

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

Annapolis, MD (Washington, DC), USA

March 11-14, 2018

## AGENDA

(updated February 1, 2018)

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- Professor Joseph Akunna, Abertay University, Dundee, UK
- Prof. Ofira Ayalon, University of Haifa and Samuel Neaman Institute, Technion, Israel
- Giuseppe Bonifazi, Sapienza – Università di Roma – La Sapienza, Italy
- Prof. Dr. Sadhan Kumar Ghosh, President, International Society of Waste Management, Air and Water (ISWMAW-IconSWM) and Professor, Mechanical Engineering, Jadavpur University, Kolkata, India
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- Nissim Ilan, Ministry Energy, Israel
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- Genxing Pan, Nanjing Agricultural University, China
- Dr. Mary Purcell, Cork Institute of Technology, Ireland
- Dr. Lakshmi Raghupathy, TERI University, India
- Prof. Krishna R. Reddy, University of Illinois, Chicago, USA
- Dr. Masafumi Tateda, Toyama Prefectural University, Japan
- Jerry E. Uhuo, Ph. D., University of Nigeria, Nsukka and National Assembly, Abuja, Nigeria
- Anita Závodská, Ph.D., Barry University, USA

# CONFERENCE SUMMARY

## SUNDAY, MARCH 11, 2018

- Pre-Conference Tour of Annapolis
- Opening Reception

## MONDAY, MARCH 12, 2018

Opening Plenary

### Oral Presentations

- 1A Economic Analyses
- 1B Use of Wastes in Construction 1
- 1C Composting and Biological Treatment 1
- 1D Landfill 1
  
- 2A Community Education and Participation
- 2B Construction and Demolition Wastes
- 2C Environmental Assessment
- 2D Recycling
- 2E Case Studies 1
  
- 3A Special Session: Emerging Contaminants Found in Landfill Leachate
- 3B Waste Collection
- 3C Agricultural and Food Wastes 1
- 3D Medical Wastes
  
- 4A Waste to Energy 1
- 4B Integrated Management and Policy 1
- 4C Shell Wastes
- 4D Ash Utilization
- 4E Innovative Technologies

Poster Session 1

## TUESDAY, MARCH 13, 2018

### Oral Presentations

- 5A Use of Wastes in Construction 2
- 5B Contaminated Sites
- 5C Mining Wastes
- 5D Composting and Biological Treatment 2
- 5E Integrated Management and Policy 2
  
- 6A Agricultural and Food Wastes 2
- 6B Landfill 2
- 6C Sludge Management
- 6D Special Wastes

Poster Session 2

- 7A Sludge and Wastewater Management
- 7B Waste to Energy 2
- 7C Research Advances
- 7D Case Studies 2

Closing Reception

## WEDNESDAY, MARCH 14, 2018

Technical Field Trips

# DETAILED AGENDA

## SUNDAY, MARCH 11

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)

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

Welcome Reception

## MONDAY, MARCH 12

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

**Keynote Address:** A Strategic Overview of Research Needs and Problems in North America and Abroad, Bryan Staley, Environmental Research & Education Foundation (EREF), USA

### Plenary Presentations:

Zero Landfill Zero Waste - Connecting People to Nature, *Sadhan Kumar Ghosh*, President, International Society of Waste Management, Air and Water, & Mechanical Engineering Dept., Jadavpur University, **India**

In Search of Secondary Resource - Research Potential in Waste, *Lakshmi Raghupathy*, TERI University, **India**

10:05 a.m. - 11:30 a.m.

Sessions 1

### SESSION 1A

#### *Economic Analyses*

Who Should Really Pay for Waste Management?, *Anita Zavodska*, Barry University, *Anne Morrissey*, Dublin City University, **USA**

Evaluation of the Performance and Profitability of Waste Businesses Using Diversion Indices, *Conglian Pan*, University of Regina, *Kelvin T.W. Ng*, University of Regina, *Amy Richter*, University of Regina, **Canada**

Modeling Economic Aspects of Food Waste-to-Energy Systems, *Matthew Franchetti*, The University of Toledo, *Somik Ghose*, The University of Toledo, **USA**

Synthetic Wood Generation through the Reuse of Solid Waste: An Environmentally Sustainable Product, *Marisa S. Borges*, Federal University of Parana, *Jonathan Cocker*, Baker & McKenzie LLP, *Douglas Santos*, INPI, **Brazil**

## **SESSION 1B**

### *Use of Wastes in Construction 1*

Geotechnical Evaluation of Recycled Concrete Aggregate (RCA) and Recycled Ceramic Coating (RCC) for Road Construction, *Henrique Pereira*, UNESC, *Luiz Renato Steiner*, UNESC, *Ingrid Belchior*, UNESC, **Brazil**

Ceramic Ware Waste Potential as Co-Ballast in Dense Masonry Unit Production, *Ajayi-Banji Ademola*, University of Ilorin, *David Jenyo Adewale*, University of Ilorin, *Michael Adegbile*, **Nigeria**

RCD Ceramicos as Alternative in Concrete Manufacture, *Carlos Mejía*, Universidad de San Buenaventura Medellín, *Luis Sierra*, Universidad de San Buenaventura Medellín, *Sergio Arboleda*, Institución Universitaria Colegio Mayor de Antioquia, *Jesús Zuluaga*, **Colombia**

Experimental Investigation of the Compressive Strength of Hair Fiber Reinforced Concrete with Superplasticizer, *Manny Anthony Taguba*, National University, *Franz Santos*, National University, *Allan Alzona*, National University, *Gabriel L. Nones*, **Philippines**

Study on the Shrinkage of Concrete with Pre-Wetting Recycled Aggregate, *Fei Li*, Beijing University of Civil Engineering and Architecture, **China**

## **SESSION 1C**

### *Composting and Biological Treatment 1*

Methane Production from Restaurant Food Waste in Batch Systems at Mesophilic Conditions, *Ivan Moreno-Andrade*, Institute of Engineering, Universidad Nacional Autónoma de México, *Maria Jose Berrocal-Bravo*, Institute of Engineering, Universidad Nacional Autónoma de México, *Beatriz Pérez-Aragón*, Institute of Engineering, Universidad Nacional Autónoma de México, **Mexico**

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

Rice-Straw Lining on Inner Walls of Composting Boxes to Regulate Heat Storage for Thermophilic Microorganism Functions in Digesting Organic Garbage, *Chulabut Chanthasoon*, The King's Royally Initiated Laem Phak Bia Environmental Research and Development Project, Chaipattana Foundation, *Kasem Chunkao*, Kasetsart University, *Noppawan Semvimol*, Kasetsart University, *Jeerasak Phermsin*, **Thailand**

Flexible Energy Production through Combined Hydrogen and Methane Production at a Municipal Sewage Treatment Plant, *Marco Küppers*, University Duisburg-Essen, *Jens Schoth*, University Duisburg-Essen, *Ruth Brunstermann*, University Duisburg-Essen, **Germany**

Enhancement of Biogas Production from Organic Fraction of Municipal Solid Waste (OFMSW) Using Acid Pretreatment, *Arpita Dasgupta*, Indian Institute of Technology Bombay, *Munish Kumar Chandel*, Indian Institute of Technology Bombay, **India**

## **SESSION 1D**

### ***Landfill 1***

The Effect of Using Prefabricated Vertical Drains on Secondary Settlement, *Mohammad Al-Quraan*, Geosyntec Consultants, *Andrew Stalling*, Geosyntec Consultants, *David Espinoza*, Geosyntec Consultants, **USA**

Redevelopment of Landfill Site Eysels, Turnhout, Belgium, *Bart Nevejans*, Aertssen Group, **Belgium**

An Innovative Passive Approach to Remediation at a Closed Landfill, *Laura Oakes*, EA Engineering, Science, and Technology, Inc., PBC, *Michael Hertz*, EA Engineering, Science, and Technology, Inc., PBC, *Michael Phillips*, EA Engineering, Science, and Technology, Inc., PBC, *Kari Hodgson*, **USA**

Using Synthetic Biogas to Evaluate Adsorbents for Removing Siloxane Contaminants from Biogas Streams under Varying Conditions, *Clara Eichler*, Virginia Tech, *Steven Cox*, Virginia Tech, *Gregory Boardman*, **USA**

Case Studies of Landfills of Indochina Peninsula, Deep Pit Disposal on Geological Barrier and Its Effects on Leachate Quality and Groundwater, *Phetyasone Xaypanya*, Tokyo Institute of Technology, *Jiro Takemura*, Tokyo Institute of Technology, *Chart Chiemchaisri*, Kasetsart University, *Hul Seingheng*, *Maria N. Tanchuling*, **Japan**

Spatial Analysis of Groundwater Quality around MSW Landfill Site, *Sachin Mishra*, Indian Institute of Technology (BHU) Varanasi, **India**

Utilization of Selected Fungal Strains to Treat Old Landfill Leachate, *Mofizul Islam*, University of Manitoba, *Qiuyan Yuan*, University of Manitoba, **Canada**

Estimation of Half-Life of Municipal Solid Waste, *Dorairaja Raghu*, NJIT, *Swamy Basim*, Central Connecticut State University, **USA**

Assessment of Ammonia Removal from Landfill Leachate Using Ultrasonic Irradiation, *Majid Sartaj*, University of Ottawa, *Andrew Tobalt*, Environment Canada, **Canada**

11:30 a.m. – 11:50 a.m.

Break

11:50 a.m. – 1:10 p.m.

**Sessions 2**

## SESSION 2A

### *Community Education and Participation*

Evaluation of Waste Recycling Practices of Primary School Learners in Mamelodi Township of South Africa, *Isaac Tebogo Rampedi*, University of Johannesburg, *Gilani Muriel Makhubele*, University of Johannesburg, **South Africa**

Waste Management and the Role of the Media in Educating the People of Ghana, *Nana Kwasi Ntim Gyakari*, University of Tsukuba, **Japan**

The 'Real Nappies for London' Scheme - Waste Prevention and Wider Social Benefits - 2012-2017, *Charles Warner*, University of Northampton, **United Kingdom**

Energy and Resource Recovery from Litters Generated in a Community for Reducing Green House Gas Emission and Mitigating Climate Change Effects, *Taiwo Babatunde Hammed*, University of Ibadan, *Shem O. Wandiga*, University of Nairobi, *Yacob Mulugetta Mulugetta*, University College London, *M.K.C. Sridhar*, **Nigeria**

Solid Waste Management in a University Campus in Brazil, *Liseane Padilha Thives*, Federal University of Santa Catarina, *Enedir Ghisi*, Federal University of Santa Catarina, **Brazil**

Raising Waste Management Awareness in Nigerian Schools, A Case Study of Premier International School, *Suleiman Abba Suleiman*, Premier International School, *Daniel O. Alamu*, Premier International School, *Mshelia S. Gana*, NASENI, *G. Hassan, R. Garba*, **Nigeria**

## 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, Doha, *Mukaram Mushtaq*, University of Gujrat, Pakistan, *Tayyaba Noreen*, University of Gujrat, Pakistan, **Qatar**

Laboratory Investigations into Construction and Demolition Waste Recycling – Utilisation in Hot Mix Asphalt Concrete, *Samiullah Bhatti*, Sir Syed University of Engineering & Technology, **Pakistan**

Assessment of Human Health and Environmental Risks in Construction and Demolition Waste Use in the Czech Republic, *Anita Zavodska*, Barry University, *M. Zimová*, Charles University, *Libuse Benesova*, Charles University, **Czech Republic**

## SESSION 2C

### *Environmental Assessment*

Multivariate Analysis and Hydrochemical Assessment of Groundwater at Regina Landfill Site, *Conglian Pan*, University of Regina, *Kelvin T.W. Ng*, University of Regina, **Canada**

Environmental Impacts of Sandstone Quarrying at Keru, Jodhpur, Rajasthan, *Abhishek Singhal*, Indian Institute of Technology, Kharagpur, *Sudha Goel*, Indian Institute of Technology, Kharagpur, **India**

Sanitation Markets and Urban Climate Decisions Asymmetry: Lessons from Trend in CH<sub>4</sub> Emissions from Solid Waste Disposal Subsector in Rwandan Cities after Private Sector Involvement in Solid Waste Collection, *Pius Nishimwe*, Water for People, *Elisee Gashugi*, University of Rwanda, *Paulin Buregeya*, COPED Group, **Rwanda**

Numerical Modeling of Migration of Landfill Gas and Odors to Nearby Homes, *Ray Kapahi*, NCM Environmental Solution, *Jesse Levin*, NCM Environmental Solution, **USA**

From Process to Practice: Generating Sustainable Waste Streams for Fun and Profit, *Eileen Straughan*, Straughan Environmental, Inc., *Diana Gutierrez*, Straughan Environmental, Inc., *Christine Wysocki*, Straughan Environmental, Inc., **USA**

Modeling the Life Cycle Greenhouse Gas Emission Benefits of Sodium Bisulfate for Poultry Litter Treatment, *Matthew Franchetti*, The University of Toledo, *Somik Ghose*, The University of Toledo, **USA**

## **SESSION 2D** *Recycling*

Role of Informal Sector Recycling in Reduction of Greenhouse Gas Emission in Developing Country Cities: A Case Study in Hanoi, Vietnam, *ThaiHuyen Nguyen*, Hanoi Architectural University, *HoaThai Nguyen*, Ritsumeikan University, **Vietnam**

The Philosophical Foundation and Purposes of Recycling, *Laib Khemissa*, Larbi Ben M'hidi University, **Algeria**

Recycling Options to Treating Glass Waste; Economic and Environmental Effects: A Literature Review, *Obaidullah Nayan*, Dr. Mahbubur Rahman Mollah College, *Afzol Hossain*, Dr. Mahbubur Rahman Mollah College, **Bangladesh**

Single Stream is Not Always the Single Answer, *Walt Davenport*, MSW Consultants, LLC, *Joanne Shafer*, Centre County Recycling & Refuse Authority, **USA**

Impact of Solid Waste Recycling on Sustainable Construction of Infrastructure in Developing Nations, *Olufemi Oyedele*, Government of the State of Osun, **Nigeria**

Utilization of Post-Consumer Plastic Bottles in Construction, *Pranshoo Solanki*, Illinois State University, *Samikaran Bhattarai*, Illinois State University, **USA**

Indian Waste Regulations Amendments 2016, *Lakshmi Raghupathy*, TERI University, **India**

Improve Efficiencies to Get to the Next Level: What Do the Numbers and Models Say?, *Lisa Skumatz*, SERA Skumatz Economic Research Associates, Inc., **USA**

Wow! Recycling Delivers GHG More Cheaply than Energy Programs – Really?, *Lisa Skumatz*, SERA Skumatz Economic Research Associates, Inc., **USA**



**SESSION 2E**  
*Case Studies 1*

Urban Solid Waste Management in Techiman Municipality (Ghana), Gloria Ametepey, Zoomlion Ghana Limited (B/A), Ghana

Analytical Hierarchy Process Decision Model for Solid Waste Management Strategy in Yaounde - Cameroon, Joel Sotamenou, University of Yaounde II, Cameroon

Development of an Integrated Solid Waste Management System in Guatemala, Sean O'Donnell, Geosyntec Consultants, Jeremy Morris, Geosyntec Consultants, David Espinoza, Geosyntec Consultants, Bill Gaffigan, Manuel Basterrechea, Javier Rojo, USA

Municipal Solid Waste Management in the City of Polokwane: Current Situation, Problems and Challenges, Mpho Godwin Morudu, University of Johannesburg, Isaac Tebogo Rampedi, University of Johannesburg, South Africa

Best Practices of Community Based Solid Waste Management in Panga, Kirtipur, Kathmandu, Nepal, Nabin Bikash Maharjan, Blue Waste to Value, Nepal

The Role of Waste Segregation in Effective Management of Domestic Solid Wastes in Nairobi, Kenya, Philip Nyongesa Wangia, Kenyatta University, Michael Koech, Kenyatta University, Kenya

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**

*Special Session: Emerging Contaminants Found in Landfill Leachate*

Introduction: Ivan Cooper, Civil & Environmental Consultants, Inc.

Regulatory and Litigation Updates, Matthew Thurlow, BakerHostetler

Perfluorinated Alkylated Substances PFAS, Harry Behzadi, SGS

Technology Panel:

*Francis Boodoo – Purolite Ion Exchange*

*John Matthis – Calgon Carbon Corporation*

*Pat Stanford – Rochem*

*Steve Koenigsberg, CEC - ARC Technology*

Wrap Up: Russ Abel – Sanborn Head, Risks

**SESSION 3B**  
***Waste Collection***

A Method Development for Improving Efficiency of Solid Waste Collection System, *Dhvanidevi Jadeja*, Pandit Deendayal Petroleum University, *Dayashankar Kaul*, Pandit Deendayal Petroleum University, *Anurag Kandya*, Pandit Deendayal Petroleum University, **India**

Monopolistic Private Sector Involvement in Solid Waste Collection in Kigali, A Success Story or a Flog: Social, Economic and Environmental Outcome, *Pius Nishimwe*, Water for People, *Jaap Evers*, IHE Institute for Water Education, *Paulin Buregeya*, COPED Group, **Rwanda**

Customer Satisfaction of Solid Waste Collection Services: A Measure towards Effective Waste Management, *Alhassan Sulemana*, Kwame Nkrumah University of Science and Technology, *Emmanuel A. Donkor*, Kwame Nkrumah University of Science and Technology, *Kofi S. Boateng*, Zoomlion Ghana Limited, *Kodwo Miezah*, *George N. Rockson*, *Ebenezer O. Turkson*, *Franklin O. Akuffo*, *Roland Darko*, **Ghana**

Route Optimization for Municipal Solid Waste Collection in Sunyani, Ghana, *Alhassan Sulemana*, Kwame Nkrumah University of Science and Technology, *Emmanuel A. Donkor*, Kwame Nkrumah University of Science and Technology, *Eric K. Forkuo*, Kwame Nkrumah University of Science and Technology, *Sampson Oduro-Kwarteng*, **Ghana**

Incidence of Human Labor in Waste Collection, *Francesco Di Maria*, Dipartimento di Ingegneria - Università di Perugia, *Federico Sisani*, Dipartimento di Ingegneria - Università di Perugia, **Italy**

The Art of Invisible Waste, *Jay Wheeler*, Underground Refuse Systems Inc., **USA**

**SESSION 3C**  
***Agricultural and Food Wastes 1***

Study of Slow Release of Urea Supported on Coconut and Straw Biochars, *Marco Antonio Gaya de Figueiredo*, Universidade do Estado do Rio de Janeiro, *Luana Ventura Bais*, Universidade do Estado do Rio de Janeiro, *Wallace Souza*, Universidade do Estado do Rio de Janeiro, *Fabio Antônio Cavalcante da Silva*, *Ana Paula Carvalho*, **Brasil**

Effects of Cassava Peels on Biogas Production, *Mohamed Ben Oumarou*, University of Maiduguri, **Nigeria**

Effect of Biochar Addition on H<sub>2</sub>S Production in an Anaerobic Digester, *Abhinav Choudhury*, University of Maryland, College Park, *Stephanie Lansing*, University of Maryland, College Park, *Walter Mulbry*, USDA, **USA**

Enhanced Biogas Production from Alkali-Pretreatment Giant Reed as a Potential Wild Reproductive Crop, *Zainab Ziad Ismail*, University of Baghdad, *Nazik Adnan Noori*, University of Baghdad, **Iraq**

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

Valorisation of Chicken Feather Barbs: Utilisation in Yarn Production and Technical Textile Application, *Tamrat Tesfaye Yimer*, UKZN, **South Africa**

Sensor Networks Based Household Bin Level Monitoring System, *Jino Ramson*, Vignan's Foundation for Science, Technology and Research, *Jackuline Moni*, Karunya Institute of Technology and Sciences, *Alfred Kirubaraj*, Karunya Institute of Technology and Sciences, *Ranjeet Kumar*, **India**

A Study on Functioning of the Dry Waste Collection Centers In Bangalore City, *Prakash Gowdra*, M.S. Ramaiah Institute of Technology, *Vivekanand Venkataraman*, M.S. Ramaiah Institute of Technology, *Judith Anthony*, PGDM, Great Lakes Institute of Management, *Mohammed Sharukh*, **India**

### **SESSION 3D** ***Medical Wastes***

Medical Waste Management Practices in Healthcare Establishments in Northern Jordan: Medical Centers and Laboratories, *Fayez Abdulla*, Jordan University of Science & Technology, *Hani Abu Qdais*, Jordan University of Science & Technology, **Jordan**

A Review of Medical Waste Management: A Case Study of South Africa, *Foluke Comfort Olaniyi*, University of Venda, *Jason S. Ogola*, University of Venda, *Augustine K. Tugli*, University of Venda, **South Africa**

3:55 p.m. – 4:15 p.m.

**Break**

4:15 p.m. – 5:55 p.m.

**Sessions 4**

### **SESSION 4A** ***Waste to Energy I***

Combustion Characteristics of Selected Tropical Wood Residues in Relation to Their Particle Sizes, *Abdulkarim Baba Rabi*, University of Ilorin, *Olumuyiwa Ajani Lasode*, University of Ilorin, *Habeeb A. Ajimotokan*, University of Ilorin, *V.A. Afolayan*, **Nigeria**

Power/Water Solutions: Using Thermal Energy from CHP Plants to Treat Challenging Waste Waters, *Earl Jones*, Heartland Water Technology, Inc., *Ben Laurent*, Heartland Water Technology, Inc., **USA**

The Feasibility Study on Municipal Solid Waste to F-T Derived, *Wei Wu*, Northeastern University, *Yijie Zhong*, Northeastern University, *Gang Fan*, Northeastern University, **P.R. China**

Development of a Small Scale Incinerator for Electricity Production, *Mohamed Ben Oumarou*, University of Maiduguri, **Nigeria**

Co-Combustion of Solid Recovered Fuel as Sustainable Tool in an Advanced Waste Management System, *Eva Miller*, University of Stuttgart - IFK, *Aaron Fuller*, University of Stuttgart - IFK, *Jörg Maier*, University of Stuttgart - IFK, *Günter Scheffknecht*, *Thomas Glorius*, **Germany**

## SESSION 4B

### *Integrated Management and Policy 1*

Waste Management in Lake Tana Basin - Case of Rapidly Urbanizing Bahir Dar City, Biruk Abate, Bahir Dar Institute of Technology, Bahir Dar University, *Goraw Goshu*, Blue Nile Water Institute and College of Agriculture and Environmental Sciences, Bahir Dar University, **Ethiopia**

LCA towards Optimizing the Environmental Performance of ISWM in a Developing Context, *Amani Maalouf*, American University of Beirut, *Mutasem El-Fadel*, American University of Beirut, **Lebanon**

An Overview of Municipal Solid Waste Indicators: Towards the Efficiency, Efficacy, and Effectiveness, *Rafael Deus*, UNESP, *Rosane Battistelle*, UNESP, *Barbara Bezerra*, UNESP, *Karina Rabelo Ogasawara Vieira*, *Edvaldo José Scoton*, **Brazil**

Evaluation of an Integrated Municipal Solid Waste Plant: A Case Study of Sangli in the State of Maharashtra, Western India, *Priti Mastakar*, Gokhale Institute of Politics and Economics, *Sudhir Swarup*, Gokhale Institute of Politics and Economics, *Kakali Mukhopadhyay*, Gokhale Institute of Politics and Economics, **India**

Challenges for Implementing Public Private Partnership Scheme on Solid Waste to Energy in Indonesia, *Erwin Sondang Siagian*, Universitas Padjadjaran, *Asep Sumaryana*, Universitas Padjadjaran, *Ida Widianingsih*, Universitas Padjadjaran, *Heru Nurasa*, **Indonesia**

Integrated PET Bottle Life Cycle System: A Comparative Study of Nigeria, Sweden and Japan, *Nkonyeasua Kingsley Egun*, Greenspring Consulting, **Nigeria**

Effective Approach towards Sustainable Processing Technologies and Strategies for Solid Waste Management in India, *Ketan Shah*, Swachh Bharat Mission Gujarat, *Dhawani Shah*, SOCET, **India**

Policy Direction for Management of Waste Lithium Batteries in Electric Vehicles, *Ji Hye Jo*, Korea Environment Institute, **South Korea**

The Impact of the Evolving E-Waste Regulations on the Informal Recycling Sector, *Abubakar A. Suleiman*, NASENI, *Mshelia S. Gana*, NASENI, *M.S. Haruna*, NASENI, **Nigeria**

Policy Implications for Sustainable Consumption and Production in India, *Lakshmi Raghupathy*, TERI University, **India**

## SESSION 4C

### *Shell Wastes*

The Influence of Utilizing Seashell Waste Materials and Fly Ash on Binding Time for Geopolymer, *Ridho Bayuaji*, Institut Teknologi Sepuluh Nopember, *M. Sigit Darmawan*, Institut Teknologi Sepuluh Nopember, *Nur Ahmad Husin*, Institut Teknologi Sepuluh Nopember, *R. Buyung Anugraha*, *S. Subekti*, *S.E. Santoso*, **Indonesia**

Valorization of Chicken Eggshell Waste in the Obtainment of Calcium Titanate, *Clarisse Cardoso*, Universidade Estadual do Norte Fluminense, *José Nilson Holanda*, Universidade Estadual do Norte Fluminense, **Brazil**

Characterization of Natural Shell Used for Treatment of Heavy Metal, *Ohidul Alam*, East China University of Science and Technology, *Xiuchen Qiao*, East China University of Science and Technology, *Yuyan Gu*, East China University of Science and Technology, **P.R. China**

#### **SESSION 4D** ***Ash Utilization***

New Zeolite Catalyst from Waste Coal Ash for Bio-Diesel Synthesis, *Omotola Babajide*, Cape Peninsula University of Technology, *Roland Missengue*, AgriProtein, *Juvet Shabani*, Cape Peninsula University of Technology, **South Africa**

Zero Solid Waste for Fly Ash: Policies, Mind-Sets, Standardization, and Technologies, *Jinder Jow*, National Institute of Clean-and-Low-Carbon Energy, *Yang Dong*, National Institute of Clean-and-Low-Carbon Energy, *Ke Wang*, National Institute of Clean-and-Low-Carbon Energy, **China**

#### **SESSION 4E** ***Innovative Technologies***

Potential Constructed Technosols Eco-System Services, *Maha Deeb*, CUNY Advanced Science Research Center, *Peter Groffman*, CUNY Advanced Science Research Center, *Sara Perl Egendorf*, *Daniel Walsh*, *Tatiana Morin*, *Manuel Blouin*, *Geoffroy Séré*, **USA**

Physico-Chemical and Biological Characterization of Mixed Fruit Peels Waste, *Gajraj Singh Rajput*, Indian Institute of Technology, Kharagpur, *Sudha Goel*, Indian Institute of Technology, Kharagpur, **India**

Use of Nano-Silica from Rice Husk as a Drug Delivery Vehicle in Drug Delivery System, *Ryoko Sekifuji*, Toyama Prefectural University, *Masafumi Tateda*, Toyama Prefectural University, **Japan**

Optimization and Prediction of the Compressive Strength of Superplasticized Hair Fiber Reinforced Concrete Using Central Composite Design and Artificial Neural Network, *Manny Anthony Taguba*, National University, *Jan Michael Elbit*, National University, *Romel Carl Basada*, National University, *Keanu Patrick Olido*, *Epphram G. Ramos*, **Philippines**

Waste Management Efforts in SAIL Plants, *Sweta Sukul*, Steel Authority of India Limited, **India**

Recovering of Metals from the Surface of Wasted Printed Circuit Board by Alkaline Electrochemical Leaching and Stripping Foil, *Chenglong Zhang*, Shanghai Polytechnic University, *Feilong Zheng*, Shanghai Polytechnic University, *Jianfeng Bai*, Shanghai Polytechnic University, *Jingwei Wang*, *Wenyi Yuan*, *Weihua Gu*, **China**

6:00 p.m. – 7:00 p.m

**Posters 1**

6:30 p.m. – 7:30 p.m

**Reception**

## **POSTER SESSION 1**

A Novel Design of a Solar-Assisted Accelerated Composting Unit, *Kurabachew Duba*, East Carolina University, *Praveen Malali*, East Carolina University, *Faete Filho*, East Carolina University, **USA**

Problem of Utilization of Municipal Solid Waste in the Republic of Uzbekistan in City Samarkand, *Shodi Kholikulov*, Samarkand State University, *Sindor Pardaev*, Samarkand Agricultural University, **Uzbekistan**

Redevelopment of Landfill Site Eysels, Turnhout, Belgium, *Bart Nevejans*, Aertssen Group, **Belgium**

Urban Solid Waste Management in Techiman Municipality (Ghana), *Gloria Ametepey*, Zoomlion Ghana Limited (B/A), **Ghana**

The Philosophical Foundation and Purposes of Recycling, *Laib Khemissa*, Larbi Ben M'hidi University, **Algeria**

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

A Method Development for Improving Efficiency of Solid Waste Collection System, *Dhvanidevi Jadeja*, Pandit Deendayal Petroleum University, *Dayashankar Kaul*, Pandit Deendayal Petroleum University, *Anurag Kandya*, Pandit Deendayal Petroleum University, **India**

Recycling Options to Treating Glass Waste; Economic and Environmental Effects: A Literature Review, *Obaidullah Nayan*, Dr. Mahbubur Rahman Mollah College, *Afzol Hossain*, Dr. Mahbubur Rahman Mollah College, **Bangladesh**

Evaluation of Different Alternatives for the Use of Coffee Ground Waste, *Irma Robles*, CIDETEQ, *Luis A. Godinez*, CIDETEQ, **Mexico**

Flexible Energy Production through Combined Hydrogen and Methane Production at a Municipal Sewage Treatment Plant, *Marco Küppers*, University Duisburg-Essen, *Jens Schoth*, University Duisburg-Essen, *Ruth Brunstermann*, University Duisburg-Essen, **Germany**

The Role of Waste Segregation in Effective Management of Domestic Solid Wastes in Nairobi, Kenya, *Philip Nyongesa Wangia*, Kenyatta University, *Michael Koech*, Kenyatta University, **Kenya**

The Effect of Using Prefabricated Vertical Drains on Secondary Settlement, *Mohammad Al-Quraan*, Geosyntec Consultants, *Andrew Stalling*, Geosyntec Consultants, *David Espinoza*, Geosyntec Consultants, **USA**

The Role of Environmental Education and Awareness in Application of the 7R Approach of Sustainable Solid Waste Management in Nairobi County, Kenya, *Philip Nyongesa Wangia*, Kenyatta University, *Michael Koech*, Kenyatta University, **Kenya**

Sustainable Energy Generation through Wastewater: A Situation in the Urban City of Lagos, Nigeria, *Timothy Oluwagbenga Ajayi*, Ogun State Institute of Technology, **Nigeria**

Biodegradation of Slaughterhouse Waste by a Two Stage Digester System, *Reema Singh*, Bhabha Atomic Research Centre, *Sunil Sethy*, Bhabha Atomic Research Centre, *Sukhendu Ghosh*, Bhabha Atomic Research Centre, **India**

Sensor Networks Based Household Bin Level Monitoring System, *Jino Ramson*, Vignan's Foundation for Science, Technology and Research, *Jackuline Moni*, Karunya Institute of Technology and Sciences, *Alfred Kirubaraj*, Karunya Institute of Technology and Sciences, *Ranjeet Kumar*, **India**

Best Practices of Community Based Solid Waste Management in Panga, Kirtipur, Kathmandu, Nepal, *Nabin Bikash Maharjan*, Blue Waste to Value, **Nepal**

Effect of the Incorporation of Biomass Wastes on the Properties of Fired Clay Bricks, *Gisela Pelozo*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Nancy Quaranta*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Marta Caligaris*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Melisa Romano*, *Adrián Cristóbal*, **Argentina**

Life Cycle Assessment for High Solids Anaerobic Digestion of Food Waste, Yard Waste, and Biosolids, *Luiza Stolte Bezerra Lisboa Oliveira*, University of South Florida, *Deborah Stolte Bezerra Lisboa Oliveira*, University of South Florida, *Eunyoung Lee*, University of South Florida, *Eduardo Jimenez*, *Qiong Zhang*, *Sarina Ergas*, **USA**

Utilization of Selected Fungal Strains to Treat Old Landfill Leachate, *Mofizul Islam*, University of Manitoba, *Qiuyan Yuan*, University of Manitoba, **Canada**

Organic Wastes Management from Low-Cost Meals: The Educator Role of the Universities, *Liseane Thives*, Federal University of Santa Catarina (UFSC), *Gabriel Dibe Andrade*, *Ricardo Henrique Nunes*, *Pâmela Betiatto*, *Mariana Fornara Nohatto*, *Cláudio Cesar Zimmermann*, **Brasil**

Emerging Contaminants: Perfluorinated Alkylated Substances PFAS, *Harry Behzadi*, SGS, **USA**

Sustainability Improvements for the USACE Navigation Mission: Dredging Sediments LCA, *Catherine Fox-Lent*, USACE, *Matthew Bates*, USACE, *Avi Mersky*, ORISE/USACE, **USA**

Effects of Chlortetracycline on the Adsorption of 17 $\beta$ -estradiol to Natural Sorbents, *Baiyang Hu*, Beijing Normal University, *Kefeng Liu*, Beijing University of Agriculture, *Xieyang Xu*, Beijing Normal University, *Xinyi Li*, *Xuelian Zhang*, *Chengda Gao*, *Xin Tong*, **China**

**TUESDAY, MARCH 13**

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. - 10:20 a.m.

**Sessions 5**

**SESSION 5A**

***Use of Wastes in Construction 2***

Effect of Partial Replacement of Slag and Nano Silica Infused Slag on Properties of Concrete, *Prakash Munnoli*, SDM College of Engineering and Technology, *Tejashwini Pattar*, SDM College of Engineering and Technology, *Jyoti Garawad*, SDM College of Engineering and Technology, **India**

Innovative PORMA-BLOCs (Block Local Organic Composites) from Synthetic and Musa Family Biomass Wastes, *Karlu Angelo Catangui*, Bicol University College of Engineering, *Mercenario Legaspi*, Bicol University College of Engineering, *Amelia Gonzales*, Bicol University College of Engineering, *Arnulfo Malinis*, Bicol University, **Philippines**

Risks and Opportunities of RDF Fuel Replacement in Cement Kilns, *Hanan Hassan El-Sersy*, Cairo University, *Mai Mohamed Kamal Fouad*, Cairo University, *Shakinaz El Sheltawy*, Cairo University, **Egypt**

Investigation on Workability and Strength of Geo-Polymer Concrete, *Najeb Sawsi*, Wayne State University, *Hwai Wu*, Wayne State University, **USA**

Concrete a Potential Source to Use Waste Materials?, *Amarnath Yerramala*, SRIT, *T. Naresh Kumar*, AITS, **India**

Waste Material Recovery Rates, Incomes, and Challenges Facing Informal Waste Reclaimers in the Ekurhuleni Metropolitan Municipality in the Gauteng Province of South Africa - An Exploratory Study, *Isaac Tebogo Rampedi*, University of Johannesburg, *Sibongile Euphemia Gumbi*, University of South Africa, **South Africa**

The Social Impact of Informal Waste Sector in Development: Analysis of Gender Differences on Lagos Dumpsite, *Adeola Abiodun Obadina*, Loughborough University, *Julie Fisher*, Loughborough University, *Mohammed Sohail Khan*, Loughborough University, **United Kingdom**

Impending Threat of Electronic Waste in Nigeria: Addressing the Challenge through Sustainable Control Measures, *Providence Nwachukwu Akpa*, QHSE Services Provyda, **Nigeria**

The Involvement of Local Informal Sector to Reduce Solid Waste in Landfill Whilst Increasing Local Income Generation, *Mochamad Arief Budiardjo*, Diponegoro University, *Indah Fajarini Sri Wahyuningrum*, Semarang State University, **Indonesia**



A Study of Community Participation in Solid Waste Management in Kathmandu Metropolitan City (A Study of the Status of Half-Developing Country), *Indra Prasad Dahal*, Lincoln College, **Nepal**

Mechanical Properties of Recycled Aggregate Concrete in Saline and Sulphate Environment, *Rahul Meena*, IIT Kharagpur, *Sudhirkumar Barai*, IIT Kharagpur, *Subhasis Pradhan*, IIT Kharagpur, **India**

## **SESSION 5B** ***Contaminated Sites***

Comparative Study of Environmental Parameters at Two Construction Sites under Controlled and Uncontrolled Conditions, *Khalid Iqbal*, University of Gujrat, *Muhammad Waseem Mumtaz*, University of Gujrat, *Muhammad Sohaib Ejaz*, University of Gujrat, **Pakistan**

Impact of Soil Texture on Contaminants around Degraded Waste Dumpsite: Case of College Road, Kaduna North-Nigeria, *Ahmed Mohammed*, Federal College of Education (Technical), *Sadiq Umar*, Ahmadu Bello University, *Zakari Ibrahim*, Ahmadu Bello University, **Nigeria**

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**

Bioremediation of Polycyclic Aromatic Hydrocarbon Contaminated Soil by a Microbial Consortium through Supplementation of Biosurfactant Produced by *Pseudomonas aeruginosa* Strain, *Fisseha Andualem Bezza*, University of Pretoria, *Evans MN Chirwa*, University of Pretoria, **South Africa**

Prediction of 1,4-Dioxane Contamination Distribution during Countermeasures at an Illegal Dumping Site by Numerical Simulation, *Kazuei Ishii*, Hokkaido University, *Atsushi Fujiyama*, Hokkaido University, *Masahiro Sato*, Hokkaido University, *Toru Furuichi*, **Japan**

Physio-Chemical and Metal Concentration of a Tidal System in Lagos, Nigeria, *Olufemi Adeogun*, Lagos State University, *Olorunjueda Zebulon*, Lagos State University, **Nigeria**

## **SESSION 5C** ***Mining Wastes***

Evaluation of Economic Mineral in Gold Tailings Dams: A Case Study of the Louis Moore Tailings Dam, Limpopo Province, South Africa, *Ndivhuwo Nemapate*, University of Venda, *J.S. Ogola*, *G.E Ekosse*, **South Africa**

Mine Waste as a Resource: A Case Study of South Africa, *Humbulani Rejune Mundalamo*, University of Venda, *Jason Samuel Ogola*, University of Venda, **South Africa**

Coal Mine Refuse and Power Generation in Pennsylvania, *Andrew Rose*, University of Pittsburgh at Johnstown, **USA**

## SESSION 5D

### *Composting and Biological Treatment 2*

Modification of Sandy Soil Biological and Physicochemical Properties Treated with Green Compost, Composted Sludge and Compost with Bio-Fertilizer, *Munawwar Ali Khan*, Zayed University, *Wadha Mubarak Alketbi*, Zayed University, *Henda Mahmoudi*, International Center for Biosaline Agriculture, *James P. Terry*, *Abdullah Alshankiti*, **United Arab Emirates**

A Feasibility Study on Treatment of Solid Waste Generated from Religious Places Using Vermicomposting Technique, *Nirav Shah*, The Maharaja Sayajirao University of Baroda, *Ketan Patel*, **India**

## SESSION 5E

### *Integrated Management and Policy 2*

Using the Young to Realize Solid Waste Management Goals in Municipals in Developing Countries, *Joan Chepkoech Tonui*, Bomet County Government, **Kenya**

Household Hazardous Waste Management, *Chukwu Onu*, Southern University, **USA**

Solid Waste Management in Monrovia, Liberia: Implications for Sustainable Development, *Victor Emery David Jr.*, Chongqing University, *Jiang Wenchao*, Chongqing University, *Daniel Mmereki*, Chongqing University, *Yasinta John*, **China**

Waste Management Intervention Evaluation Using System Dynamics and Field Survey: A Case Study in a Low-Income Neighborhood in Baltimore, MD, USA, *Fengwei Hung*, Johns Hopkins University, *Benjamin Hobbs*, Johns Hopkins University, *Molly Lasater*, Johns Hopkins University, *Peter Winch*, **USA**

Enhancing Local Capacity for Solid Waste Management in Ethiopia and Worldwide, *Ranjith Annepu*, Be Waste Wise, **USA**

10:20 a.m. – 10:50 a.m.

**Break**

10:50 a.m. – 12:35 p.m.

**Sessions 6**

## SESSION 6A

### *Agricultural and Food Wastes 2*

Preparation of Furfural from Agricultural Wastes Active Ingredient in the Production of Nematicides, *Oluwatoyin Fabiyi*, University of Ilorin, *Gabriel Olatunji*, University of Ilorin, *Olubunmi Atolani*, University of Ilorin, *O. Akande*, **Nigeria**

Biotechnology for the Production of Humus Rich Compost from Lignocellulosic Substrates, *Niharendu Saha*, Bidhan Chandra Krishi Viswavidyalaya, *Nilkanta Mukherjee*, Bidhan Chandra Krishi Viswavidyalaya, *Kalyan Bhattacharaya*, Bidhan Chandra Krishi Viswavidyalaya, **India**

The Brazilian Experience in the Valorization of Agro-Livestock By-Products and Production of Biofertilizers, *Marisa S. Borges*, Federal University of Parana, *Thiago Gonzales*, CIBIOGAS, *Douglas Santos*, INPI, **Brazil**

Biodegradation of Slaughterhouse Waste by a Two Stage Digester System, *Reema Singh*, Bhabha Atomic Research Centre, *Sunil Sethy*, Bhabha Atomic Research Centre, *Sukhendu Ghosh*, Bhabha Atomic Research Centre, **India**

Anaerobic Process Performance Treating Swine Wastewater in Full Scale, *Woong Kim*, Kyungpook National University, **Republic of Korea**

Evaluation of Different Alternatives for the Use of Coffee Ground Waste, *Irma Robles*, CIDETEQ, *Luis A. Godinez*, CIDETEQ, **Mexico**

The Feasibility of Fruit and Vegetable Waste for Methane Production by Using Different Substrate to Inoculum Ratios at Hyderabad, Sindh, Pakistan, *Korai Muhammad Safar*, IEEM, MUET, *Mahar Rasool Bux*, US-Pakistan Center for Advance Studies in Water (US-PCASW), Mehran UET, *Uqaili Muhammad Aslam*, Mehran UET, **Pakistan**

King Bhumibol's Royally Initiative Nature-by-Nature Process for Activating Digestion Period in Municipal Garbage Composting, *Kasem Chunkao*, Kasetsart University, *Thanit Pattamapitoon*, Kasetsart University, *Chulabut Chanthasoon*, The King's Royally Initiated Laem Phak Bia Environmental Research and Development Project, Chaipattana Foundation, *Surat Bualert*, *Aphichaya Taychitkunanon*, *Narumon Vongsawan*, *Sakonwan Mokatip*, **Thailand**

Phenolic Aqueous Solution Treatment Using Crude Enzyme Peroxidases from Waste Cabbage (*Brassica oleracea capitata* var. *alba* L.) Leaves, *Allan Alzona*, National University, *Joanna Clarisse Velasco*, National University, *Manny Anthony Taguba*, National University, *Thea Rodriguez*, *Mary Rose De Leon*, *Josh Evans Cariño*, *Lerrie Anne Valeriano*, *Virginia Rocabo*, **Philippines**

Potential of Campus Food Waste for Biodigestion or Direct Combustion, *Patrick Caton*, US Naval Academy, *Scotty Davids*, US Naval Academy (Formerly), **USA**

Organic Wastes Management from Low-Cost Meals: The Educator Role of the Universities, *Liseane Thives*, Federal University of Santa Catarina (UFSC), *Gabriel Dibe Andrade*, *Ricardo Henrique Nunes*, *Pâmela Betiatto*, *Mariana Fornara Nohatto*, *Cláudio Cesar Zimmermann*, **Brasil**

## SESSION 6B

### *Landfill 2*

Site Characterization and Evaluation for Siting of a Municipal Solid Waste Landfill in Nigeria's Federal Capital Territory (FCT), *Olusegun Ige*, University of Ilorin, *Olufemi Ogunsanwo*, University of Ilorin, *Inyang Hilary*, Global Education and Infrastructure Services (GEIS), **Nigeria**

Analysis on Potentials of Waste to Energy by Landfill Mining and Resource Recovery in Korea, *Sora Yi*, Korea Environment Institute, *YoungJoon Rhee*, Korea Environment Institute, **Korea**

Waste Characterisation and Geographic Information System Mapping of Recyclables at Designated Dumpsites in Ibadan, Nigeria, *James Adetokunbo Abegunrin*, University of Ibadan, *Godson R.E.E. Ana*, University of Nairobi, *Taiwo Babatunde Hammed*, University of Ibadan, **Nigeria**

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**

Activated Sludge Bioaugmentation: A New Boost for Hexavalent Chromium Tolerance in Air Cathode MFCs, *Soumya El Abed*, University Sidi Mohamed Ben Abdellah, *Alae El Abed*, University Sidi Mohamed Ben Abdellah/ Faculty of Sciences and Technics/FEZ, *Loubna Ezziat*, University Sidi Mohamed Ben Abdellah, *Saad Ibnsouda*, **Morocco**

Multivariate Factor Analysis as a Tool for Evaluation of Complex Groundwater Datasets for Waste Management Facilities, *Wayne Pearce*, SCS Engineers, **USA**

## **SESSION 6C** ***Sludge Management***

Moving towards Organic Farming Utilising Sewage, *Neha Shukla*, Pandit Deendayal Petroleum University, *Anurag Kandya*, Pandit Deendayal Petroleum University, **India**

Sewage Sludge Treated by Pyrolysis to Be Used as an Adsorbent, *Luciane Lemos do Prado*, Parana Federal University, *Vander de Freitas Melo*, Parana Federal University, *Maria Cristina Borba Braga*, Parana Federal University, *Edson Costa Jr.*, **Brazil**

Characterization of a Graphite-Rich Sludge Generated from the Treatment of Forging Wastewaters and Evaluation of Its Energetic Potential, *Renan Thiesen*, Universidade Federal do Rio Grande do Sul, *Viviana Reckziegel*, Universidade Federal do Rio Grande do Sul, *Ivo Schneider*, Universidade Federal do Rio Grande do Sul, *Carolina Marques Rodrigues*, **Brazil**

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

Cigarette Butt as Non-Biodegradable Wastes: Cause of Environmental Concern, *Shamim Ahsan*, Metropolitan State University of Denver, **USA**

Environmental Friendlier Magnesium Fuel from Liquid Waste Bittern, *Rania Ramadan*, National Research Centre, *Marwa Saied Shalaby*, National Research Centre, *Shakinaz Ali El-Sherbiny*, Cairo University, *Hanem Abdel Rahman Sibak*, **Egypt**

The “Ins” and “Outs” of EPR and Product Stewardship: Hazardous Waste & Mercury Thermostats Examples, *Lisa Skumatz*, SERA Skumatz Economic Research Associates, Inc., **USA**

## POSTER SESSION 2

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

Utilization of Coal Bottom Ash as Aggregate in Clayey Mixtures, *Miguel Unsen*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Gisela Pelozo*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Marta Caligaris*, Facultad Regional San Nicolás - Universidad Tecnológica Nacional, *Nancy Quaranta*, **Argentina**

Pyrite Concentration from Coal Waste and Hydrometallurgical Production of a Ferric Sulfate Coagulant – A Study in a Pilot Plant, *Renan Thiesen*, Universidade Federal do Rio Grande do Sul, *Jessica Weiler*, Universidade Federal do Rio Grande do Sul, *Ivo Schneider*, Universidade Federal do Rio Grande do Sul, *Angéli Viviani Colling*, **Brazil**

Waste Management for Soil-Like Substrate Production and Growth Evaluation of Different Plant Species in Sequence, *Jéssica Weiler*, Universidade Federal do Rio Grande do Sul, *Beatriz Vasquez*, Universidade Federal do Rio Grande do Sul, *Ivo Schneider*, Universidade Federal do Rio Grande do Sul, **Brazil**

The Use of Municipal Tree Pruning and Bamboo Wastes in Bricks Production, *Barbara Bezerra*, UNESP, *Manuel Silva*, UNESP, *Rosane Battistelle*, UNESP, *Paulo Roberto O. Carvalho*, **Brazil**

Coal Mine Refuse and Power Generation in Pennsylvania, *Andrew Rose*, University of Pittsburgh at Johnstown, **USA**

An Economic, Technical and Environmental Feasibility Study for Slurry Injection for Biosolids Management in the Dallas Fort Worth Metroplex, *Yashesh Panchal*, Advantek Waste Management Services, *Ibrahim Mohamed*, Advantek Waste Management Services, *Omar Abou-Sayed*, Advantek Waste Management Services, *Nihal Mounir*, **USA**

Effects of Chemical Pre-Treatment on Solubilization of Organic Material of Sewage Sludge, *Fernanda Patricia do Monte*, UEPB, *Beatriz Susana Ovruski de Ceballos*, UEPB, *Wilton Silva Lopes*, UEPB, **Brazil**

Exploring the Potentialities of Waste Plant Materials for the Production of Gold Nanoparticles and Multi-Metallic Composite Particles and Its Application in Wastewater Treatment, *Wubshet Belay Abagero*, Coca-Cola (East Africa Bottling Share Company), *Clara Costa Maria*, University of Algarve, *Anahi Dandlen*, CCMAR, **Ethiopia**

The Social Impact of Informal Waste Sector in Development: Analysis of Gender Differences on Lagos Dumpsite, *Adeola Abiodun Obadina*, Loughborough University, *Julie Fisher*, Loughborough University, *Mohammed Sohail Khan*, Loughborough University, **United Kingdom**

New Zeolite Catalyst from Waste Coal Ash for Bio-Diesel Synthesis, *Omotola Babajide*, Cape Peninsula University of Technology, *Roland Missengue*, AgriProtein, *Juvet Shabani*, Cape Peninsula University of Technology, **South Africa**

Policy Implications for Sustainable Consumption and Production in India, *Lakshmi Raghupathy*, TERI University, **India**

Investigation of Growth Response of Microbial Communities to Uranium Contaminated Environments, *Jada Hoyle-Gardner*, Florida A&M University, *Tyrik Cooper*, Florida A&M University, *Victor Ibeanusi*, Florida A&M University, *Haley Howard*, *Landon Tucker*, *Ben Mwashote*, **USA**

Development of Microbial Mechanisms to Predict Mineralization of Uranium of Nuclear Sites and the Impacts to the Environment, *Tyrik Cooper*, Florida A&M University, *Jada Hoyle-Gardner*, Florida A&M University, *Victor Ibeanusi*, Florida A&M University, *Haley Howard*, *Landon Tucker*, *Ben Mwashote*, **USA**

Study of Incorporation of Gravel Drilling and the Ashes of Marc Cane Sugar in Formulations for Manufacture of Bricks Cement-Soil, *Sheyla Marques*, IFAL, *Wilson Acchar*, UFRN, **Brazil**

Energy Utilization of Municipal Solid Waste in Brazil: Technologies, Economic Viability, Barriers and Policy Proposal, *Fabio Rubens Soares*, Instituto de Energia e Ambiente da Universidade de São Paulo, *Suani Teixeira Coelho*, Universidade de São Paulo, *Javier Escobar*, Universidade de São Paulo, **Brazil**

1:35 p.m. – 2:35 p.m.

**Luncheon**

2:35 p.m. – 4:25 p.m.

**Sessions 7**

## **SESSION 7A**

### ***Sludge and Wastewater Management***

An Economic, Technical and Environmental Feasibility Study for Slurry Injection for Biosolids Management in the Dallas Fort Worth Metroplex, *Yashesh Panchal*, Advantek Waste Management Services, *Ibrahim Mohamed*, Advantek Waste Management Services, *Omar Abou-Sayed*, Advantek Waste Management Services, *Nihal Mounir*, **USA**

Feasibility of Sewage Water Treatment in Skaka City Using Up-Flow Anaerobic Sludge Blanket (UASB) Reactor, *Abdalla Zakey Albahrawy*, Aljouf University, *Mohamed El-Khateeb*, Aljouf University, *Maher Al-Enazi*, Sattam bin Abdulaziz University, **Saudi Arabia**

Applicable Granule Sludge from Wastewater Treatment Process of Cassava Starch Factory for Energy Generating and Construction Materials, *Noppawan Semvimol*, Kasetsart University, *Kasem Chunkao*, Kasetsart University, *Surat Bualert*, Kasetsart University, *Siwanat Thaipakdee*, *Chulabut Chanthasoon*, *Donyarat Subwongrod*, **Thailand**

Utilization of Community Wastewater and Sewage Sludge for Economic Cropping in Phetchaburi Province, Thailand, *Onanong Phewnil*, Kasetsart University, *Noppawan Semvimol*, Kasetsart University, *Watcharapong Wararam*, Kasetsart University, *Kittichai Duangmal*, *Nawee Chanwong*, *Pavin Wichittrakarn*, *Worakai Usa*, *Nontaporn Prasertkul*, *Wiroon Sumleeraj*, **Thailand**

Multidrug Resistance Klebsiella Species from Sewage Water in Ibadan, Nigeria, *Felicia.C. Adesina*, Lead City University, *Adejoke A. Mako*, Tai Solarin University of Education, *Oluwanike Abiola-Olagunju*, Lead City University, *Omolola A. Oluboyede*, **Nigeria**

Lighting up the Cities with Garbage: A Study of Electricity Production In Ghazipur Landfill Site, Delhi, India, *Jag Mohan*, Aditi Mahavidyalaya, University of Delhi, *Kartikeya Rastogi*, Manipal Institute of Technology, Karnataka, **India**

## **SESSION 7B**

### ***Waste to Energy 2***

A New Approach in Dioxins and Furans Emissions by Accumulation of Precursor Compounds at Incinerators Post Fire Zone, *Marcelo Pestana Vieira*, Cetrel S.A., **Brazil**

Identification of Waste Potential and Location(s) for Waste-to-Value-Added Facility to Generate Heat and Electricity in the Province of Alberta, *Prashant Patel*, University of Alberta, *Mahdi Vaezi*, University of Alberta, *Amit Kumar*, University of Alberta, **Canada**

## **SESSION 7C**

### ***Research Advances***

Circular Economy within Wind Energy Sector, *Spyridoula Karavida*, Czech University of Life Sciences, **Czech Republic**

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

A Comprehensive Characterization of Plastic Waste and Effect of UV Radiation on Bacterial Breakdown of LDPE, *Ved Prakash Ranjan*, Indian Institute of Technology, Kharagpur, *Sudha Goel*, Indian Institute of Technology, Kharagpur, **India**

Pyrolysis of MSW for Biochar Production and Its Dioxin Distribution, *Zhiguang Yang*, Henan University of Urban Construction, *Xiaozhen Liu*, Henan University of Urban Construction, *Hongxun Zhang*, University of Chinese Academy of Sciences, **China**

Recovery of Neodymium from Waste Permanent Magnets by Solvent Extraction and Supported Liquid Membrane, *Achmad Chusnun Niam*, Chung Yuan Christian University, *Yi-Hsien Liu*, Chung Yuan Christian University, *Sheng-Jie You*, Chung Yuan Christian University, *Ya-Fen Wang*, **Taiwan**

**SESSION 7D**  
**Case Studies 2**

Development of a Sustainable Municipal Solid Waste Management for an Urban Area: Case Study from a Developing Country, *Anil Kumar Gupta*, IIT Kharagpur, *Venkata Sai Praneeth Doranadula*, IIT Kharagpur, *Brajesh Dubey*, IIT Kharagpur, *Arundhuti Devi*, *Suravi Kalita*, *Khanindra Sharma*, **India**

Eco-Industrial Parks for Developing Economies, *Lakshmi Raghupathy*, TERI University, **India**

Material Flow in Informal Sectors – Case Studies from India, *Lakshmi Raghupathy*, TERI University, **India**

Solid Waste Management in Kathmandu Metropolitan City, *Sanjib Dhakal*, Environment Conservation Initiative Nepal, **Nepal**

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

**WEDNESDAY MARCH 14**

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 Trips to posted soon.**