Institute (Csir-Neeri), Nagpur, *Sunil Kumar*, Csir-National Environmental Engineering Research Institute (Csir-Neeri), Nagpur, **India**

Recycling and Reducing Waste in Schools, *Suzana Namusonga*, Handmaids Sisters, **Zambia**

Household Preferences and Willingness to Pay for Waste Management Services in Rural Nigeria, *Richardson Kojo Edeme*, University of Nigeria, *Nelson Nkalu*, University of Nigeria, **Nigeria**

Household Solid Waste Management in Monrovia, Liberia: Influencing factors, Characteristics, and Management Solutions, *Victor Emer David Jr*, Chongqing University, **China**

Using the Young to Realize Solid Waste Management Goals in Municipals in Developing Countries, *Joan Chepkoech Tonui*, Kenyatta University, **Kenya**

Attitudes and Behaviour of Residents towards the Management and Recycling of Municipal Solid Wastes in Olievenhoutbosch, South Africa, *Ndivhewafhi Oscar Makhale*, University of Johannesburg, *Isaac Tebogo Rampedi*, University of Johannesburg, **South Africa**

11:30 a.m. – 11:50 a.m.  
Break

11:50 a.m. – 1:10 p.m.  
**Sessions 2**

**SESSION 2A**  
***Policy and Regulations***

Governance Failure in Public Service Delivery; A Study of Solid Waste Management in Kathmandu Metropolitan City, Nepal, *Indra Prasad Dahal*, Nepal Rural Development and Environment Protection Council, **Nepal**

Addressing Tire Dumps through Legislation, *Michael Grappe*, Arkansas Department Of Environmental Quality, **USA**

How Policies Can Support Small Businesses in Community Waste Collection – Case Studies from Mbeya, Tanzania and Baltimore, Maryland, *Kristyn Oldendorf*, Baltimore City Department of Public Works, **United States**

Solid Waste Issues in the Palestinian Authority Area of the West Bank, *Ivan Cooper*, Civil & Environmental Engineers, Inc., Eng. Monther Hind, Palestinian Wastewater Engineers Group (PWEG), **USA**

An Assessment of Policy Related to Municipal Solid Waste Management in Botswana, *Daniel Mmereki*, Department for Management of Science and Technology Development,

## SESSION 2B

### *Construction and Demolition Wastes*

Estimation of Construction Waste with Rectangular Prism and Pyramidal Shape Method in Urban Areas of Pakistan, *Jawad Rafi*, Al Khayarin International, Al Thumama, Doha, Qatar, *Muhammad Rafi*, Royal Haskoning & Khatib & Alami and Partners, Sultanate of Oman (former), *Mukaram Mushtaq*, Department of Computer Sciences, University of Gujrat, Gujrat (50700), Punjab, Pakistan, **Qatar**

Best Practices for Reducing, Reusing, and Recycling Construction and Demolition Materials, *Diana Gutierrez*, Straughan Environmental, Inc., **United States**

Utilization of waste concrete aggregates in bituminous mixes, *Pushpinder Singh*, Punjab Engineering College, Chandigarh, *S.K. Singh*, Punjab Engineering College, Chandigarh, **India**

## SESSION 2C

### *Geotechnical Use of Wastes*

Dry Density-Water Content Curves for High Plasticity Clays Treated with Fly Ash, Stone Dust and Combinations, *Darga Kumar Nandyala*, J N T University Hyderabad, **India**

Crushed Solid Wastes Based Geopolymer Cements and Nano-Geomaterials and the Rheology of Treated Soils for Pavement Construction, *Kennedy Onyelowe*, Michael Okpara University of Agriculture, Umudike, Umuahia, Abia State, Nigeria, *Duc Bui Van*, Hanoi University of Mining and Geology, Hanoi, *Manh Nguyen Van*, Hanoi University of Mining and Geology, **Nigeria**

Mechanical Behavior of a Reinforced Clay Soil with Açai (*Euterpe oleracea*) Fibers, *Matheus Machado Lopes*, Universidade de Brasília, *Victória Gomes de Oliveira*, Universidade de Brasília, *Michéle Dal Toé Casagrande*, Universidade de Brasília, **Brazil**

## SESSION 2D

### *Biological Treatment*

Vermicomposting of Different Organic Materials Using the Epigeic Earthworm *Eisenia Foetida*, *Yvonne Indrani Ramnarain*, Ministry of Agriculture, *Abdullah Ansari*, University of Guyana, *Lydia Ori*, University of Suriname, **Suriname**

Application of Mixed Organic Waste for Effective Septage Treatment through In-vessel Co-composting, *Anu Rachel Thomas*, Indian Institute of Technology Madras, *Martin Kranert*, University of Stuttgart, *Ligy Philip*, Indian Institute of Technology Madras, *NIL*, **India**

Assessment of the Effects of *Beauveria Bassiana* (*Hypocreales*) inoculum on the Composting of Vegetable Wastes, *Felix Nchu*, Cape Peninsula University of Technology, *Nomfusi Ntsohi*, Cape Peninsula University of Technology, **South Africa**

Biodegradable Waste management techniques for Apartments complexes and Gated communities for Metro cities- Best Practices of Bruhat Bengaluru Mahanagarapalike(ULB of Bengaluru City), *Jyothilakshmi Ramaswamy*, M. S. ramaiah Institute of Technology, *Sumangala Patil*, M.S. College of Engineering, **India**

Investigation of Biosolid-Compost Produced by High-Temperature Fermentation Process, *Jih-Hsing Chang*, Chaoyang University of Technology, *Saroj Adhikari*, Chaoyang University of Technology, *Ding-Quan Ng*, Chaoyang University of Technology, *Shan-Yi Shen*, **Taiwan**

Impact of Seasonal and Regional Influences on the Quality of Separately Collected Biological Waste, *Melanie Brune*, RWTH Aachen University - I.A.R., *Christoph Jansen*, RWTH Aachen University - I.A.R., *Alexander Feil*, RWTH Aachen University - I.A.R., **Germany**

## **SESSION 2E**

### ***Energy Recovery***

Trial Calculation to Obtain the Upper Price Limit for a Complete Electricity Generation System Based on Waste Incineration, *Masafumi Tateda*, Toyama Prefectural University, *Ryoko Sekifuji*, Toyama Prefectural University, **Japan**

Challenging Situation to Optimise 100% Pet Coke With 15% Tsr: A Case Study at Ambujanagar, *Bibekananda Mohapatra*, National Council for Cement & Building Materials, *Pravesh Kumar Sharma*, Ambuja Cements Ltd., *Ramsinh Chauhan*, Ambuja Cements Ltd., *Mr. Atul Kumar Chaturvedi*, *Ms. Reshu Chauhan*, *Mr. Sukuru Ramarao*, **India**

Limitations of one-step flue gas treatment systems for small-scale waste-to-energy plants, *Boleslav Zach*, Institute of Chemical Process Fundamentals of the CAS, v. v. i., *Michael Pohořelý*, Institute of Chemical Process Fundamentals of the CAS, v. v. i., *Michal Šyc*, Institute of Chemical Process Fundamentals of the CAS, v. v. i., *Karel Svoboda*, *Šárka Václavková*, *Jaroslav Moško*, *Jiří Brynda*, *Miroslav Punčochář*, **Czech Republic**

1:10 p.m. - 2:05 p.m.

**Awards Luncheon**

**Presentation of the Russell Ackoff Award, Roy F. Weston Award, Iraj Zandi Award and Student Paper Award**

2:05 p.m. – 3:55 p.m.

**Sessions 3**

## **SESSION 3A**

### ***Agricultural Wastes***

Assessment of Environmental Impact and Nutrient Content of Oil Palm Slurry in Livestock Nutrition in Nigeria, *Adejoke Adeneye Mako*, Tai Solarin University of Education, Ijagun, *Oluwanike Abiola-Olagunju*, Lead City University, Ibadan, *Victor Olusegun Akinwande*, Tai Solarin University of Education, Ijagun, **Nigeria**



Novel Application of Ultrasonic Pretreatment of Giant Reed Co-Digested with Chicken Manure for Biogas Recovery, *Zainab Ismail*, University of Baghdad, *Nazik Noori*, University of Baghdad, **Iraq**

Reverse Logistics of Agrochemical Packaging in Brazil: Case Study, *Ariane Braga Oliveira*, Unesp, *Bruno Fernando Gianelli*, Instituto Federal de São Paulo, *Sandro Donnini Mancini*, Unesp, **Brazil**

Feasibility Analysis of Different Agricultural Waste Management Techniques for Northern India, *Nawazish Parwez*, IIT Kharagpur, *Hitesh Vyas*, IIT Kharagpur, **India**

Effect of Crop Residue, Poultry Manure, Cow Dung and Sawdust as a Growth Media in the Production of Physic Nut (*Jatropha curcas* L.) Seedlings in Samaru Zaria, Nigeria, *Usman Ibrahim*, Ahmadu Bello University, Zaria, *I. L. Hamma*, Federal University, Kashere, Gombe State, *I.J. Dantata*, Federal University, Gashua, Yobe State, **Nigeria**

Utilisation of Agricultural Wastes for Wealth Generation in Nigeria, *Temitayo Ogunsakin*, Fame Oyster & Co. Nigeria, **Nigeria**

Development of Solid Waste as a Organic Fertilizer from Arum Leaf Extract During Electricity Generation System, *Md.Afzol Hossain*, Dr. Mahbubur Rahman Mollah College, *Kamrul Alam Khan*, Jagannath University, *Md. Emran Quayum*, University of Dhaka, **Bangladesh**

### SESSION 3B

#### *Ash*

Effects of Silica Fume on Strength and Microstructure Characteristics of a Municipal Sewage Sludge Ash as Supplementary Cementitious Material, *Xiaochao Tang*, Widener University, *Ian Nordfors*, Widener University, **USA**

Assessment of the Municipal Solid Waste (MSW) Fly Ash Produced at “Intermunicipal Waste Management of Greater Porto” (LIPOR, Portugal), *Bruno Valentim*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Renato Guimarães*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Ana Cláudia Santos*, **Portugal**

Char Concentration from Coal Fly Ash for Electrochemical Reactions using an Alternative Sequence of Separation Methods, *Ana Cláudia Santos*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Renato Guimarães*, **Portugal**

A Feasibility Study to Obtain Valuable Materials via the Fractionation of Cork Powder Fly Ash, *Renato Guimarães*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Ana Cláudia Santos*, **Portugal**

Concentration and Characterization Ti-spheres (titanspheres) from Cork Powder Fly Ash, *Renato Guimarães*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute,

*Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute,  
*Ana Cláudia Santos*, **Portugal**

Study on the Use of Post Processed MSWI Ash in Concrete and Mortar, *Grady Mathews IV*, Penn State Harrisburg, *Reem Alsinan*, Penn State Harrisburg, *Michael Young*, Penn State Harrisburg, **USA**

### **SESSION 3C** ***Facilities Siting***

Identifying the Waste Potential and Optimizing the Location(s) for Waste-to-Value-Added Facilities to Generate Electricity in the State of Illinois, USA, *Mahdi Vaezi*, Northern Illinois University, *Veerendra Chowdary Chidipothu*, Northern Illinois University, **USA**

Municipal Solid Waste Disposal Site Selection of Panauti Municipality using GIS model, *Aanchal Khadka*, Central department of environmental science, Tribhuvan university, Kathmandu, Nepal, *Alka Sapkota*, Himalayan Whitehouse International College, **Nepal**  
Health Effect of Landfill Location: A Case study of Olososun Landfill, Lagos, Nigeria, *Augustine Oluwatoyin Ojo*, ABC Sanitation Solutions Ltd, **Nigeria**

### **SESSION 3D** ***Case Studies***

Some Aspects of Household Food Waste Generation and Treatments Options: A Case Study of Mamelodi and Montana in the City of Tshwane Metropolitan Municipality in South Africa, *Morwesi Silvia Ramotse*, University of Johannesburg, *Isaac Tebogo Rampedi*, University of Johannesburg, **South Africa**

The Practices and Challenges for Municipal Solid Waste Management in Temeke Municipality, *Dar Es Salam, Tanzani*, *Ahmed Lubwama*, The Open University, Tanzania, **Tanzania**

Establishment of Eco-Solid Waste Management Park in Palompon, Leyte, Philippines, *Maribel Munsayac*, Environmental Management Bureau Region Office Viii, *Reggie Urmeneta*, Environmental Management Bureau Region Office Viii, **Philippines**

Characterization and Existing Practices of Solid Waste Management on Roadsides: A Case Study of Tribhuvan and Araniko Highways, Nepal, *Priyanka Aryal*, Central Department of Environmental Science, Tribhuvan University, Nepal, *Kedar Rijal*, Central Department of Environmental Science, Tribhuvan University, Nepal, *Saroj Adhikari*, Central Department of Environmental Science, Tribhuvan University, Nepal, **Nepal**

Characterization and Existing Practices of Solid Waste Management on Roadsides: A Case Study of Tribhuvan and Araniko Highways, Nepal, *Priyanka Aryal*, Central Department of Environmental Science, Tribhuvan University, Nepal, *Kedar Rijal*, Central Department of Environmental Science, Tribhuvan University, Nepal, *Saroj Adhikari*, Central Department of Environmental Science, Tribhuvan University, Nepal, **Nepal**

Evaluation of Solid Waste Generation, Categories and Disposal Option in developing Countries: A case Study of Nigeria, *Augustine Oluwatoyin Ojo*, ABC Sanitation Solutions Ltd, **Nigeria**

Solid Waste Management in Liberia : The Case of Monrovia, *Margaret M. Beyslow*, Environmental Protection Agency of Liberia, *Abayomi Grant*, Environmental Protection Agency of Liberia, *Mark E. Tambah*, Prime Research Inc., **Liberia**

An Assessment of Solid Waste Management Practices:A Casestudy for East Delhi, India, *Dharav Singh Randhawa*, National Institute of Technology, Patna, *Aashna Kathpalia*, Jamia Millia Islamia, *Shailender Kumar Mandal*, National Institute Of Technology, Patna, **India**

### **SESSION 3E**

#### ***Environmental Assessment 1***

Life Cycle Assessment of Construction Materials: An Overview, *Sarah Honorato Lopes da Silva*, Federal Technological University of Paraná, *Marienne Do Rocio De Mello Maron Da Costa*, Federal University of Paraná, *Marcell Mariano Corrêa Maceno*, Federal University of Paraná, *Maria Clara Cavalini Pinto*, **Brazil**

Design Strategies to Reduce Carbon Emissions from Buildings, *EneDir Ghisi*, Federal University of Santa Catarina, *Andrea Invidiata*, **Brazil**

Piecewise Nonlinear Regression: A statistical Method for the Analysis of Experimental Adsorption Data by the Intraparticle-Diffusion Models, *Mohammad Elkhairi*, Alexandria University, **Egypt**

3:55 p.m. – 4:15 p.m.

**Break**

4:15 p.m. – 5:55 p.m.

**Sessions 4**

### **SESSION 4A**

#### ***Landfill 2***

Methanotrophic Methane Oxidation in New Biogeochemical Landfill Cover System, *Raksha Rai*, University of Illinois at Chicago, *Krishna Reddy*, University of Illinois at Chicago, **USA**

New Coupled Thermo-Hydro-Bio-Mechanical Model for Optimized Design and Operation of Bioreactor Landfills, *Girish Kumar*, University of Illinois at Chicago, *Krishna Reddy*, University of Illinois at Chicago, **USA**

Evaluation of Unsaturated Hydraulic Behavior of Evapotranspiration (ET) Cover through Field Instrumentation and Numerical Modeling, *Md Jobair Bin Alam*, University of Texas at Arlington, *Prabesh Bhandari*, University of Texas at Arlington, *Farnaz Seraj*, University of Texas at Arlington, **USA**

The Effect of Soil Type and Vegetation on Methane Oxidation Efficiency of Landfill Covers Under Wet and Dry Conditions, *Dinu Sankalpa Attalage*, University of Calgary, *Joseph Patrick Hettiaratchi*, University of Calgary, *Hiva Jalilzadeh*, University of Calgary, *Eranda Bartholomeuz*, **Canada**

Reactions Between Leachate and Possible Clay Types, *Ibrahim Adewuyi Oyediran*, University of Ibadan, Nigeria, *David Ayodele Olalusi*, University of Ibadan, Nigeria, **Nigeria**

Assesment of Impact Landfill Leachate on Groundwater Quality, *Saleh Al-Muzaini*, Kuwait Institute for Scientific Research, **Kuwait**

## **SESSION 4B**

### *Use of Wastes in Construction 2*

Portland Composite Cement: An Sustainable Product in Indian Scenario, *Bibekananda Mohapatra*, National Council for Cement & Building Materials, *Pravesh Kumar Sharma*, Ambuja Cements Ltd., *Varsha Liju*, National Council for Cement and Building Materials, *Sanjeev Chaturvedi*, National Council for Cement & Building Materials, **India**

Compressive Strengths of Concretes Containing Synthetic Lightweight Aggregate Made from Waste Materials, *Christopher Swan*, Tufts University, *Rory Buckman*, Tufts University, *Morgan McKiernan*, Tufts University, **USA**

Performance of Concrete with Recycled Plastic Waste for Flood Defence Barrier Systems, *Bahareh Kaveh*, Nottingham Trent University, *Hynda Aoun-Klalib*, Nottingham Trent University, *Tom Kemp*, Green consultants, **UK**

Properties of Self Compacting Concrete Incorporating Silica Fume, *Anhad Singh Gill*, Thapar Institute of Engineering & Technology, *Rafat Siddique*, Thapar Institute of Engineering & Technology, **India**

A Study on Performance of Pervious Concrete Pavement incorporating waste materials and its Life Cycle Cost Analysis: A Review, *Surya Kant Sahdeo*, IIT Roorkee, *G.D. Ransinchung R.N.*, IIT Roorkee, *Sumit Nandi*, IIT Roorkee, **India**

Effect of RAP on Characteristics of Flexible Pavements : A Review, *Kumari Monu*, Indian Institute of Technology, Roorkee, India, *G.D Ransinchung R.N.*, Indian Institute of Technology, Roorkee, India, **India**

The Economic Benefit and Health Hazards Inherent in Informal e-waste Management in Nigeria, *Augustine Oluwatoyin Ojo*, ABC Sanitation Solutions Ltd, **Nigeria**

## **SESSION 4C**

### *Electronic Wastes*

Recovery Rare Earth and Synthesis of Perovskite NdfeO<sub>3</sub> Nanoparticles Based on Waste Permanent Magnet for Catalytic Application, *Hai Huynh Trung*, Hanoi University of Science and Technology, *Huy Pham Khanh Huy*, Hanoi University of Mining and Geology, **Vietnam**

E-Wastes Management in Nigeria: Challenges and Prospects, *Fatima Badiru Ibrahim*, Ahmadu Bello University Zaria, *Abubakar Ismail*, Ahmadu Bello University Zaria, **Nigeria**

## **SESSION 4D**

## *Plastics Wastes*

Single-Use Plastics: How Prepared Are Ireland and the US for Sustainability?, *Anita Zavodska*, Barry University, *Anne Morrissey*, **US**

Plastic Waste Management and Public Health Concerns in Bangladesh, *Mohammad Habibur Rahman*, Buet and Dwasa, *Alauddin Ahmed*, ITN-Buet, **Bangladesh**

Effective Plastic Waste Management in Developing Nations, *Olufemi Oyedele*, Government of the State of Osun, **Nigeria**

A Sustainable Approach for Post-Consumer PET Bottles Recovery and Reduction in Nigeria, *Olaide Monsor Aderoju*, Department of Geo-sciences, Environmental Spatial Planning, Faculty of Sciences, University of Porto, *Antonio Guerner Dias*, Department of Geo-sciences, Environmental Spatial Planning, Faculty of Sciences, University of Porto, *Peter C Ekweozoh*, Department of Environmental Science & Technology, Federal Ministry of Science & Technology, *Iquo Offiong*, **Portugal**

### **SESSION 4E** *Contaminated Sites 1*

Identification of Metal Tolerant Plant Species for Sustainable Phytomanagement of Bauxite Residue Dumps, *Meenu Gautam*, Institute of Science, Banaras Hindu University, Varanasi, *Madhoolika Agrawal*, Institute of Science, Banaras Hindu University, Varanasi, **India**

Assessment of Groundwater Quality around Municipal Solid Waste Dumpsite in Southwest Nigeria, *Adedayo Adekunle Badejo*, Federal University of Agriculture, Abeokuta, *Geoffery Nwosu*, Federal University of Agriculture, Abeokuta, *Shileola Akindoju*, Funaab, *Adekunle, A.A*, **Nigeria**

6:00 p.m. – 7:00 p.m

**Posters 1**

6:30 p.m. – 7:30 p.m

**Reception**

### **POSTER SESSION 1**

Alternatives for Red Mud Reuse in Civil Engineering Construction Materials after Environmental Accidents in Brazil, *Liseane Padilha Thives*, Federal University of Santa Catarina, *João Francisco Thives da Luz Fontes*, Federal University of Santa Catarina, *Mayara S.S. Lima*, Federal University of Santa Catarina, **Brazil**

Utilization of Some Environmental Resource Materials as a Soil Conditioner, *Ahmed Abuzkhar*, University of Tripoli, *Ahmed Tamzini*, University of Jabal Nafosa, **Libya**

Causes of Contamination of Soil, *Sevinc Hacıyeva*, BSU, *Elmina Gadirova*, BSU, *Emina Yolchuyeva*, BSU, **Azerbaijan**

Investigation of Solid Waste on the Difference of Surface Morphology of the Zn/Cu Based Electrodes Arum Leaf Extract Electrochemical Cell, *Md. Obaidullah Nayan*, Dr. Mahbubur Rahman Mollah College, *Md. Afzol Hossain*, Dr. Mahbubur Rahman Mollah College, **Bangladesh**

Assessment of Solid Waste Management System in Bangladesh, *Jinnatun Naher*, Shusamaj Foundation, **Bangladesh**

The Density of Matrices Made from Collagen Nanofibrils, *Gennaro Maffia*, Manhattan College, *Amanda Peterman*, Manhattan College, **USA**

An Assessment of Policy Related to Municipal Solid Waste Management in Botswana, *Daniel Mmereki*, Department for Management of Science and Technology Development, Ton Duc Thang University, *Kgosiesele Velempini*, University of Botswana, *Larona Mosime-Serero*, Botswana Qualification Authority, **Vietnam**

Assessment of the Municipal Solid Waste (MSW) Fly Ash Produced at “Intermunicipal Waste Management of Greater Porto” (LIPOR, Portugal), *Bruno Valentim*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Renato Guimarães*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto- Faculty of Sciences / Earth Sciences Institute, *Ana Cláudia Santos*, **Portugal**

Analysis of Selective Collect Program in East Side of São Paulo/Brazil: an exploratory study, *João Alexandre Paschoalin Filho*, Universidade Nove de Julho, *Eliana Gonçalves da Luz*, *Tatiana Tucunduva Philippi Cortese*, Univerersidade Nove de Julho, *Ana Cristina de Faria*, *Antônio Jose Guerner Dias*, **Brazil**

Char Concentration from Coal Fly Ash for Electrochemical Reactions using an Alternative Sequence of Separation Methods, *Ana Cláudia Santos*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Renato Guimarães*, **Portugal**

A Feasibility Study to Obtain Valuable Materials via the Fractionation of Cork Powder Fly Ash, *Renato Guimarães*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Ana Cláudia Santos*, **Portugal**

Environmental Assessment of Alternative Commercial Solid Waste Management Strategies for a Mexican Border City, *Karla Garduño Palomino*, Cety's University, *Sara Ojeda*, *Jorge Jauregui*, Cety's University, *Samanta Cruz*, *Martha Salcedo*, **Mexico**

Concentration and Characterization Ti-spheres (titanspheres) from Cork Powder Fly Ash, *Renato Guimarães*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Bruno Valentim*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Alexandra Guedes*, University of Porto - Faculty of Sciences / Earth Sciences Institute, *Ana Cláudia Santos*, **Portugal**

Enhanced Biogas Production from Fecal Sludge by Trace Metal Supplementation, *Bikash Adhikari*, Kathmandu University, *Sampada Dhungana*, Kathmandu University, **Nepal**

Mechanical Behavior of a Reinforced Clay Soil with Açaí (Euterpe oleracea) Fibers, *Matheus Machado Lopes*, Universidade de Brasília, *Victória Gomes de Oliveira*, Universidade de Brasília, *Michéle Dal Toé Casagrande*, Universidade de Brasília, **Brazil**

Solid Waste Environmental Impact in Yemen, *Ahmed ALGabal*, Ministry of Water & Environment, **Yemen**

Analysis of the Compressive Strength by the addition of Cement for Different Types of Iron Ore Tailings, *Matheus Machado Lopes*, Universidade de Brasília, *Thaís Guimarães dos Santos*, *André Augusto Nóbrega Dantas*, *Gabriel da Cunha Cotrim*, **Brazil**

## TUESDAY, APRIL 2

8:00 a.m. - 5:30 p.m.

Conference check-in and registration

8:00 a.m. – 8:30 a.m.

Coffee

9:00 a.m. - 10:20 a.m.

Sessions 5

### SESSION 5A

#### *Waste Collection*

An Optimal Solid Waste Collection Fee Based on Area Characteristics Using Hedonic Pricing Approach, *Komwit Siritorn*, Songkhla Rajabhat University, *Chompoonuh K. Permpoonwiwat*, Srinakharinwirot University, **Thailand**

Effects of Waste Composition and Collection Frequency on Optimal Truck Routes, *Hoang Lan Vu*, University of Regina, Engineering, *Kelvin Tsun Wai Ng*, University of Regina, Engineering, *Bahareh Fallah*, University of Regina, Engineering, **Canada**

Development of Linear Optimization Model for Dry Waste Collection Center at Bangalore City, INDIA, *Prakash Gowdra*, Ramaiah Institute of Technology, *Vivekanand Venkataraman*, Ramaiah Institute of Technology, *Judith Krupa*, Hirepro Consulting, *Joel John Koshy*, *Mohammed Sharukh*, *Bharath Reddy Mandara*, **India**

Geoprocessing Tool for Location of Partially-Burried Containers for Point-to-Point Municipal Solid Waste Collection on Administrative Regions with Sanitation Deficit and Low Income in Brasilia, Brazil, *Camila Lopes dos Santos*, Urban Cleaning Service of the Federal District (SLU/DF), *Victor Silva*, University of Brasilia, *Francisco Contreras*, University of Brasilia, *Caio Dias*, **Brazil**

Linear Programming for Municipal Solid Waste Transportation Routes Optimization and Reduction of Environmental Impacts in Brasilia, Brazil, *Victor Silva*, University of Brasilia, *Camila Santos*, Urban Cleaning Service of the Federal District, *Francisco Contreras*, University of Brasilia, *Caio Dias*, **Brazil**

### SESSION 5B

#### *Landfill 3*

Insight into a Full Scale landfill Mining and Remediation Project, *Kaur-Mikk Pehme*, Estonian University of Life Sciences, *Mait Kriipsalu*, Estonian University of Life Sciences, **Estonia**

Effect of Closed Municipal Solid Waste (MSW) Landfill on Surrounding Water Bodies, *Lokeshwari M*, R.V.College Of Engineering, *Tanay N Bysani*, R.V. College Of Engineering, *Nanjunda Swamy C*, Dr. Ambedkar Institute of Technology, **INDIA**

**SESSION 5C**  
*Policy and Management*

Smart City Development: A Step towards Solid Waste Management and Sustainable Development, *Anaya Ghosh*, National Institute of Technology, Durgapur, *Sadhan Kumar Ghosh*, Jadavpur University, **India**

A Situational Analysis of Municipal Solid Waste Management Practices in Sara-i-Alamgir City, Pakistan, *Khalid Iqbal*, University of Gujrat, Office of Research, Innovation and Commercialization (ORIC), *Muhammad Ali*, King Abdullah University of Science and Technology, Saudi Arabia, **Pakistan**

Municipal Solid Waste Characterization and Management Techniques In India, *Arshad Husain*, Aligarh Muslim University, *Iram Javed*, Aligarh Muslim University, **India**

How the Commodities Recovery and the Restoration/Disaster Industries Can Work Closer Together for Expanded Business Opportunities, *Stephen Baruch*, The Baruch Group, *Jason Teliszczak*, JTEEnvironmental Consulting Inc., **USA**

Proposed Update of World Bank Solid Waste guidelines, *Florian Kölsch*, Dr. Kölsch GmbH, **Germany**

Integrated Waste Management through Symbiotic Culture, A Holistic Approach, *Atun Roy Choudhury*, Ramky Enviro Engineers Ltd., *Srinivas K*, Ramky Enviro Engineers Ltd., *Arutchelvan V*, Annamalai University, *Mr. R.M. Goutham*, **India**

Life Cycle Assessment of Alternatives to Reduce the Environmental Impact of Brasilia's Municipal Solid Waste, *Victor Silva*, University of Brasilia, *Francisco Contreras*, University of Brasilia, *Camila Santos*, Brasilia's Urban Cleaning Service, **Brazil**

**SESSION 5D**  
*Tire/Rubber Wastes*

Utilization of Scrap Tires and Waste Oil as Supplementary Fuels in Cement Production, *Gizem Eker*, Uludag University, *Vedat Pinarli*, Uludag University, **Turkey**

Recycled Tires: 10 Green Innovative Solutions for Common Civil and Geo-Technical Problems, *Monte Niemi*, TDA Manufacturing, **USA**

After 10 Years Implementation of the Environmental Legislation about Scrap Tires Disposal, What Has Changed in Brazil, *Liseane Padilha Thives*, Federal University of Santa Catarina, *EneDir Ghisi*, Federal University of Santa Catarina, *Gabriela Hammes*, Federal University of Santa Catarina, *Yuri Mello Muller de Oliveira*, **Brazil**

**SESSION 5E**  
*Health Care Wastes*

Practices and Challenges of Health Care Risk Waste Management in Thulamela Local Municipality, *Priscilla Pfunzo Nematenda*, University of Venda, *Comfort Foluke Olaniyi*, University of Venda, *Jason Ogola*, University, *Dr Ntavhanyedzeleni Viginia Mudau*, **South Africa**



The Knowledge, Attitude and Practice of Medical Waste Management Amongst Health Personnel from Hospitals in Enugu, Nigeria, *Ebere Ezeudu*, University of Nigeria, Nsukka, **Nigeria**

The Discarded Pharmaceuticals in Municipal Solid Wastes, *Huan-Jung Fan*, Hungkuang University, *Teng-Tsung Hsieh*, Hungkuang University, *Eiji Furuya*, Meiji University, Kawasaki, *Da Tian Chang*, **Taiwan**

10:20 a.m. – 10:50 a.m.

**Break**

10:50 a.m. – 12:35 p.m.

**Sessions 6**

## **SESSION 6A**

### ***Environmental Assessment 2***

Monitoring the Effects of Industrial Solid Waste Amendments in Agricultural Soil through Morphological and Histological Markers Identified in Certain Tropical and Exotic Earthworms, *Suryasikha Samal*, Orissa University of Agriculture and Technology, **India**

Evaluating Potentialities of Certain Biochemical Markers in Tropical and Exotic Earthworms in Monitoring the Effects of Phosphogypsum and Paper Mill Sludge Used as Soil Amendments in Agricultural Fields, *C.S.K. Mishra*, Orissa University of Agriculture and Technology, **India**

Drinking and Domestic water Use Near an Open Dumpsite in a Peri-urban Community, *Olubunmi Mokuolu*, University of Ilorin, *Ifeoluwa Olaniyi*, University of Ilorin, **Nigeria**

A Pilot Study on EIA Report Quality in the Management and Recycling of Proposed Hazardous Waste Management Projects in The Gauteng Province of South Africa, *Willem Abraham Foord Ceronio*, University of Johannesburg, *Isaac Tebogo Rampedi*, University of Johannesburg, **South Africa**

Dispersion of Heavy Metals from Tshikondeni Exxaro Coal Dump, Limpopo Province, South Africa, *Phumudzo Gift Munyai*, University of Venda, *Jason Samuel Ogola*, University of Venda, *Lufuno Reginald Kone*, University of Venda, **South Africa**

Solid Waste Environmental Impact in Yemen, *Ahmed ALGabal*, Ministry of Water & Environment, **Yemen**

Environmental Assessment of Alternative Commercial Solid Waste Management Strategies for a Mexican Border City, *Karla Garduño Palomino*, Cetys University, *Sara Ojeda*, *Jorge Jauregui*, Cetys University, *Samanta Cruz*, *Martha Salcedo*, **Mexico**

Energy and Climate Impact Assessment of Municipal Solid Waste in Pakistan, *Syeda Adila Batool*, University of the Punjab, *Noor Zahra*, **Pakistan**

## **SESSION 6B**

### ***Biochemical Treatment***

Solid Waste Management by Chemical and Biochemical Treatment, *Ashok Kumar Jha*, University Department of Chemistry, T. M. Bhagalpur University, Bhagalpur, **India**

A Genetic Programming Model for Forecasting Yield and LHV of Syn-Gas Generated via Gasification of MSW in a Fluidised Bed Gasifier, *Anaya Ghosh*, National Institute of Technology, Durgapur, *Biswajit Debnath*, Jadavpur University, *Sadhan Kumar Ghosh*, Jadavpur University, **India**

Enhanced Biogas Production from Fecal Sludge by Trace Metal Supplementation, *Bikash Adhikari*, Kathmandu University, *Sampada Dhungana*, Kathmandu University, **Nepal**

## **SESSION 6C** *Contaminated Sites 2*

The Next Frontier on PFAS Contamination, Sediment, Surface Water and Fish Tissue, *Harry Behzadi*, SGS, **USA**

The Role of Lipopeptide Biosurfactant on Microbial Remediation of Aged Polycyclic Aromatic Hydrocarbons (PAHs)-Contaminated Soil, *Fisseha Andualem Bezza*, University of Pretoria, *Evans MN Chirwa*, University of Pretoria, **South Africa**

Desorption kinetics of polycyclic aromatic hydrocarbons (PAHs) from contaminated soil and the effect of biosurfactant supplementation on the rapidly desorbing fractions, *Fisseha Andualem Bezza*, University of Pretoria, *Evans MN Chirwa*, University of Pretoria, **South Africa**

## **SESSION 6D** *Special Wastes*

Investigation through Pareto followed by Ishikawa Analysis for Low Accuracy Product in Turning Operation- A Case Study, *Dipak Ranjan Jana*, Jis College Of Engineering, **India**

Safe Removal and Disposal Procedures of Asbestos Containing Waste In Italy, *Sergio Bellagamba*, Italian Institute for Insurance against Accidents at Work, *Federica Paglietti*, Italian Institute for Insurance against Accidents at Work, *Sergio Malinconico*, Italian Institute for Insurance against Accidents at Work, *Beatrice Conestabile Della Staffa*, *Ivano Lonigro*, *Paolo De Simone*, **Italy**

Utilization of Jarosite in Precast Concrete Paver Blocks, *Sumit Nandi*, Indian Institute of Technology Roorkee (IITR), *G. D. Ransinchung R. N.*, Indian Institute of Technology Roorkee (IITR), *Surya Kant Sahdeo*, Indian Institute of Technology Roorkee (IITR), **India**

Analysis of the Compressive Strength by the addition of Cement for Different Types of Iron Ore Tailings, *Matheus Machado Lopes*, Universidade de Brasília, *Thaís Guimarães dos Santos*, *André Augusto Nóbrega Dantas*, *Gabriel da Cunha Cotrim*, **Brazil**

Economic Potential of Gold Mine Waste: A Case Study of Consolidated Murchison Mine Waste, *Rembuluwani Solly Ravele*, University of Venda, *Jason Ogola*, University of Venda, *Humbulani Rejune Mundalamo*, University of Venda, **South Africa**

The Density of Matrices Made from Collagen Nanofibrils, *Gennaro Maffia*, Manhattan College, *Amanda Peterman*, Manhattan College, **USA**

## SESSION 6E

### *Sludge*

Hydrodynamic Assessment of Up-flow Anaerobic Sludge Solid-State Reactor: CFD and Experimental Validation, *Vigueras-Carmona Sergio Esteban*, Tecnológico de Estudios Superiores de Ecatepec, *Montes-García María Monserrat*, Tecnológico de Estudios Superiores de Ecatepec, *Yañez-Varela Juan Antonio*, Universidad Autónoma Metropolitana- Azcapotzalco, **México**

Estimation of Specific Gravity of Solids for Organic Soils/Sludges to Be Used for Weight Volume Relations, *Dorairaja Raghu*, NJIT, *Swamy Basim*, Central Connecticut State University, **USA**  
Phyto Sludge Dewatering, *Amira Ahmed*, American University in Cairo, **Egypt**

Sewage Sludge Based Products as a Locally Important Secondary Sources of Agricultural Phosphorus, *Šárka Václavková*, Institute of Chemical Process Fundamentals of the CAS, v.v.i., *Michal Šyc*, Institute of Chemical Process Fundamentals of the CAS, v.v.i., *Jaroslav Moško*, Institute of Chemical Process Fundamentals of the CAS, v.v.i., *Karel Svoboda*, **Czech Republic**

Effect of Anaerobic Digestion Temperature on Sludge Quality, *Getachew Dagnew/Gebreeyessus*, Kotebe Metropolitan University, **Ethiopia**

12:35 p.m. – 1:35 p.m.

**Poster Session 2**

## POSTER SESSION 2

Office Waste Management Optimized: How A Centralized Waste Bin System Can Reduce Operating Costs and Enhance Your Organization's Sustainability Credentials, *P. Richard Cook*, Great Forest, Inc., **USA**

Infectious Medical Waste Management: a General Perspective and Issues in Kathmandu Valley of Nepal, *Manoj Bista*, Clean Environment Nepal (CEN) Pvt. Ltd., *Dhruba Baduwal*, Environmentalist Association of Nepal(EAN), **Nepal**

Removal of Nitrogenous Contaminants Present in Diesel Using a Sample of Catalyst Production Residue, *Marco Figueiredo*, State University of Rio de Janeiro, *Luana Baia*, State University of Rio de Janeiro, *Wallace Carvalho*, State University of Rio de Janeiro, *Juliana P. S.Leitão*, *Fábio A. C.Silva*, **Brazil**

Performance Evaluation of Construction and Demolition Debris as Substitute for Aggregate in Portland Concrete, *Claude Villiers*, Florida Gulf Coast University, **USA**

Fate, Disposal and Handling of Medicinal Waste in India- A Case Study, *Jiya Phoghat*, Guru Jambheshwar University of Science & Technology, *Rekha Singh*, University of Virginia, *Tony Singh*, University of Virginia, **India**

Pakistan's First Integrated Resource Recovery Center, *Syed Sheraz Ali Shah*, UN-Habitat, **Pakistan**

How the Commodities Recovery and the Restoration/Disaster Industries Can Work Closer Together for Expanded Business Opportunities, *Stephen Baruch*, The Baruch Group, *Jason Teliszczak*, JTEEnvironmental Consulting Inc., **USA**

Effects of Fly Ash Addition on the Rheological Behaviour of Red Mud Slurry, *Maria P.D. Ingunza*, Federal University of Rio Grande do Norte (UFRN), *David Williams*, The University of Queensland, *Sebastian Q. Olaya*, The University of Queensland, **Brazil**

Analysis of the Permanent Deformation and Loss by Induced Moisture in Asphaltic Mixtures of the Hma Type, Using Recycled Aggregates of Construction and Demolition Waste, *Tayná Macêdo*, Federal University of Sergipe, *Victor Manuel de Queiroz Lourenço*, *Gardênia Rocha Oliveira*, *Joelson Hora Costa*, **Brazil**

Recovery Rare Earth and Synthesis of Perovskite Ndfeo3 Nanoparticles Based on Waste Permanent Magnet for Catalytic Application, *Hai Huynh Trung*, Hanoi University of Science and Technology, *Huy Pham Khanh Huy*, Hanoi University of Mining and Geology, **Vietnam**

Recycled Tires: 10 Green Innovative Solutions for Common Civil and Geo-Technical Problems, *Monte Niemi*, TDA Manufacturing, **USA**

Life Cycle Assessment of Alternatives to Reduce the Environmental Impact of Brasilia's Municipal Solid Waste, *Victor Silva*, University of Brasilia, *Francisco Contreras*, University of Brasilia, *Camila Santos*, Brasilia's Urban Cleaning Service, **Brazil**

Evaluation of Swachh Bharat Mission Slogan on Solid Waste Management in India, *Ashootosh Mandpe*, Csir-National Environmental Engineering Research Institute (Csir-Neeri), Nagpur, *Sunil Kumar*, Csir-National Environmental Engineering Research Institute (Csir-Neeri), Nagpur, **India**

Geoprocessing Tool for Location of Partially-Burried Containers for Point-to-Point Municipal Solid Waste Collection on Administrative Regions with Sanitation Deficit and Low Income in Brasilia, Brazil, *Camila Lopes dos Santos*, Urban Cleaning Service of the Federal District (SLU/DF), *Victor Silva*, University of Brasilia, *Francisco Contreras*, University of Brasilia, *Caio Dias*, **Brazil**

Linear Programming for Municipal Solid Waste Transportation Routes Optimization and Reduction of Environmental Impacts in Brasilia, Brazil, *Victor Silva*, University of Brasilia, *Camila Santos*, Urban Cleaning Service of the Federal District, *Francisco Contreras*, University of Brasilia, *Caio Dias*, **Brazil**

Effect of RAP on Characteristics of Flexible Pavements : A Review, *Kumari Monu*, Indian Institute of Technology, Roorkee, India, *G.D Ransinchung R.N*, Indian Institute of Technology, Roorkee, India, **India**

Evaluation of Physical and Mechanical Parameters of Construction and Demolition Waste for Geotechnical Applications., *Jéssica Menezes*, Federal University of Sergipe, *Erinaldo Cavalcante*, Federal University of Sergipe, *Guilherme Bravo Almeida*, Federal University of Sergipe, , **Brazil**

**Luncheon**

5:00 p.m. – 6:00 p.m.  
**Closing Reception**

**WEDNESDAY APRIL 3**

8:00 a.m. – 9:00 a.m.  
Conference check-in and registration

8:00 a.m. – 9:00 a.m.  
Coffee

9:00a.m. – 2:00 p.m.  
Technical Field Trips (choose 1)

**Field Trip 1**

Details to be posted in January

**Field Trip 2**

Details to be posted in January