

Environment & Engineering: Synergetic Solutions Towards Sustainable Future

UP EnE Research Web-Colloquium Series
Environment & Engineering:
Synergetic Solutions Towards Sustainable Future

Schedule of Presentations

Session 1: Monsters in our Waters

Date and Time: **4 September 2020 at 5:00 - 6:30 pm**
Moderators: Dr. Eligia D. Clemente and Dr. Roberto Soriano

Session 2: Towards Healthy Water Environment: Numerical Models and Remotely Sensed Images

Date and Time: **11 September 2020 at 3:00 - 4:45 pm**
Moderators: Dr. Eugene C. Herrera and Dr. Arthur Gonzales

Session 3: Solid Waste Management: From Decision Support Tools to Resource Recovery

Date and Time: **17 September 2020 at 3:00 - 4:45 pm**
Moderators: Dr. Maria Antonia N. Tanchuling and Dr. Joanna Z. Resurreccion

Session 4: Advanced Oxidation Processes: The Treatment for Dyes, Pesticides, and Arsenic in Water

Date and Time: **24 September 2020 at 3:00 - 4:45 pm**
Moderators: Dr. Florencio C. Ballesteros, Jr. and Dr. Joey D. Ocon

Session 5: Adsorption and Phytoremediation: Simple and Natural Approaches For Clean Water

Date and Time: **25 September 2020 at 3:00 - 4:15 pm**
Moderators: Dr. Joseph Gerard T. Reyes and Dr. Mary Donnabelle Balela

Session 6: Towards Circularity in Resource Management: Advanced Techniques for Recovering Nutrients, Minerals, and Energy from Wastewater

Date and Time: **26 September 2020 at 3:00 - 4:15 pm**
Moderators: Dr. Leslie Joy L. Diaz and Dr. Marjorie L. Baynosa



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Session 1: Monsters in our Waters

4 September 2020

Keynote Speaker:

Moderators: Dr. Eligia D. Clemente and Dr. Roberto Soriano

Paper Number	Time	TITLE of the Paper (may be modified by the authors)	AUTHORS (first name: presenter)
	5:00 -5:15 pm	Opening Message / Keynote Talk	
EQ1	5:15 - 5:30 pm	Assessment of Groundwater Nitrate Concentration of Panglao, Bohol	CURAY, MA. GRACE MOQUIRING & Dr. Roberto S. Soriano
EQ2	5:30 - 5:45 pm	Mercury Soil Contaminants in Brgy. Sta. Lourdes, Puerto Princesa City, Palawan	LANGCAY, MAE LEAN IQUIN & Dr. Eligia D. Clemente
EQ3	5:45 - 6:00 pm	Investigative Study on the Physical Transport of Total Mercury (THG) Along the Tagbueros River, Puerto Princesa, Palawan	PITOGO, RENE ALDOUS QUICHO, Dr. Roberto S. Soriano, Dr. Eligia D. Clemente
EQ4	6:00 - 6:15 pm	Characterization of Microplastics in Taguig River and its Contribution to Pollution Loading to Laguna Lake	MACUHA, KEYZA JEAN DELIZO & Dr. Maria Antonia N. Tanchuling
EQ5	6:15 – 6:30 pm	Ubiquity of Microplastics in the Surface Waters and Sediments Sampled for Five Identified River Mouths of Manila Bay	OSORIO, EZRA DAASIN & Dr. Maria Antonia N. Tanchuling

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Session 2: Towards Healthy Water Environment: Numerical Models and Remotely Sensed Images

11 September 2020

Keynote Speaker:

Moderators: Dr. Eugene C. Herrera and Dr. Arthur Gonzales

Paper Number	Time	TITLE of Paper	AUTHORS (first name: presenter)
	3:00 - 3:15 pm	Opening Message / Keynote Talk	
EM1	3:15 - 3:30 pm	Proposing Lake Water Quality Zones for Laguna Lake Using Sentinel-3 Optical Water Type Classification and other Remotely Sensed Images	JALBUENA, REY LEDESMA & Dr. Ariel C. Blanco
EM2	3:30 – 3:45 pm	Assessment of the Nutrient Loading and of the Carrying Capacity of Laguna de Bay as a Class C Surface Water Body Using Numerical Modelling	CUECO, BRIANNE NAPALAN & Dr. Eugene C. Herrera
EM3	3:45 - 4:00 pm	A Neural Network-Based Electronic Nose Odour Monitoring Model for Gaseous Emissions: Model Development and Application	GALANG, MARK GINO & Dr. Florencio C. Ballesteros, Jr.
EM4 *	4:00 - 4:15 pm	Iodine-129 and Iodine-127 as an Environmental Tracer for Salinity Origin in Groundwater	TAN, SUNSHINE PETAL VELOSO & Dr. Augustus C. Resurreccion
EM5 *	4:15 - 4:30 pm	High Fluorescence Carbon Dots from Kappa-Carrageenan and Nitrogen-Doped Maleic Anhydride for Environmental Sensing and Biological Imaging Applications	SINOY, MA. CONCEPCION ALVIOR & Dr. Mark Daniel G. De Luna
EM6 *	4:30 - 4:45 pm	Development of an Artificial Neural Network (ANN)-based Prediction Model for the Occurrence of Algal Blooms in Laguna de Bay based on In situ Data and Remotely Sensed Data	ESGUERRA, GIVETTE KRISTINE YU & Dr. Florencio C. Ballesteros, Jr.

*For Confirmation

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Session 3: Solid Waste Management: From Decision Support Tools to Resource Recovery

17 September 2020

Keynote Speaker:

Moderators: Dr. Maria Antonia N. Tanchuling and Dr. Joanna Z. Resurreccion

Paper Number	Time	TITLE of Paper	AUTHORS (first name: presenter)
	3:00 - 3:15 pm	Opening Message / Keynote Talk	
SW1	3:15 - 3:30 pm	Assessment of the Utilization of Lightly Pyrolyzed Rubber (LPR) and Rice Husk Ash (RHA) in Hot-Mix Asphalt	CARAM, ROSABELLE LOUISE ABAD & Dr. Leslie Joy L. Diaz
SW2	3:30 – 3:45 pm	Replacement of Conventional Pigments with Ground Waste Plastic Sachets for Anti-Corrosion Coatings	EUGENIO, FRANCIS DARWIN TANGPUZ & Dr. Bryan B. Pajarito
SW3	3:45 - 4:00 pm	Using Waste Generation Input-Output Table as a Decision Support Tool for Waste Diversion Strategies: Applied to Naga City	LASALA, KLARISSA MAI MIRANDA & Dr. Joanna Z. Resurreccion
SW4	4:00 - 4:15 pm	Characterization, Analysis, and Recommendations for Minimization of Microplastics in Makati City Creeks	LUMONGSOD, STEPHANIE LOU RECUENCO & Dr. Maria Antonia N. Tanchuling
SW5	4:15 - 4:30 pm	Development and Implementation of a Recycling Performance Assessment Tool for Philippine Urban Cities.	CAI, VENSON RICO & Dr. Rizalinda L. De Leon
SW6 *	4:30 - 4:45 pm	Parametric Study on the Microwave-Assisted Alkali Pretreatment of Various Lignocellulosic Biomass as Feedstock for Bioethanol Production	NGOHAYON, JOEL MARC AGUADA & Dr. Angela D. Escoto

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Session 4: Advanced Oxidation Processes: The Treatment for Dyes, Pesticides, and Arsenic in Water
24 September 2020

Keynote Speaker:

Moderators: Dr. Florencio C. Ballesteros, Jr. and Dr. Joey D. Ocon

Paper Number	Time	TITLE of Paper	AUTHORS (first name: presenter)
	3:00 - 3:15 pm	Opening Message / Keynote Talk	
WWA1	3:15 - 3:30 pm	Development and Performance of Graphene Oxide (GO)/Hexagonal Molybdenum Trioxide (h-MoO ₃)/silicon Dioxide (SiO ₂)/Magnetite (Fe ₃ O ₄) Magnetic Composite Photocatalyst in the Degradation of Methylene Blue and Phenol under Visible Light	ANTONIO, RHEAMAY VASALLO & Dr. Florencio C. Ballesteros, Jr.
WWA2	3:30 - 3:45 pm	Fabrication of Plasma-Modified PVA/AG-TiO ₂ Electrospun Nanofibers for the Visible-Light-Driven Degradation of Methylene Blue	MONTALLANA, ARANTXA DANIELLE SUGALAN & Dr. Magdaleno R. Vasquez, Jr.
WWA3	3:45 - 4:00 pm	Synthesis, Characterization and Application of Cu-Bipyridine/Co-2-Methylimidazole Metal-Organic Framework Photocatalysts in the Degradation of Acridine Orange and Sulfametoxazole under Visible Light Irradiation	BARTE, EMELY GAVIOLA & Dr. Mark Daniel G. De Luna
WWB1	4:00 – 4:15 pm	Treatment of Cartap Wastewater through Electro-Fenton Process	GUMALING, RIZA PIMENTEL & Dr. Mark Daniel G. De Luna
WWB2	4:15 - 4:30 pm	Arsenic Removal Using Electrocoagulation Process	PATOUMPHONE, VAIYAKONE & Dr. Florencio C. Ballesteros, Jr.
WWB3	4:30 - 4:45 pm	A Comparison of Arsenic(III) Removal in Aqueous Solution in Electrocoagulation, Electrochemical Peroxidation, and Photo-assisted Electrochemical Peroxidation Process	MONTEFALCON, MICAH FLOR VISCAYNO & Dr. Joey D. Ocon
WWB4 *	4:45 - 5:00 pm	Removal of Imidacloprid Pesticide by Catalytic Percarbonate Oxidation in Homogeneous-Batch and Heterogeneous-Fluidized-Bed Reactions: Catalyst Synthesis, Kinetics, Optimization, and Transformation Products	SABLAS, MICHAEL MARA & Dr. Mark Daniel G. De Luna

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Session 5: Adsorption and Phytoremediation: Simple and Natural Approaches For Clean Water

25 September 2020

Keynote Speaker:

Moderators: Dr. Joseph Gerard T. Reyes and Dr. Mary Donnabelle Balela

Paper Number	Time	TITLE of Paper	AUTHORS (first name: presenter)
	3:00 - 3:15 pm	Opening Message / Keynote Talk	
WWC1	3:15 - 3:30 pm	Synthesis of geopolymer-13X-activated biochar composite for adsorptive removal of pollutants	ABARCA, RALF RUFFEL MERCADO & Dr. Mark Daniel G. De Luna
WWC2	3:30 - 3:45 pm	Phytomining of copper from aqueous solution by vetiver grass [Chrysopogon zizanioides (L.) Roberty]	CENIA, MARIE CHELA BERGANTINOS & Dr. Herman D. Mendoza
WWC3 *	3:45 – 4:00 pm	Graphene Zeolite-based Granular Media Filtration System for the Pretreatment of Brackish Water	PINTO, MA. MANNA FARREL BALBOA & Dr. Magdaleno R. Vasquez, Jr.
WWC4 *	4:00 - 4:15 pm	Removal of Heavy Metal (Pb) Ion from Wastewater Using Modified Dimocarpus Longan Seeds Adsorbent	LE QUANG DIEP & Dr. Herman D. Mendoza

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Session 6: Towards Circularity in Resource Management: Advanced Techniques for Recovering Nutrients, Minerals, and Energy from Wastewater

26 September 2020

Keynote Speaker:

Moderators: Dr. Leslie Joy L. Diaz and Dr. Marjorie L. Baynosa

Paper Number	Time	TITLE of Paper	AUTHORS (first name: presenter)
	3:00 – 3:15	Opening Message / Keynote Talk	
WWD1	3:15 - 3:30 pm	Ammonium-Nitrogen Removal from Synthetic Wastewater by Electrodialysis	PINGUL-ONG, SHEILA MAE BATAN & Dr. Mark Daniel G. De Luna
WWD2	3:30 - 3:45 pm	Treatment of Printed Circuit Board Wastewater Containing Copper and Nickel Ions by Fluidized-bed Homogeneous Granulation Process	QUIMADA, NATHANIEL ENTERA & Dr. Mark Daniel G. De Luna
WWD3 *	3:45 – 4:00 pm	Start-up Performance of High-rate Wastewater Containing Copper and Nickel Ions by Fluidized-bed Homogenous Granulation Process	VILLA, BENJAMIN & Dr. Analiza Rollon
WWD4 *	4:00 - 4:15 pm	Recovery of copper, cobalt and phosphorous from semiconductor wastewater through fluidized-bed homogeneous granulation: On the crystallization of metal phosphates	BAYON, LESTER LEE ELIZAGA & Dr. Florencio C. Ballesteros, Jr.
WWD5 *	4:00 - 4:15 pm	Recovery of Nickel from Simulated Industrial Wastewater via Homogeneous Phosphate Granulation in a Fluidized-Bed Reactor	BALDOVIA, JACKLYN MONSERATE & Dr. Mark Daniel G. De Luna
WWD6 *	4:15 - 4:30 pm	Integration of Electrochemical Processes with Self-Forming Dynamic Membrane (SFDM) for the Treatment of Synthetic Municipal Wastewater and Membrane Fouling Control	MILLANAR-MARFA, JESSA MARIE JUNIO, Dr. Mark Daniel G. De Luna, Dr. Vincenzo Naddeo

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