

The Thirtieth International Conference on Solid Waste Technology and Management

Philadelphia, PA, USA

March 15 – March 18, 2015

AGENDA

(updated December 26, 2014)

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Founder:
Iraj Zandi
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Chair:
Ronald L. Mersky
Widener University

Conference Manager:
Rhona Klein
Widener University

Scientific Committee:

- Haluk Akgun, Middle East Technical University, Turkey
- Dr. Joseph Akunna, University of Abertay Dundee, UK
- Ofira Ayalon, University of Haifa and Samuel Neaman Institute, Technion, Israel
- Giuseppe Bonifazi, Sapienza – Università di Roma, Italy
- Maria Cristina Borba Braga, Parana Federal University, Brazil
- Shouu-Yuh Chang, North Carolina A&T State University, USA
- Toru Furuichi, Hokkaido University, Japan
- Dr.(Mrs.) Kasturi Gadgil, I.I.T., Delhi (retired), India
- Ruby Mejía de Gutiérrez, Universidad del Valle (Cali), Colombia
- Mervat El-Hoz, University of Balamand, Lebanon
- Maria Liubarskaia, Saint-Petersburg State University of Economics, Baltic Academy for Tourism and Entrepreneurship, Russia
- William L. Magette, PhD, UCD School of Civil, Structural and Environmental Engineering (retired), Ireland
- Ilan Nissim, Ministry of National Infrastructures, Energy and Water Resources, Israel
- Sara Ojeda-Benitez, Institute of Engineering, Autonomous University of Baja California, México
- Dr. Chukwu Onu, Southern University and A & M College, USA
- Professor Paul Phillips, University of Northampton, UK
- Dr. Eva Pongrácz, University of Oulu, Finland
- Prof. Krishna Reddy, University of Illinois at Chicago, USA
- Dr. Jerry E. Uhuo, National Assembly Abuja, Nigeria
- Anita Závodská, Barry University, USA

CONFERENCE SUMMARY

SUNDAY, MARCH 15, 2015

- Pre-Conference Tour of Philadelphia
- Professional Education Short Course
- Opening Reception

MONDAY, MARCH 16, 2015

Opening Plenary

Oral Presentations

- 1A Generation and Composition 1
- 1B Landfill 1
- 1C Organic Wastes 1
- 1D Policy

- 2A Recycling
- 2B Environmental Impacts
- 2C Energy Recovery 1
- 2D Waste Utilization in Construction 1

- 3A Economics
- 3B Hazardous Wastes
- 3C Landfill 2
- 3D Recycling Technologies

- 4A Case Studies 1
- 4B Geotechnical and Mining Advances
- 4C Industrial Wastes 1
- 4D Education and Analysis
- 4E Collection and Transport

Poster Session 1

TUESDAY, MARCH 17, 2015

Oral Presentations

- 5A Construction and Demolition Wastes
- 5B Energy Recovery 2
- 5C Generation and Composition 2
- 5D Biological Treatment

- 6A Agricultural Wastes
- 6B Medical Wastes
- 6C Waste Utilization in Construction 2
- 6D Environmental and Health Impacts

Poster Session 2

Oral Presentations

- 7A Case Studies 2
- 7B Ash
- 7C Waste Utilization in Construction 3
- 7D Industrial Wastes 2
- 7E Innovative Technologies

Closing Reception

WEDNESDAY, MARCH 18, 2015

Technical Field Trips

DETAILED AGENDA

SUNDAY, MARCH 15

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

Conference check-in and registration

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

Guided Tour of Philadelphia: The tour will include the Liberty Bell, Independence Hall and the Betsy Ross house along with a bus tour of the city.
(additional fee)

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

Professional Education Short Course: Details will be posted in early January.
Professional Development Hours will be awarded to participants.
(additional fee)

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

Welcome Reception

MONDAY, MARCH 16

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

Conference check-in and registration

8:00 a.m. – 9:00 a.m.

Coffee

9:00 a.m. – 9:30 a.m.

Opening Plenary

9:30 a.m. – 10:55 a.m.

Sessions 1

SESSION 1A

Generation and Composition 1

Mathematical Modeling for Predicting Generation of New York City Municipal Solid Waste (NYCMSW), Masato Nakamura, New York City College of Technology (City Tech), Sharon Jones, New York City College of Technology (City Tech), USA

Characterization of Municipal Solid Waste (MSW) Generated at the University of Ibadan, Ibadan, Nigeria, Samuel Ihuoma, Imo State Polytechnic, Umuagwo, Nigeria, Damilola Omoyeni, Isaac Bamgboye, Nigeria

Predicting the Accuracy of Curbside Waste Composition Studies, Bruce Wilson, University of New Brunswick, Canada

The Impact of Recycling on the Calorific Value of Urban Solid Waste in the City of São Paulo, *Clauber Leite, USP, Patricia Matai, USP, Virginia Parente, USP, Sonia Seger, Sylmara Dias*, **Brazil**

Waste Generation Rate from Household and Relevant Factors in Okayama City, Japan, *Yasuhiro Matsui, Okayama University, Le Hung Cao, Vietnam Environment Administration*, **Japan**

SESSION 1B *Landfill 1*

Unsaturated Behaviour of Waste Wood Ash Treated Lateritic Soil, *Kolawole Osinubi, Ahmadu Bello University, Johnson Oluremi, Ladoke Akintola University of Technology, Adrian Eberemu, Ahmadu Bello University*, **Nigeria**

Model of a Secure Landfill Using Abandoned Mine Pit: Technical and Economic Imperatives in Poor Developing Nations, *Michael A. Nwachukwu, Federal University Of Technology Owerri, Nigeria, Ijeoma M. Nwachukwu, Federal University Of Technology Owerri, Nigeria*, **Nigeria**

Landfill Final Cover and Management of Leachate Seeps below Final Cover, *Ali Khatami, SCS Engineers*, **USA**

A Review and Understanding of Existing Models to Predict Gas Production for Municipal Solid Waste (MSW) Landfills and Refined Method to Predict MSW Landfill Gas Production, *Vatsal Shah, NJIT, Hatch Mott MacDonald, Dorairaja Raghu, NJIT, Joseph Lifrieri, Warren Pro Services*, **USA**

Temporal Variation in Emission of Carbonyls from Typical Municipal Solid Waste, *Dipanjali Majumdar, ICSIR-National Environmental Engineering Research Institute (NEERI), Kolkata Zonal Laboratory, Anjali Srivastava, ICSIR-National Environmental Engineering Research Institute (NEERI), DZL*, **India**

SESSION 1C *Organic Wastes 1*

A Novel Approach to Food Waste To Energy Modeling in the US, *Matthew Franchetti, University of Toledo, Toledo, OH 43606*, **USA**

Brazilian Research in MSW Biogas: How Large Is It and How Far Has It Gone?, *Ruy Quadros, Innovarelab, Unicamp, Glícia Vieira dos Santos, UFES, André Neiva Tavares, Innovarela, Dr. Sergio Valdir Bajay*, **Brazil**

Options for Extracting Value from Municipal Organics, *Norma McDonald, Organic Waste Systems, Inc., Luc DeBaere, Organic Waste Systems, Inc.*, **USA**

A Comparative Studies on Composts Quality Phenomena in Municipal Solid Waste Compost to Agricultural Compost, *Shiddappa Lagamappa Belagali*, DOS in Environmental Science, University of Mysore, *D C Shyamala*, *DOS in Environmental Science*, *University of Mysore*, **India**

Sustainable Bio-Waste Management in Finland through Cascade Use of Biomass, *Sari Piippo*, University of Oulu, *Eva Pongrácz*, *University of Oulu*, **Finland**

SESSION 1D *Policy*

Industrial and Energy Policies for Biogas-Based Electricity from Municipal Solid Waste in Brazil, *Ruy Quadros*, Innovarelab, Unicamp, *André Neiva Tavares*, *Innovarelab*, *Glícia Vieira dos Santos*, UFES, *Dr. Sergio Valdir Bajay*, **Brazil**

GreenTape Reduction: A Case Study from Queensland, Australia, *Georgina Davis*, The Waste to Opportunity Enterprise, **Australia**

Managing Solid Waste through Public/Private Partnership - A Way Out of Environmental Nuisance in Nigeria, *Olanrewaju Oladokun Adejo*, Olabisi Onabanjo University, Ago Iwoye, **Nigeria**

10:55 a.m. - 11:15 a.m.
Break

11:15 a.m. – 1:10 p.m.
Sessions 2

SESSION 2A *Recycling*

Workplace Waste Recycling Attitudes and Behaviour: A Meta-Analytic Review, *Adekunle Oke*, Robert Gordon University, **Scotland, UK**

Fractal Spatial Analysis: The Montreal Case Study, *Pierre-Alexandre Guillemette*, ÉTS, *Mathias Glaus*, ÉTS, *Robert Hausler*, ÉTS, **Canada**

Sustainable Development and Recycling Systems in the Structural Industry in Kuwait, *Shaikha AlSanad*, Kuwait Institute for Scientific Research, *Ali Abdul-jaleel*, *Kuwait Institute for Scientific Research*, **Kuwait**

SESSION 2B

Environmental Impacts

Effects Of Solid Waste Disposal On Human Being In The Landfill Sites Surrounding Agra City, *Sohail Ayub*, Department of Civil Engineering . Z.H College of Engg. & Tech. AMU Aligarh, **India**

Environmental Assessment of Flotation Deinking Processes, *Audrey Tanguy*, Ecole des Mines de St-Etienne, *Jonathan Villot*, *Ecole des Mines de St-Etienne*, *Valérie Laforest*, Ecole des Mines de St-Etienne, **France**

Air Pollution, *Raju Shrestha*, Kathmandu Metropolitan City Office, **Nepal**

Urbanization and Environment, *Prakash Khadka*, Kathmandu Metropolitan City Office, **Nepal**

Lack of Community Participation in Management of Garbage: Its Impacts on River Water, and Introduction of Rain Water Harvesting as an Alternative to Pipe Borne Water in Lautoka, *Fiji Islands*, *Ajantha Perera*, Fiji National University, **Fiji Islands**

Environmental Problems Associated with Solid Waste Disposal Practices, *Samali Marasinghe*, Rajarata University of Sri Lanka, **Sri Lanka**

Photocatalysis for the Management of Landfill Gas, *Jean Andino*, Arizona State University, *Maria Sanchez Tellez*, Arizona State University, **USA**

Simultaneous Treatment for Utilization of Carbon Dioxide and Industrial Waste, *Min-Gu Lee*, Yonsei university, *Dongwoo Kang*, *Yonsei university*, *Hoyong Jo*, Yonsei university, *Yoonyoung Lee*, *Jinwon Park*, **South Korea**

SESSION 2C

Energy Recovery 1

The Potential for Waste-to-Energy at the US Naval Academy: A Case Study, *Patrick Caton*, US Naval Academy, *Joshua Schmidt*, *US Naval Academy*, *Christopher Adsit*, US Naval Academy, *Christopher Chase*, *Eric Bermudez*, *Timothy Kerner*, **USA**

Simultaneous Removal of PCDD/Fs and NOx from the Flue Gas of a Municipal Solid Waste Incinerator with a Pilot Plant, *Xiaolong Liu*, Institute of Process Engineering, Chinese Academy of Sciences, *Jian Wang*, *Institute of Process Engineering*, *Chinese Academy of Sciences*, *Xue Wang*, Institute of Process Engineering, Chinese Academy of Sciences, *Tingyu Zhu*, **China**

Experimental Investigation of Ash Deposits on Convection Heating Surfaces of a CFB Municipal Solid Waste Incinerator, *Zhi Tang*, Key Laboratory of Energy Thermal Conversion and Control of Ministry of Education, School of Energy & Environment, Southeast University, *Xiaoping Chen*, *Key Laboratory of Energy Thermal Conversion and Control of Ministry of*

Education, School of Energy & Environment, Southeast University, Zhonglin Zhang, Key Laboratory of Energy Thermal Conversion and Control of Ministry of Education, School of Energy & Environment, Southeast University, Carlos E. Romero, China

Pyrolysis Characteristics and Kinetics of Algal Biomass Using TGA/ DTA Analysis, *Jaya Prakash Dodle, Osmania University, Radha Kumari M, CSIR-Indian Institute of Chemical Technology, Satyavathi B, CSIR-Indian Institute of Chemical Technology, India*

Reactive Extraction of Microalgae for Biodiesel Production; an Optimization Study, *Hassan El Shimi, Cairo University, Nahed Attia, National Research Center, Shakinaz El Sheltawy, Cairo University, Guzine El Diwani, Egypt*

Sustainable Waste Power Systems-Patented Wet Waste Gasification Technology-GIPO® ModuCore®, *Claudine Ellyin, Sustainable Waste Power Systems, Mike Gillespie, Sustainable Waste Power Systems, Chris Gillespie, Sustainable Waste Power Systems, USA*

Overview of the Process Parameters and Product Characterisation of Co-Gasification of Coal and Plastics, *Monojit Chowdhury, Chemical Engineering Department, Jadavpur University, Monotosh Chowdhury, Department of Energy Management, Indian Institute Of Social Welfare and Business Management, India*

SESSION 2D

Waste Utilization in Construction 1

Composite Cements, *Bibekanada Mohapatra, Ambuja Cements Ltd, Shrikant Varpe, Ambuja Cements Ltd, Jitendra Desai, Ambuja Cements Ltd, India*

Strength Properties and Sulfate Resistance of Self-Compacting Concrete Incorporating Metakaolin, *Anhad Singh Gill, Thapar University, Rafat Siddique, Thapar University, India*

Experimental Study of a Clayey Soil with the Insertion of Crushed PET as a Reinforcement Material, *Nathalia dos Santos Lopes Louzada, PUC-Rio, Ingrid Milena Reyes Martínez, PUC-Rio, Michéle Dal Toé Casagrande, PUC-Rio, Lucas Mendes Repsold, Brazil*

Solid Waste (Ceramic Tiles) As A Replacement For Concrete Aggregate, *Shakeel Ahmad, AMU Aligarh, Rehan Ahmad Khan, Department of Civil Engineering AMU Aligarh UP India, Md Daniyal, AMU Aligarh, India*

Reuse Of Waste From The Ceramics Industry Rejects As Recycled Aggregates For The Manufacture Of Prestressed Concrete Elements, *Fernando L. Gayarre, University of Oviedo, Pedro J. Fernández Arias, University of Oviedo, Carlos Lopez-Colina, University of Oviedo, Dr. Miguel A. Serrano Lopez, Spain*

Cement Mortars with Textile Sludge and Wood Ash, *Ana Cecilia Vieira da Nóbrega, Federal University of Pernambuco, Wilma de Albuquerque Leloup, Federal University of Pernambuco,*

Érika Pinto Marinho, Federal University of Pernambuco, *Antonio Eduardo Martinelli*, *Dulce Maria de Araújo Melo*, *Maria das Vitórias Vieira Almeida de Sá*, **Brazil**

Utilization of Copper Slag in Concrete Manufacturing, *Ravinder Kaur Sandhu*, Thapar University, **India**

Microscopy Analysis of Fired Bricks Containing Solid Wastes Generated from Energy-related Processes, *Lu-Ming Chen*, University of Illinois at Urbana-Champaign, **USA**

1:10 p.m. - 2:00 p.m.

Awards Luncheon

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

2:00 p.m. – 3:55 p.m.

Sessions 3

SESSION 3A

Economics

Linkage Model between Sustainable Consumption and Household Waste Management System, *NiLuh Widyaningsih*, University of Indonesia, **Indonesia**

Insight into Economies of Scale for Waste Packaging Sorting Plants, *Ciprian Cimpan*, University of Southern Denmark, *Anja Maul*, *RWTH Aachen University*, *Henrik Wenzel*, University of Southern Denmark, *Prof. Thomas Pretz*, **Denmark**

Economics of Solid Waste Management with Special Reference to India, *Duraisamy Ramesh*, College, *Subbramanian Narayanan*, *D. G. Vaishnav College*, **India**

Results-Based Financing for Municipal Solid Waste, *Farouk Mollah Banna*, The World Bank Group, *Marcus Lee*, *The World Bank Group*, *Renee Yuet-Yee Ho*, The World Bank Group, *Perinaz Bhada-Tata*, *Yara Salem*, *Silpa Kaza*, **USA**

Formalizing the Informal: Participatory Inclusion of Informal Waste Workers in the Modernizing West Bank Waste Management System, *Sintana Vergara*, World Bank, *Ibrahim Dajani*, World Bank, **USA**

SESSION 3B

Hazardous Wastes

Synthesis of Graphene Oxide and Its Application for Efficient Removal of Fluoride from Water, *Syed Hadi Hasan*, Department of Chemistry, *Sweta Mohan*, *Department of Chemistry*, *Devendra Kumar Singh*, Department of Chemistry, *Vijay Kumar*, **India**

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 M. Nkhalambayausi Chirwa*, University of Pretoria, **South Africa**

Separation of Metallic and Non-Metallic Components of Printed Circuit Boards by Physical/Mechanical Techniques - A Review, *Himanshu Ranjan Verma*, Indian Institute of Technology (Banaras Hindu University), Varanasi, *Rachita B. Singh*, Indian Institute of Technology (Banaras Hindu University), Varanasi, *K. K. Singh*, Indian Institute of Technology (Banaras Hindu University), Varanasi, *Prof. T. R. Mankhand*, **India**

Ionic diffusivity in cementitious materials assessed by electrical conductivity, *João Marcos Vaillant*, Federal Center of Technological Education of Minas Gerais, **Brazil**

Biosurfactant Assisted Bioremediation of polycyclic aromatic hydrocarbons (PAHs) in Liquid Culture System and Substrate Interactivity Factors, *Fisseha Andualem Bezza*, University of Pretoria, *Evans M. Nkhalambayausi Chirwa*, University of Pretoria, **South Africa**

SESSION 3C ***Landfill 2***

Optimum Stability Parameters of the Industrial Sanitary Landfill: A Case Study, *Hasan Firat Pulat*, Celal Bayar University, *Yeliz Yukselen-Aksoy*, Celal Bayar University, **Turkey**

Landfill Site Selection Using Multi Criteria Decision Analysis and Geospatial Techniques, *Saad Malik*, Institute of Space Technology, *Javeria Gabriel Arain*, Institute of Space Technology, **Pakistan**

Expanded Vermiculite And Zeolite Used As Adsorbents To Remove N-Nh₃ From Landfill Leachate, *Patricia Arns Steiner Ferreira*, Parana Federal University, *Natalia Costa Dias*, Parana Federal University, *Cristina Braga*, Parana Federal University, **Brazil**

Ammonium Nitrogen Removal From Landfill Leachate Using Fixed Bed Adsorption Columns, *Patricia Arns Steiner Ferreira*, Parana Federal University, *Cristina Braga*, Parana Federal University, *Sergio Michelotto Braga*, Parana Federal University, *Natalia Costa Dias*, *Miguel Mansur Aisse*, *Agnes de Paula Scheer*, **Brazil**

Evaluation of Coagulation-Flocculation Process As Pretreatment Option for Landfill Leachate Using Alum, Ferric Chloride and Polyacrylamide Grafted Gum Ghatti, *Mohini Verma*, Birla Institute of Technology, Mesra, *Shubhrasekhar Chakraborty*, Birla Institute of Technology, Mesra, *R. Naresh Kumar*, Birla Institute of Technology, Mesra, **India**

SESSION 3D
Recycling Technologies

MSW Biodrying in the Czech Republic, *Libuše Benešová*, Charles University Prague, *Vojtěch Pilnáček*, Charles University Prague, *Dr. Anita Zavodska*, Barry University, **Czech Republic**

Operating Conditions in the Catalytic Steam Reforming of Volatile Products from HDPE Pyrolysis, *Itsaso Barbarias*, University of the Basque Country, *Maite Artetxe*, University of the Basque Country, *Maidier Amutio*, University of the Basque Country, *Gartzen Lopez*, *Jon Alvarez*, *Aitor Arregi*, *Martin Olazar*, **Spain**

Comminution Characteristics Of Small Domestic Appliances By High-Speed Vertical Shredder, *Joonheon Lee*, Seoul National University, *Heechan Cho*, Seoul National University, *Kihong Kim*, Seoul National University, *Jeonghoon Ok*, *Daeyang Lee*, *Sookyung Kim*, **Korea**

Metal Oxide Varistor Leachate Purification via Cementation for Electrowinning of Zinc, *Toni Gutknecht*, Chalmers University of Technology, *Britt-Marie Steenari*, Chalmers University of Technology, **Sweden**

Research and Development of Equipment and Facilities For WEEE/E-Waste Management in Lagos, Nigeria, *Abdul Wahab Ogunbiyi*, Lagos State Government, Ministry of Works and Infrastructure, *Olasunkanmi Ojowuro*, Lagos State Government, Ministry of Physical Planning and Urban Development, Lagos, Nigeria, *Adeshola Openibo-Adebosin*, Lagos State Government, Ministry of Transportation, Lagos, Nigeria, *Engr Rasheed A. Ayeni*, **Nigeria**

3:55 p.m. - 4:15 p.m.

Break

4:15 p.m. – 6:30 p.m.

Sessions 4

SESSION 4A
Case Studies 1

Teaching Solid Waste Management at University, *Anita Zavodska*, Barry University, *Anne Morrissey*, Dublin City University, **USA**

Case Study of Solid Waste Management: 3R (Reduce, Reuse, and Recycle) at Karnataka State Women's University, Bijapur, Karnataka, India, *Meena Maithili Chandawarkar*, Karnataka State Women's University, **India**

Case Study: Sustainable Energy Management by a Local Agricultural Organization Through Implementation of Complete Rice Husk Recycling, *Masafumi Tateda*, Toyama Prefectural University, **Japan**

A Strategic Roadmap for Self-Regulation: A Case Study of Queensland's Waste and Recycling

Sector, Georgina Davis, The Waste to Opportunity Enterprise, Australia

Status of Solid Waste Material Recovery (SWMR) In Benin Metropolis, Nigeria, Dennis Iyeke Igbinomwanhia, University of Benin, Emmanuel Ehis Osolease, University of Benin, Nigeria

The Analysis of China's Rural Household Waste Disposal - A Case Study in Feidong, Anhui Province, Xu Tang, China Agriculture, Yue Zhang, China Agricultural University, China

Waste to energy in India and UK : Analysis Through Case Studies, Debashree De, Jadavpur University, Sadhan Kumar Ghosh, Jadavpur University, Sadhan Kumar Ghosh, India

Increasing Waste Recycling on Campus: The Influence of Situational and Personal Factors, Adekunle Oke, Robert Gordon University, Seonaidh McDonald, Robert Gordon University, Scotland, UK

SESSION 4B

Geotechnical and Mining Advances

Determination of Clay Barriers Hydraulic Conductivity Using a Centrifuge Permeameter, Jai Jung, University of Waterloo, Mark Knight, University of Waterloo, Shayne Giles, Dillon Consulting, Robin Pernet, Canada

Compressibility Behavior of Synthetic Fresh and Aged MSWs, Hasan Firat Pulat, Celal Bayar University, Yeliz Yukselen-Aksoy, Celal Bayar University, Turkey

Evaluation of Dynamic properties of Municipal Solid Waste Sites by Geophysical Tests, Naveen B.P, Indian Institute Of Science, Sitharam T.G, Indian Institute Of Science, Sivapullaiah P.V, Indian Institute Of Science, India

Bioremediation of Mining Wastes, Ankita Bedi, The Energy and Resource Institute, Nisha Aggarwal, Miranda House, Colin Barrow, Deakin University, Dr. Alok Adholeya, India

Mine Closure Planning In Steeply Dipping Coal Deposits of Indonesia-A Case Study at PT.RSM-Bengkulu with Cost Benefit Analysis for Closure Management in Steeply Dipping Coal Deposits by Open Pit Method, Rajendra Prasad Reddy Ailoni, PT. Antang Gunung Meratus-Indonesia, Rao Nalini Erra Maheswar, PT. Megaops Technologies, A.R.P.Reddy, E.M.Nalini, Indonesia

Fresh And Strength Properties Of Low Calcium Fly Ash Based Geopolymers-Review, Rafat Siddique, Thapar University, Ankur Mehta, Thapar University, India

SESSION 4C

Industrial Wastes 1

Supercritical CO₂ and Subcritical Water for the Utilization of Wine-Making Waste, *Kurabachew Simon Duba*, University of Trento, *Luca Fiori*, University of Trento, **Italy**

Qatalum's 1st Cut SPL: Treatment and Applications, *Omar Al-Jarod*, Qatar University, *Aboubakr M. Abdullah Ali*, Qatar University, **Qatar**

Industrial Solid Wastes in Greece: The Current Situation and Prospects for Valorization, *Erasmia Pantazopoulou*, Aristotle University of Thessaloniki, *Ourania Zebiliadou*, Aristotle University of Thessaloniki, *Georgios Bartzas*, National Technical University of Athens, *K. Komnitsas*, *A. Xenidis*, *A. Zouboulis*, **Greece**

Valuable products from waste generated by the textile industry, *Karel Kolomazník*, Tomas Bata University in Zlín, *Jiří Pecha*, Tomas Bata University in Zlín, *Michaela Bařinová*, Tomas Bata University in Zlín, *Josef Vácha*, **Czech Republic**

Predicted Free Settling Velocity of Spherical Non-Oily Palm Oil Mill Effluent Particles at Different Particle Sizes, *Reem Alrawi*, Dams and Water Resources Engineering Department/ Collage of Engineering/ Salahaddin University-Hawler, *Anees Ahmad*, 2Division of Industrial Chemistry, Department of Chemistry, Aligarh Muslim University, Aligarh, *Norli Ismail*, 3Environmental Technology Division, School of Industrial Technology, Universiti Sains Malaysia, *A. K. Mohd Omar*, **Iraq**

Management of ceramic waste materials, *Hanem Sibak*, Faculty of Engineering Cairo University, *Shakinaz El Sherbiny*, Faculty of Engineering Cairo University, *Shereen Amin*, The National research Center, *Magdi Abadir*, **Egypt**

Utilization of Copper Slag in Concrete Manufacturing, *Ravinder Kaur Sandhu*, Thapar University, **India**

Investigation of Magnetic Iron Dust (MID) for Its Applicability as Matrix for Immobilization of Laccase, *Jagdish Patel*, Charusat University, *Darshan H Patel*, *Rucha Desai*, *Sunil Shah*, *Piyush Chudasama*, *Nilofar Sodagar*, **India**

Synthesizing New Anodes from Qatalum's 1st Cut SPL, *Abdullah Holozadah*, Qatar University, *Aboubakr Abdullah*, Qatar University, *Mufeed Odeh*, Qatalum, *Chris A. Devadas*, **Qatar**

SESSION 4D

Education and Analysis

A Flipped Classroom Approach to Solid Waste Minimization for Engineering Undergraduate Students, *Matthew Franchetti*, University of Toledo, **USA**

Raising Waste Management Awareness in Nigerian Schools, *Suleiman Abba Suleiman*, Premier International School, Abuja, *Daniel O Alamu*, Premier International School, Abuja, *Odiase E Omo-Osagie*, Premier International School, Abuja, *Ruth Garba*, **Nigeria**

Improving Solid Waste Reduction Programs by Predicting Waste Prevention Behaviour, *Ana Paula Bortoleto*, State University of Campinas, **Brazil**

Bibliometric Study of the International Scientific Production on "Solid Waste Management", *Pedro Luiz Côrtes*, University of São Paulo, *Antônio Guerner Dias*, University of Porto, **Brasil**

SESSION 4E ***Collection and Transport***

Design of a Hierarchical Waste Collection System on the Landscape, *Audrey Tanguy*, Ecole de Technologie Supérieure, *Mathias Glaus*, Ecole de Technologie Supérieure, *Valérie Laforest*, Ecole des Mines de St-Etienne, *Jonathan Villot*, *Robert Hausler*, **Canada**

Driving The Waste Collection Routing Agenda: A Model for Determination of the Route Time by Simulating a Collection vehicle traveling in Greater Baku Area, Republic of Azerbaijan, *Faig Sadigov*, Ministry of Economy and Industry, **Republic of Azerbaijan**

6:30 p.m. – 7:30 p.m
Posters 1 and Reception

POSTER SESSION 1

Sewage Sludge as Raw Material in the Manufacture of Roofs, *Maria Pilar Durante Ingunza*, Federal University of Rio Grande do Norte, *Andressa Lima*, *Rubens Nascimento*, Federal Univeersity of Rio Grande do Norte, **Brasil**

Solid Waste Management: A Case Study On Scrap Waste In Sub-Metropolitan City Of Pokhara, *Nepal*, *Bishow Raj Tiwari*, Goldengate International College, Tribhuvan University, **Nepal**

Performance Of Experimental Double Capillary Barrier Cover, Monolithic Cover And Evapotranspirative Cover In A Brazilian Landfill, *Juacyara Carbonelli Campos*, UFRJ - Federal University of Rio de Janeiro, *Gilberto Oliveira Joaquim Junior*, UFRJ - Federal University of Rio de Janeiro, *Elisabeth Ritter*, UERJ, **Brazil**

Resource Potential of Obsolete Household Appliances Recycling: The Case of Beijing, *Yifan Gu*, Institute of Circular Economy, Beijing University of Technology, *Yufeng Wu*, Institute of Circular Economy, Beijing University of Technology, **China**

Recyclable Household Solid Waste Generation and Collection in Beijing, China, *Tingting Liu*, Institute of Circular Economy, Beijing University of Technology, *Yufeng Wu*, Institute of

Circular Economy, Beijing University of Technology, Xi Tian, Institute of Circular Economy, Beijing University of Technology, Yu Gong, Tiejong Zuo, China

Evaluation of the Biogas Productivity Potentials of Domestic and Agricultural Waste in a Tertiary Institution, *Adedayo Badejo, Tshwane University of Technology, Pretoria South Africa, Julius Ndambuki, Tshwane University of Technology, Pretoria South Africa, Williams Kupolati, Tshwane University of Technology, Pretoria South Africa, Ekeade O.B, Okunrounmu O.A., South Africa*

Quantification of Pb, Cd and Hg in Waste Rare Earth Phosphors by ICP-AES, *Xiaofei Yin, Beijing University of Technology, Yufeng Wu, Beijing University of technology, Jiamei Yu, Beijing University of Technology, Tiejong Zuo, P.R. China*

Establishment of Energy Potential of Norio Landfill of Municipal Solid Waste of Tbilisi, *Natela Dvalishvili, Institute of Hydrometeorology at Georgian Technical University, Georgia*

The Impact of Recycling on the Calorific Value of Urban Solid Waste in the City of São Paulo, *Clauber Leite, USP, Patricia Matai, USP, Virginia Parente, USP, Sonia Seger, Sylmara Dias, Brazil*

Mechanical Properties of Concrete Containing Shredded Scrap Tires and Class C Fly Ash, *Pranshoo Solanki, Illinois State University, Bharat Dash, Illinois State University, USA*

Sustainable Waste Power Systems-Patented Wet Waste Gasification Technology-GIPO® ModuCore®, *Claudine Ellyin, Sustainable Waste Power Systems, Mike Gillespie, Sustainable Waste Power Systems, Chris Gillespie, Sustainable Waste Power Systems, USA*

Investigation of Scaffold Fabrication Techniques: Tissue Engineering for Reducing Medical Waste and the Environmental Impacts, *Ozlem Yasar, New York City College of Technology, Masato Nakamura, New York City College of Technology, Shalman Ahmed, New York City College of Technology, USA*

Microwave Effect onto Sorption Capacity of Tartrazine by Activated Carbon Produced from Agricultural Waste (Pecan Shells), *Jonatan Torres-Pérez, Universidad Autónoma de Ciudad Juárez, Gabriela Muñoz- Armenta, Universidad Autónoma de Ciudad Juárez, Marcos Solache-Ríos, Instituto Nacional de Investigaciones Nucleares, Mexico*

Biosurfactant Assisted Bioremediation of Polycyclic Aromatic Hydrocarbons (PAHs) in Liquid Culture System and Substrate Interactivity Factors, *Fisseha Andualem Bezza, University of Pretoria, Evans M. Nkhalambayausi Chirwa, University of Pretoria, South Africa*

Analysis of Municipal Solid Waste Composition (MSW), Evaluating Its Energy Potential by Using Direct Combustion Process, *Andrea Carolina Gutiérrez Gómez, Universidade Federal do ABC, Ana Maria Pereira, Universidade Federal do ABC, Juliana Tófanio, Universidade Federal do ABC, Rodolfo Sbrolini, Mauro Malpeli, Maitê Thomaz, Brazil*

Speciation of Titanium Compounds in Incinerated Painted Wood Waste, *Mikael Carl Fredrik Karlsson*, Chalmers University of Technology, *Britt-Marie Steenari*, Chalmers University of Technology, **Sweden**

Reciclaje De Residuos De La Construcción Para La Fabricación De Ladrillos Sustentables, *Esperanza Aquino Bolaños*, Universidad Nacional Autónoma de México, *María Neftalí Rojas Valencia*, Universidad Nacional Autónoma de México, **México**

Determination of the Compost Quality Produced from Wastewater Sludges and Municipal Solid Waste Mixtures, *Mehmet Sinan Bilgili*, Yildiz Technical University, *Ahmet Demir*, Yildiz Technical University, *Muhammed Sabri Bilgili*, Yildiz Technical University, **Turkey**

Recycling of Zirconia Waste Obtained During the Milling of Dental Ceramic Blocks, *Wilson Acchar*, Federal University of Rio Grande do Norte-UFRN, *Yankel Silva*, Federal University of Rio Grande do Norte-UFRN, **Brazil**

Biosurfactant Assisted Bioremediation of Polycyclic Aromatic Hydrocarbons (PAHs) in Liquid Culture System and Substrate Interactivity Factors, *Fisseha Andualem Bezza*, University of Pretoria, *Evans MN Chirwa*, University of Pretoria, **South Africa**

Effect of Temperature on Nutrient Availability in Sludge Amended Soil, *Pramod Kumar Sharma*, BHU, *Anupam Das*, BHU, **India**

The Technology of Carbon Dioxide Utilization through Carbon Fixation in Aqueous Phase with Fast Kinetics, *Dongwoo Kang*, Yonsei University, *Sangwon Park*, Korea Institute of Geoscience and Mineral Resources, *Min-Gu Lee*, Yonsei University, *Hoyong Jo*, *Yoonyoung Lee*, *Jinwon Park*, **Republic of Korea**

Estimation of Solid Waste Generation and Recycling Potential on Hotel Sector: Case Study in a Tourism City - Hue, Vietnam, *Thi Thu Trang Do*, Okayama University, *Yasuhiro Matsui*, Okayama University, *Phuc Thanh Nguyen*, Hitachi Zosen Corporation, *Cao Le Hung*, **Japan**

Adobe Bricks with Residues from Rigid Polyurethane Foam and Tire Rubber, *Ana Cecilia Vieira da Nóbrega*, Federal University of Pernambuco, *Simone Machado Santos*, Federal University of Pernambuco, *Maria Victória Leal de Almeida Nascimento*, Federal University of Pernambuco, *Tamara Ísis Ventura Carneiro*, *Dannúbia Ribeiro Pires*, *Ivaldo Brasileiro Viana Neto*, **Brazil**

Hybrid Alkaline Concrete Based on Fly Ash, Blast Furnace Slag and Portland Cement: Mechanical and Permeation Properties, *Daniela E. Angulo Ramirez*, Universidad del Valle, Grupo Materiales Compuestos (GMC), *William G. Valencia Saavedra*, Universidad del Valle, Grupo Materiales Compuestos (GMC), *Ruby Mejía de Gutierrez*, Universidad del Valle, Grupo Materiales Compuestos (GMC), **Colombia**

Adsorption of Basic Dyes Using Activated Carbon Prepared From Date Palm Fibre, *Riham Hazzaa*, Petrochemical Engineering Department, Faculty of Engineering Pharos University in Alexandria, *Mohamed Hussien*, Chemical Engineering Department, Faculty of Engineering,

Alexandria University, Egypt

Solid Waste Management Practices, Awareness, and Perceptions of a Community in Benguet, Philippines, *Kensha Andrea Gardingan*, Saint Louis University, **Philippines**

Morphological Composition of Municipal Solid Waste, *Shodi Kholikuolv*, Samarkand State University, *Sindor Parдав*, *Samarkand Agricultural institute*, **Uzbekistan**

Investigation of Scaffold Fabrication Techniques: Tissue Engineering for Reducing Medical Waste and the Environmental Impacts, *Masato Nakamura*, New York City College of Technology (City Tech), *Sharon Jones*, *New York City College of Technology (City Tech)*, **USA**

Mathematical Modeling for Predicting Generation of New York City Municipal Solid Waste (NYCMSW), *Masato Nakamura*, New York City College of Technology (City Tech), *Sharon Jones*, *New York City College of Technology (City Tech)*, **USA**

The Preparation of an Effective and Low-Cost Coal Fly Ash Catalyst and Its Application, *Wei Ma*, School of Chemical Engineering, Dalian University of Technology, Dalian 116024, China National Institute of Clean-and-low Carbon Energy, Beijing 102209, China, *Panpan Zong*, *Dalian University of Technology*, *Zihong Cheng*, Dalian University Technology, **China**

Application of Anaerobic Digestion to the Treatment of MSW in China, *Hao Chen*, Ordos Institute of Solid Waste Technology, RCEES of CAS, *Yuzhu Zhao*, *Ordos Institute of Solid Waste Technology*, *RCEES of CAS*, *Xiaohua Xia*, Ordos Institute of Solid Waste Technology, RCEES of CAS, *Mr. Zhenyu Wu*, *Mr. Wenbiao Han*, **P. R. China**

TUESDAY, MARCH 17

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

Conference check-in and registration

8:00 a.m. – 8:30 a.m.

Coffee

8:30 a.m. - 10:10 a.m.

Sessions 5

SESSION 5A

Construction and Demolition Wastes

Social Life Cycle Analysis As a Tool for Sustainable Management of Construction and Demolition Wastes In Municipal Services, *Ana Carina Santos*, CENSE, Faculty of Sciences and Technology, University of Algarve, Campus of Gambelas, *Margarida Ribau Teixeira*, *CENSE*, *Faculty of Sciences and Technology*, *University of Algarve*, *Campus of Gambelas*, *Paula Mendes*, Loulé City Hall, **Portugal**

Source Identification, Classification and Quantification of Construction Waste Material, *Khalid*

Iqbal, Institute of Environmental Sciences and Engineering (IESE), School of Civil and Environmental Engineering (SCEE), National University of Sciences and Technology (NUST), Islamabad, Pakistan, *Muhammad Anwar Baig*, Institute of Environmental Sciences and Engineering (IESE), School of Civil and Environmental Engineering (SCEE), National University of Sciences and Technology (NUST), Islamabad, Pakistan, *Muhammad Waseem Mumtaz*, Department of Chemistry Sciences, University of Gujrat, Gujrat, Pakistan, **Pakistan**

Mixing Construction, Demolition and Excavation Waste and Solid Waste Compost for the Derivation of a Planting Medium for Use in the Rehabilitation of Quarries, *Eleni Assaf*, American University of Beirut, *Nadim Farajalla*, American University of Beirut, **Lebanon**

Construction and Demolition Waste Addition to Soil Urban Degraded by Mining. Growth Promotion of *Leucaena leucocephala*, *Erica Mejia*, Universidad de San Buenaventura, *Angelica Rosso*, Universidad de San Buenaventura, *Maria Castro*, Universidad de San Buenaventura, *Jorge Ivan Tobón*, *Walter Osorio*, **Columbia**

Use of Recycled Aggregate Concrete in Pavement Construction, *Roz-Ud-Din Nassar*, University of South Asia Lahore, *Parviz Soroushian*, Michigan State University, **Pakistan**

SESSION 5B ***Energy Recovery 2***

MSW (Municipal Solid Waste) Thermal Treatment: Evaluation from the Energetic and Environmental Point of View, *Deborah Panepinto*, Politecnico di Torino, *Giuseppe Genon*, Politecnico di Torino, *Francesca Viggiano*, Politecnico di Torino, **Italia**

Recovery of Combustible Gases via Pyrolysis of the Combustible Fraction of Municipal Solid Waste, *William Buah*, University of Mines and Technology, *Paul Williams*, University of Leeds, **Ghana**

Final Disposal of Wastewater Sewage Sludge: The Thermal Treatment Option, *Giuseppe Genon*, Politecnico di Torino, *Panepinto Deborah*, Politecnico di Torino, *Francesca Viggiano*, Politecnico di Torino, **Italy**

Westinghouse Plasma - Commercialized; Industrial scale plasma gasification technology for the conversion of various waste feedstocks into clean energy, *KAL BHOJAK*, WESTINGHOUSE PLASMA CORP., **CANADA**

SESSION 5C ***Generation and Composition 2***

Comparison of Municipal Solid Waste Typologies Generation Between Two Municipalities in Serra Gaúcha, Brazil, *Vania Elisabete Schneider*, University of Caxias do Sul, *Denise Peresin*, University of Caxias do Sul, *Mariana Riegel Grando*, University of Caxias do Sul,

Denise Peresin, Mariana Riegel Grando, Veronica Casagrande, Artur Rech da Rosa, and Nicolas Finkler, Brazil

Solid Waste Management in The Kathmandu Valley, *Sarbagya Raj Paudel*, Kathmandu Metropolitan City Office, **Nepal**

Household Waste Generation, Composition and Expenditure: A Growing Waste Challenge in Iskandar Malaysia, *Cindy Ik Sing Lee*, Universiti Teknologi Malaysia, *Zainura Zainon Noor*, Universiti Teknologi Malaysia, *Fatin Aliah Phang*, Univesiti Teknologi Malaysia, **Malaysia**

Quantification of Electronic Passive in the Valley of Toluca, *Maria del Consuelo Mañon-Salas*, Universidad Politécnica del Valle de Toluca, *Maria del Consuelo Hernandez-Berriel*, Instituto Tecnológico de Toluca, *Martha María Montes de Oca-Herrera*, Universidad Politécnica del Valle de Toluca, *Laura Verónica Díaz Archundia*, *Elvira Olay Romero*, **México**

Application of Anaerobic Digestion to the Treatment of MSW in China, *Hao Chen*, Ordos Institute of Solid Waste Technology, RCEES of CAS, *Yuzhu Zhao*, Ordos Institute of Solid Waste Technology, RCEES of CAS, *Xiaohua Xia*, Ordos Institute of Solid Waste Technology, RCEES of CAS, *Mr. Zhenyu Wu*, *Mr. Wenbiao Han*, **P. R. China**

SESSION 5D ***Biological Treatment***

Influence of Vermicompost and Vermicompost Leachate on Growth Characteristics of *Withania Somnifera* (L.), *Arvinder Kaur*, Guru Nanak Dev University, *Amandeep Kaur*, Guru Nanak Dev University, *Puja Ohri*, Guru Nanak Dev University Amritsar, *Dr. P.K. Pati*, **India**

Significance of Waste Separation on Composting Process and Compost Quality, *Manohara Badekkanadka*, University of Mysore, *Shiddappa Lagamappa Belagali*, University of Mysore, **India**

Biodegradation of hydrocarbons exploiting spent substrate from *Pleurotus ostreatus* in agricultural soils, *Beatriz Pérez-Armendáriz*, Universidad Popular Autónoma del Estado de Puebla, *Judith Cavazos-Arroyo*, Universidad Popular Autónoma del Estado de Puebla, **México**

Disposal of Organic Waste Worship Materials through Vermicomposting from Some Religious Places of Patna, Bihar, *Arvind Kumar Nag*, College of Commerce, Patna, under Magadh University Bodh Gaya, *Bihari Singh*, A.N.College Patna, Under Magadh University Bodh Gaya, *Abhishek Mani*, A.N. College Patna, *Chiranjeev Kumar*, **India**

Use of Biogas Slurry in Development of Bioformulation of *Paecilomyces lilacinus* against Root-knot Nematodes, *Abhishek Sharma*, Indian Institute of Technology Delhi, *Satyawati Sharma*, Indian Institute of Technology Delhi, **India**

Dynamics of Fermentative and Methanogenic Bacteria in the Accelerated Degradation of Municipal Solid Waste, *Gisela Ines Hernández-Contreras*, Instituto Tecnológico de Toluca,

María del Consuelo Hernández-Berriel, Instituto Tecnológico de Toluca, Isaías de la Rosa-Gómez, Instituto Tecnológico de Toluca, Liliana Márquez-Benavides, María del Carmen Carreño-de León, México

Anaerobic Digestion of Source-Segregated Domestic Food Waste: The Role of Trace Elements, *He Song, University of Southampton, Charles Banks, University of Southampton, Yue Zhang, University of Southampton, UK*

10:10 a.m. - 10:30 a.m.

Break

10:30 a.m. – 12:15 p.m.

Sessions 6

SESSION 6A

Agricultural Wastes

Energy from Agricultural Wastes: Environmental Evaluation, *Viggiano Francesca, Politecnico di Torino, Deborah Panepinto, Politecnico di Torino, Giuseppe Genon, Politecnico di Torino, Italy*

Comparative Analysis of Some Neem Seed Oil Extraction Methods for Biodiesel Production, *Mohamed Ben Oumarou, University of Maiduguri, Garba Mohammed Ngala, University of Maiduguri, Nigeria*

Utilization of Cassava Processing Waste in Ibadan as a Viable and Sustainable Option to Meet Cassava Processing Energy Needs: Case Study from Ibadan City, Nigeria, *Akinwale Coker, University of Ibadan, Chibueze Achi, University of Ibadan, Nigeria*

Seed Priming With Vermicompost Tea And Vermicompost Leachate For Enhancing Seedling Emergence And Growth Of A Valuable Medicinal Plant Withania Somnifera, *Amandeep Kaur, Guru Nanak Dev University, Arvinder Kaur, Guru Nanak Dev University, Puja Ohri, Guru Nanak Dev University Amritsar, Dr. P.K. Pati, India*

Suppressiveness of Composts against the Plant Pathogens Phytophthora Nicotianae and Fusarium Oxysporum, *Josefa Blaya, Center of Edaphology and Applied Biology of Segura River (CEBAS-CSIC), Margarita Ros, Center of Edaphology and Applied Biology of Segura River (CEBAS-CSIC), Jose A. Pascual, Center of Edaphology and Applied Biology of Segura River (CEBAS-CSIC), Spain*

Renewable Waste Substrates of Plant Origin for Bioethanol Production, *Bartho Okolo, University of Nigeria, Anene Moneke, University of Nigeria, Reg Agu, Scotch Whisky Research Institute, Onyetugo Amadi, Department of Microbiology University of Nigeria, Nigeria*

Integrating Anaerobic Manure Digestion with Algal Cultivation, for Decentralized Near - Zero Discharge Waste Management, *Revital Riklin, The Jacob Blaustein Institutes for Desert*

Research, Ben Gurion University of the Negev, *Amit Gross, Zuckerberg Institute for Water Research, The Jacob Blaustein Institutes for Desert Research, Ben Gurion University of the Negev, Sammy Boussiba, Microalgal Biotechnology Laboratory, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Dr. Stefan leu, Israel*

Three Stages Composting Process for Poultry Mortality at Open Desert Site in Kuwait, *Samir Al-Ghawas, Kuwait Institute for Scientific Research, Hamad Al-Munsoor, Kuwait Institute for Scientific Research, Kuwait*

SESSION 6B ***Medical Wastes***

Investigation of Scaffold Fabrication Techniques: Tissue Engineering for Reducing Medical Waste and the Environmental Impacts, *Ozlem Yasar, New York City College of Technology, Masato Nakamura, New York City College of Technology, Shalman Ahmed, New York City College of Technology, USA*

Medical Waste Management in Libya Northeastern Region Hospitals as a Case Study, *Farag El Mabrouk, Benghazi University, Ibrahim Ghaweel, Benghazi University, Libya*

Waste Prevention and Management in Hospitals, *Joan Plisko, Maryland Hospitals for a Healthy Environment, University of Maryland School of Medicine, Carrie Flora, Maryland Hospitals for a Healthy Environment, University of Maryland School of Medicine, USA*

The Challenge of Healthcare Waste Management Practices in Primary Healthcare Centers, Ogun State, Nigeria, *Ezechiel Oladapo Longe, University of Lagos, Ismail Adenuga, Ogun State Government, Nigeria*

SESSION 6C ***Waste Utilization in Construction 2***

The Use Of Dumpsite Solid Waste In The Production Of Clay Bricks, *Magdi Abadir, Cairo University - Faculty of Engineering, Shakinaz El Sherbiny, Faculty of Engineering - Cairo University, Shereen Amin, National Research Center, Marwa Ahmed, Kamilia El Naggat, Egypt*

Deformation Properties of Recycled Concrete with Mixed Recycled Aggregates, Focused On Precast Prestressed Products, *Fernando L. Gayarre, Universidad de Oviedo, Ruben Blanco Viñuela, Universidad de Oviedo, Pedro Serna Ros, Universidad Politecnica de Valencia, Carlos Lopez-Colina, Aitor Llano Torre, Spain*

Utilization of Fly Ash and Red Mud to Make Foam Bricks by Addition of Polystyrene, *Kamalesh Singh, Indian Institute of Technology (BHU), Vinay Singh, Indian Institute of Technology (BHU), T. R. Mankhand, Indian Institute of Technology (BHU), India*

Mechanical Behavior of Reinforced Clayey Soil with Polyethylene Terephthalate Fibers, *Ingrid Milena Reyes Martinez*, Pontifical Catholic University of Rio de Janeiro - PUC-Rio, *Nathalia Louzada*, Pontifical Catholic University of Rio de Janeiro - PUC-Rio, *Michele Casagrande*, Pontifical Catholic University of Rio de Janeiro - PUC-Rio, *Lucas Mendes Repsold*, **Brazil**

Influence of Coal Bottom Ash on the Strength Properties of Concrete, *Rafat Siddique*, Thapar University, *Malkit Singh*, Thapar University, **India**

Novel Self-consolidating Concrete Containing Industrial Waste, *Felix Udoeyo*, Temple University, *Armaghan Izadpanahi*, Temple University, *Evan Shepard*, Formerly, Temple University, *Priyank Patel*, *Stuart Shepard*, **USA**

Hybrid alkaline concrete based on fly ash, blast furnace slag and Portland cement: Mechanical and permeation properties, *Daniela E. Angulo Ramirez*, Universidad del Valle, Grupo Materiales Compuestos (GMC), *William G. Valencia Saavedra*, Universidad del Valle, Grupo Materiales Compuestos (GMC), *Ruby Mejía de Gutierrez*, Universidad del Valle, Grupo Materiales Compuestos (GMC), **Colombia**

SESSION 6D

Environmental and Health Impacts

Industrial Pollution, *Parbati Pudasaini*, Nepal Red Cross Society Kathmandu, **Nepal**

Water Pollution, *Binod Bhattarai*, Kathmandu Metropolitan City Office, **Nepal**

Liquefied Petroleum Gas Operated Vehicles, *Bhimsen KC*, Kathmandu Metropolitan City Office, **Nepal**

Development and Implementation of a Municipal Solid Waste Management Single Score Sustainability Index, *Hacer Ak*, Stevens Institute of Technology, *Washington Braidia*, Stevens Institute of Technology, **USA**

The Impact of Entrepreneurs in Mitigating Effects of Polythene and Plastic Waste to Soils, *Mugisha Mathias Richard*, LWECOTEP, **Uganda**

Constructed Wetland Based System for Waste Water Treatment, *Bihari Singh*, A. N. College, Patna, Magadh University, Bodh Gaya, India, *Amrendra Kumar*, A. N. College, Patna, PIN-800013, Bihar, India, *Tahsheen Anwar*, A. N. College, Patna, PIN-800013, Bihar, India, *Ms. Archana Singh*, **India**

Respiratory Disease Risk Assessment Among Solid Waste Workers Using Fuzzy Rule Based System Approach, *Namrata Jariwala*, S.V.National Institute Of Technology, Surat, *Robin Christian*, S.V.National Institute Of Technology, Surat, **India**

12:15 p.m. – 1:15 p.m.
Poster Session 2

POSTER SESSION 2

Evaluation of the Ability of Municipal Solid Waste Treatment Plants to Serve as Regional Disaster Response Facilities, *Tomohiro Tabata*, Kobe University, *Peii Tsai*, Kobe University, *Takashi Saeki*, Toyama Prefectural University, **Japan**

Bacteriological Characterization Of Leachates From Experimental Cells Containing Household Solid Waste And Health Care Solid Waste, *Juacyara Carbonelli Campos*, UFRJ - Federal University of Rio de Janeiro, *Bianca Ramalho Quintaes*, COMLURB - Municipal Waste Management Company, *Alessandra Fonseca Lourenço*, UFRJ - Federal University of Rio de Janeiro, *Marco Antonio Lemos Miguel*, *João Alberto Ferreira*, **Brazil**

Albizia Tree Hazard Mitigation Following Tropical Storm Iselle, *Julia Crowley*, University of Hawaii at Manoa, *Karl Kim*, University of Hawaii at Manoa, **USA**

Economic and Environmental Benefits of the Indium Recycling from the Waste Liquid Crystal Displays in China, *Yufeng Wu*, Institute of Circular Economy, Beijing University of Technology, *Yifan Gu*, Institute of Circular Economy, Beijing University of Technology, *Yu Gong*, Institute of Circular Economy, Beijing University of Technology, **China**

Mixing Construction, Demolition and Excavation Waste and Solid Waste Compost for the Derivation of a Planting Medium for Use in the Rehabilitation of Quarries, *Eleni Assaf*, American University of Beirut, *Nadim Farajalla*, American University of Beirut, **Lebanon**

Biodesulfurization Of Biogas In Biotrickling Filters: Study Of The Empty Bed Residency Time (EBRT), *Renata Solcia*, Dept of Biochemistry and Chemical Technology, Institute of Chemistry, UNESP – Univ Estadual Paulista, *Denise Bevilaqua*, Dept of Biochemistry and Chemical Technology, Institute of Chemistry, UNESP – Univ Estadual Paulista, **Brazil**

Lessons Learned in The City of Boras and What Can Be Shared in Curitiba, *Marisa S. Borges*, Federal University of Parana, **Brazil**

Biobleaching Of Trace Elements From A Residue Of Sugarcane Industry: Effect Of The Pulp Density, *Josiane Gaspar Grillo*, Institute of Chemistry, Universidade Estadual Paulista in Department of Biochemistry and Chemical Technology, *Rafael Ferreira*, Itatijuca Biotech, *Julio Marumo*, Instituto de Pesquisas Energéticas e Nucleares, *Ana Teresa Lombardi*, *Rodovia Washington Luís*, *Mauricio Cesar Palmieri*, *Professor Lineu Prestes*, *Denise Bevilaqua*, *Prof. Francisco Degni*, **Brazil**

Glass and E-Waste Disposal Management at Karnataka State Women's University, Bijapur, Karnataka, India, *Mahantappa Jogad*, University, *Meena Maithili Chandawarkar*, Karnataka State Women's University, Bijapur, **India**

Anaerobic Digestion of Source-Segregated Domestic Food Waste: The Role of Trace Elements, *He Song*, University of Southampton, *Charles Banks*, University of Southampton, *Yue Zhang*, University of Southampton, **UK**

Diagnosis of Solid Waste Generation of Administrative Sector of Education Institution, *Fernando Reis*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Misael Juliani*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Neife Abraão*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Luiz Flávio Reis Fernandes*, *Luiz Antonio Lima*, **Brazil**

In Order to Install Ecopontos Final Destination Suitable for Scrap Tires, *Neife Santos Abraão*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Misael Silva Juliani*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Fernando Yuri da Silva Reis*, Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, *Luiz Flavio Reis Fernandes*, *Luiz Antonio Lima*, **Brazil**

Municipal Waste Management in Poland: Current Status and Challenges, *Marta Sebastian*, Wrocław University of Technology, **Poland**

How to Improve the Quality of Waste Derived Fuels, *Emilia Den Boer*, Wrocław University of Technology, *Marta Sebastian*, Wrocław University of Technology, **Poland**

Comparison of Environmental Performance of Municipal Solid Waste Compost and Chemical Fertilizer, *Zerihun Abate*, Addis Ababa Institute of Technology, Addis Ababa University, *Berhanu Assefa*, Addis Ababa Institute of Technology, Addis Ababa University, *Wakene Negessa*, Department of Plant, Soil and Microbial Sciences, Michigan State University, East Lansing, USA, **Ethiopia**

Hidden Flows of Finnish Consumption: Analyzing the Sociometabolic Profile of Finland, *Sari Piippo*, University of Oulu, *Pablo Piñero*, University of Oulu, *Eva Pongrácz*, University of Oulu, **Finland**

Analysis of Controlled Release Rate Models in Porous Collagen Matrices, *Eugene Bender*, Manhattan College, *Gennaro Maffia*, Manhattan College, **USA**

Performance Evaluation of Recycling in the Highway SC-355: Characterization of the Recycled Mixture and Structural Assessment of Monitored Segments Executed, *Gislaine Luvizão*, Universidade Federal De Santa Catarina - UFSC, *Glicério Trichês*, Universidade Federal De Santa Catarina - UFSC, **Brasil**

Medical Waste Management: A General Perspective and Issues in Kathmandu Valley of Nepal, *Manoj Bista*, Clean Environment Nepal (CEN) PVT.LTD, *Durga Rawal*, Environmentalists' Association of Nepal (EAN), **Nepal**

Solid Waste Management in Addis Ababa Ethiopia, *Zeineb Yassin*, Maichew Polytechnic College, **Ethiopia**

Construction and Demolition Waste Addition to Soil Urban Degraded by Mining Growth Promotion of *Leucaena leucocephala*, *Erica Mejia*, Universidad de San Buenaventura, *Angelica Rosso*, Universidad de San Buenaventura, *Maria Castro*, Universidad de San Buenaventura, *Jorge Ivan Tobón*, *Walter Osorio*, **Columbia**

Estimation of Microbial Growth Kinetics and in Waste Water and Design of a Bio-Reactor, *Girish Kumar Sinha*, Magadh University Bodh-Gaya, *Sury Narayan Yadav*, Magah University Bodh-Gaya, *Akanksha Priya*, University of Delhi, **India**

Recycling of Zirconia Waste Obtained During the Milling of Dental Ceramic Blocks, *Wilson Acchar*, Federal University of Rio Grande do Norte-UFRN, *Yankel Silva*, Federal University of Rio Grande do Norte-UFRN, **Brazil**

Evaluation of Dynamic properties of Municipal Solid Waste Sites by Geophysical Tests, *Naveen B.P.*, Indian Institute of Science, *Sitharam T.G.*, Indian Institute of Science, *Sivapullaiah P.V.*, Indian Institute of Science, **India**

Management of Medical Waste in Rural and Urban Clinics within Polokwane Municipality, *France Raphela*, Central University of Technology, Free State, **South Africa**

Evaluating the Impact of Lime Softening Sludge Disposal in Natural Environments through the Use of Alternative Leach Tests, *Nawaf Blaisi*, University of Florida, *Justin Roessler*, University of Florida, *Weizhi Cheng*, University of Florida, *Timothy Townsend*, *Souhail Al-Abed*, **USA**

Comparison of Municipal Solid Waste Typologies Generation Between Two Municipalities in Serra Gaúcha, Brazil, *Vania Elisabete Schneider*, University of Caxias do Sul, *Denise Peresin*, University of Caxias do Sul, *Mariana Riegel Grando*, University of Caxias do Sul, *Denise Peresin*, *Mariana Riegel Grando*, *Veronica Casagrande Artur Rech da Rosa*, and *Nicolas Finkler*, **Brazil**

Thermal Decomposition Kinetics Of Blends Of Sugar Cane Mills Wastes In N₂/O₂ Atmosphere By Flynn-Wall-Ozawa Method, *Daniel Rodrigues da Silva*, UNESP - IQ/CAr, *Marisa Spirandeli Crespi*, UNESP - IQ/CAr, **Brasil**

Study Of The Application Of Waste Generated In The Process Of Effluent Treatment In Agriculture And As Source Of Energy, *Weverton Nozela*, Universidade Estadual Paulista, *Marisa Crespi*, Universidade Estadual Paulista, *Sandra Maintinguer*, Universidade Estadual Paulista, *Sonia de Almeida*, *Carina de Freitas Velloso Nozela*, **Brasil**

Improving Solid Waste Reduction Programs by Predicting Waste Prevention Behaviour, *Ana Paula Bortoleto*, State University of Campinas, **Brazil**

1:15 p.m. – 2:15 p.m.

Luncheon

2:15 p.m. – 4:15 p.m.

Sessions 7

SESSION 7A

Case Studies 2

Impact of Informal Private Sector in Integrated Solid Waste Management (ISWM) in Ibadan, Nigeria, Lukman Habeeb, Deecency Cleaning & Restoration, Nigeria

Status of Solid Waste Material Recovery (Swmr) In Benin Metropolis, Nigeria, Dennis Iyeke Igbinomwanhia, University of Benin, Emmanuel Ehis Osalease, University of Benin, Nigeria

Glass and E-Waste Disposal Management at Karnataka State Women's University, Bijapur, Karnataka, India, Mahantappa Jogad, University, Meena Maithili Chandawarkar, Karnataka State Women's University, Bijapur, India

Too Much Waste – Too little Space: Waste Management System in the Greater Banjul Area (GBA) of the Gambia, Challenges and Prospects, Dawda Badgie, University of Cape Coast – Ghana C/O National Environment Agency, The Gambia, Latifah Abd Manaf, University Putra Malaysia, Mohd Armi Abu Samah, University Putra Malaysia, Gambia

Application of EDSS-MSWM for Primary Collection and Secondary Storage of Municipal Solid Waste Management, Anurag Ohri, Indian Institute of Technology (Banaras Hindu University) Varanasi, Prabhat Kumar Singh, Indian Institute of Technology (Banaras Hindu University) Varanasi, India

Feasibility of Municipal Solid Waste Landfill Site in Lekhnath Municipality, Nepal using Geographical Information System (GIS), Bishow Raj Tiwari, Goldengate International College, Tribhuvan University, Nepal

Concept Paper for Multiple Utilisation of Solid Waste for the Generation of Electricity and Composting in Kathmandu, Nepal, Suman Adhikari, Kathmandu Metropolitan City Office, Nepal

Concept Paper For Utilization Of Solid Waste In Kathmandu, Nepal For The Generation Of Electricity In Kathmandu, Suman Adhikari, Kathmandu Metropolitan City Office, Kathmandu, Nepal, Nepal

Solid Waste Management Practices in Rural South Africa: A Case Study of Shigalo Village in Limpopo Province, Joseph Binala, University of Venda, Simango Thembi, University of Venda, South Africa

Solid Waste Management in Developing Countries, Babatunde Olawale Falana, Water Supply & Environmental Sanitation Department. Ipokia Local Government, Nigeria

Albizia Tree Hazard Mitigation Following Tropical Storm Iselle, Julia Crowley, University of Hawaii at Manoa, Karl Kim, University of Hawaii at Manoa, USA

Solid Waste Management in Addis Ababa Ethiopia, Zeineb Yassin, Maichew Polytechnic College, Ethiopia

SESSION 7B

Ash

Heavy Metals Immobilization in Hazardous ASR Residue by Novel Nanometallic Ca/CaO Based Composite Materials, *Srinivasa Reddy Mallampati*, University of Ulsan, *Chi-Hyeon Lee*, University of Ulsan, *Byeong-Kyu Lee*, University of Ulsan, **Republic of Korea**

Stabilization of Spreader Stoker Coal Fly Ashes (SSCFA) by Using Alternative Binders and Chemical Activators, *Julie Hot*, LMDC - Toulouse University, *Moustapha Sow*, LMDC - Toulouse University, *Christelle Tribout*, LMDC - Toulouse University, *Prof. Martin Cyr*, **France**

Indian Fly Ash: A Study on the Removal of Unburnt Carbon from Fly Ash by Flotation to Use It as an Adsorbent, *Surabhi Singh*, Department of Applied Chemistry, Pillai Institute of Information Technology, Engineering, Media Studies & Research, Mumbai University, New Mumbai, India, *Udayabhanu G.*, Indian School of Mines, Dhanbad, *Nikkam Suresh*, Indian School of Mines, Dhanbad, India, **India**

The Preparation of an Effective and Low-Cost Coal Fly Ash Catalyst and Its Application, *Wei Ma*, School of Chemical Engineering, Dalian University of Technology, Dalian 116024, China National Institute of Clean-and-low Carbon Energy, Beijing 102209, China, *Panpan Zong*, Dalian University of Technology, *Zihong Cheng*, Dalian University Technology, **China**

SESSION 7C

Waste Utilization in Construction 3

A Novel Self-consolidating Concrete Containing Industrial Wastes as Supplementary Materials, *Felix Udoeyo*, Temple University, *Armaghan Izadpanahi*, Temple University, *Evan Shepard*, Formerly, Temple University, *Priyank Patel*, *Stuart Shepard*, **USA**

Use of PVC Waste in Road Construction Process, *Ambika Behl*, CSIR-Central Road Research Institute, *Girish Sharma*, CSIR-CRRI, *Gajendra Kumar*, CSIR-CRRI, *Dr. P.K Jain*, **India**

Applicability 'Pure Water' Sachet In Asphalt For Sustainable Environment, *Adedayo Badejo*, Tshwane University of Technology, Pretoria South Africa, *Julius Ndambuki*, Tshwane University of Technology, Pretoria South Africa, *Williams Kupolati*, Tshwane University of Technology, Pretoria South Africa, *Adekunle AA*, *Adekoya OO*, **South Africa**

A Study on the Development of Sustainable, Green Composites from Recycled Polymer and Thermal Power Plant Waste-Fly Ash, *Shubhalakshmi Sengupta*, University of Calcutta, *Dipa Ray*, University of Calcutta, *Aniruddha Mukhopadhyay*, University of Calcutta, *Suparna Sengupta*, *Tanusree Kar*, **India**

Reuse as Construction Materials of CO₂, *Changsik Choi*, Institute for Advanced Engineering, *Bum Ui Hong*, Institute for Advanced Engineering, *Byung-hwan Kim*, Daewoo Institute of Construction Technology, *Eun Sil Lee*, *Cheol Jin Jeong*, *Doo Su Jeong*, **Korea**

Leaching of Asphalt Resulting from Moisture Conditioning, *Mekdim Weldegiorgis*, Brudis Associates, *Rafiquel Tarefder*, *University of New Mexico*, **USA**

SESSION 7D
Industrial Wastes 2

Understanding the Lead Acid Batteries Waste Management in State of Punjab (India)- A Case Study, *Puneet Pal Singh Cheema*, Guru Nanak Dev Engineering College, Ludhiana, *Jagadanand Jha*, *Guru Nanak Dev Engineering College, Ludhiana*, *Preetinder Kaur*, *Guru Nanak Dev Engineering College, Ludhiana*, **India**

Disposal of Solid Waste Generated by Stainless Acid Pickling Process, *Raed Hasan*, Clean Environment Technologies, **Saudi Arabia**

SESSION 7E
Innovative Technologies

Innovative Technique for Waste Water Treatment and Contaminated Site Remediation, *Klaus Philipp Sedlazeck*, Montanuniversitaet Leoben, *Daniel Höllen*, *Montanuniversitaet Leoben*, *Peter Müller*, *Ferro Decont*, *Robert Mischitz*, **Austria**

Sewage Sludge Valorisation by Fast Pyrolysis for the Production of Bio-Oil and Adsorbents, *Jon Alvarez*, University of the Basque Country, *Maider Amutio*, *University of the Basque Country*, *Gartzzen Lopez*, *University of the Basque Country*, *Maite Artetxe*, *Aitziber Erkiaga*, *Itsaso Barbarias*, *Aitor Arregi*, *Martin Olazar*, **Spain**

Analysis of Controlled Release Rate Models in Porous Collagen Matrices, *Eugene Bender*, *Manhattan College*, *Gennaro Maffia*, *Manhattan College*, **USA**

Characterization and Application of Hazardous Sludge Waste Generated in CETPs, *Rajashekar Mohan*, *Andhra Pradesh Pollution Control Board*, *Srivatsav*, *Telangana State Pollution Control Board*, **India**

The Feasibility of Using Banana Peels as a Solid Catalyst for the Transesterification of Non-Edible Bauhinia Monandra Seed Oil into Methyl Esters: An Optimization Study, *Aramide Mistura Akintunde*, *Obafemi Awolowo University*, *Victoria Oluwadamilare Odude*, *Obafemi Awolowo University*, *Sheriff Olalekan Ajala*, *Obafemi Awolowo University*, *Tunde Victor Ojumu*, *Eriola Betiku*, **Nigeria**

Design and Testing of a Low Cost Single Axis Solar Tracker, *Mohamed Ben Oumarou*, *University of Maiduguri*, *Abdulrahim Abdulbaqi Toyin*, *University of Maiduguri*, **Nigeria**

6:00 p.m. – 6:45 p.m.
Presentation for Field Trip 1

6:30 p.m. – 7:30 p.m.
Closing Reception

WEDNESDAY MARCH 18

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 – Environmental Landfill and Composting

Details will be posted in early January.

FIELD TRIP 2 –Recycling, Energy Recovery and Transfer

Details will be posted in early January.