

2015 OVPA Research Symposium
November 12-13, 2015
Intel Center for Science Innovation (ICSI) Auditorium
National Institute of Physics, UP Diliman Campus

Day 1, November 12, 2015, Thursday

- 07:30 am Registration
- 08:30 am Opening Ceremonies
UP Naming Mahal
Opening Remarks – Dr. Carla B. Dimalanta, Assistant Vice President for Academic Affairs (Research)
Welcome Message - Dr. Gisela P. Concepcion, Vice President for Academic Affairs

9:30-10:00 am Keynote Paper

10:00-10:30 am Break

PLENARY SESSION

- 10:30-11:00 am Towards good water governance for development: A multi-case analysis
➤ Dr. Agnes Rola (EIDR)
- 11:00-11:30 am Computer-aided discovery of compounds for the treatment of tuberculosis in the Philippines
➤ Dr. Junie Billones (EIDR)
- 11:30-12:00 nn Social-ecological resilience on different spatial and temporal scales (Emphasis on the coast)
➤ Dr. Helen Yap (EIDR)
- 12:00-01:00 pm Lunch Break
- 1:00-1:20 pm HULLUBATON: Putting together the Mandaya Dawot
➤ Dr. Genevieve Quintero (EIDR)
- 1:20-1:40 pm Palaeoenvironmental and biodiversity study of Mindoro Island: An archaeological science initiative
➤ Dr. Armand Mijares (EIDR)
- 1:40-2:00 pm Versatile Instrument System for Science Education and Research- Sensors and Modules (VISSER:SM)
➤ Dr. Giovanni Tapang (EIDR)
- 2:00-2:20 pm Indoor air quality, airborne infection and ventilation: Exposure assessment of hospital pay and charity wards of the Philippine General Hospital
➤ Dr. Emmanuel Baja (Balik PhD)
- 2:20-2:45 pm OPEN FORUM
- 2:45-3:15 pm Break

CLOSED SESSIONS

SESSION A Health Sciences

- 3:15-3:30 pm Profiling and functional characterization of novel mutations in the EGFR cellular proliferation and cell survival pathways among Filipino young-onset, sporadic colorectal cancer patients
➤ Dr. Reynaldo Garcia
- 3:30-3:45 pm Drug use behavioral health among adolescents in Metro Manila
➤ Dr. Leonardo Estacio Jr.
- 3:45-4:00 pm Clinical and autoimmune characteristic of early onset diabetes in young adult Filipinos
➤ Dr. Elizabeth Pacheco
- 4:15-4:30pm Analysis of susceptibility variants (Single Nucleotide Polymorphisms or SNPs) in candidate genes to unravel the genetic basis of preeclampsia (pregnancy-induced hypertension) among Filipino women
➤ Dr. Cynthia Saloma
- 4:45-5:00 pm Mathematical analysis of climate-based malaria transmission model with age-structure human population
➤ Dr. Joel Addawe

5:00-5:30 pm OPEN FORUM

Day 2, November 13, 2015, Friday

CLOSED SESSIONS

- 08:00-08:30 am Registration
- 08:30-09:00 am Message
Pres. Alfredo E. Pascual
UP President
- 09:00-09:30 am Plenary Paper
- 09:30-10:00 am Break

SESSION B Physical Sciences

- The analysis of Bernoulli free boundary problem using the velocity method and second-order perturbation of identity technique
➤ Dr. Jerico Bacani
- Bifurcations in laser networks with Sn symmetry
➤ Dr. Juancho Collera
- Effects of shaped filler reinforcement on the diffusion behavior of liquids in polymer composites
➤ Dr. Bryan Pajarito
- Atomic-scale understanding of the interaction of hydrogen (H) atom and carbon monoxide (CO) molecule on copper-palladium (CuPd) surface: An application to biomass-based renewable energy source
➤ Dr. Allan Abraham Padama (BP)
- Establishment of a structured light laboratory within the Photonics Research Laboratory of the National Institute of Physics
➤ Dr. Nathaniel Hermosa (BP)

OPEN FORUM

SESSION C
Social Sciences

- 10:00-10:15 am Data science and society:
Applications in public education
➤ Dr. Clarissa David
- 10:15-10:30 am Bugkos: Defining the Asian century
through peace, development, and
community
➤ Dr. Antoinette Raquiza
- 10:30-10:45 am Identifying transaction costs and
assessing its effects in agriculture:
The case of farmer's market
participation in the Philippine rice
sector
➤ Dr. Agham Cuevas
- 10:45-11:00 am Automated constructions of
phylogenetic trees and networks of
languages in the Greater Central
Philippines by a feature-sensitive
metric
➤ Dr. Richard Lemence
- 11:00-11:15 am Development of strategies to
improve academic performance of
units based on the Internal
Academic Assessment and
Development System (iAADS)
findings
➤ Dr. Irene Villaseñor
- 11:15-11:30 am Spaces in transition: Mapping
Manila's peri-urban fringe
➤ Dr. Arnisson Ortega (BP)
- 11:30-11:45 am Coping strategies to natural
disasters: Micro-meso-macro
interactions and consequences
➤ Dr. Majah Leah Ravago
(BP)
- 11:45-12:00 nn Archaeological human remains
from Southeast Asia: A taphonomic
approach
➤ Dr. Catherine Crozier (BP)
- 12:00-12:15 pm OPEN FORUM
- 12:15-1:00 pm Lunch Break

SESSION D
Biological Sciences

- Recombinant protein expression and
immunological characterization of de-
antigenized human influenza H3
hemagglutinin
➤ Dr. Windell Rivera
- Assessment of the effects of combining
biochar, biofertilizer and vermicompost
on soil quality and crop production
➤ Dr. Nelly Aggangan
- Tapping into novel fungal endophytes for
enzymes with biotechnology applications
➤ Dr. Eizadora Yu (BP)
- Identification and functional analysis of
the role of non-coding RNAs in hormone-
dependent transcriptional regulation
➤ Dr. Pia Bagamasbad (BP)
- Transcriptome-based genetic resources
for coconut scale insect (CSI) and its
susceptible and tolerant host coconuts
➤ Dr. Anita Bautista (BP)
- Discovery of small molecule therapeutics
from cyanobacteria
➤ Dr. Lilibeth Salvador-Reyes (BP)
- Exploring the molecular, chemical, and
material ecology of coral interspecies
interactions
➤ Dr. Ma. Cecilia Conaco
- Discovery of selective antimicrobial
agents and probiotic interventions against
gut-associated diseases
➤ Dr. Joyce Ibana (BP)

SESSION E

Biological Sciences

- 1:00-1:15 pm Development of a nanoparticle-based biosensor for the detection of prevalent Escherichia coli O157:H7 strain in the Philippines
➤ Dr. Lilia Fernando
- 1:15-1:30 pm Interdisciplinary research and development for the production and utilization of Gabing San Fernando (*Xanthosoma sagittifolium* (L) Schott, Melet) for food, feeds and fuel.
➤ Dr. Jose Nestor Garcia
- 1:30-1:45 pm Optimization of expression of an endoglucanase gene insert for potential in the hydrolysis of lignocellulosic materials
➤ Dr. Richard Tambalo
- 1:45-2:00 pm Protein engineering of the major storage protein of mungbean enhanced with bioactive peptides exhibiting hypocholesterolemic activity
➤ Dr. Mary Ann Torio
- 2:00-2:15 pm Utilization of sago flour to improve nutritional profile of selected food products
➤ Dr. Juma Novie Alviola (BP)
- 2:15-2:30 pm Understanding cell physiology through characterization of the physical properties of cells: an atomic force microscopy perspective
➤ Dr. Eloise Prieto (BP)
- 2:30-2:45 pm OPEN FORUM
- 2:45-3:15 pm **BREAK**

SESSION F New Projects

- Philippine performance archive: Ritual, dance, theatre
➤ Dr. Judy Celine Ick
- The Mass Transit System in Metro Manila: From Tranvia to MRT, 1879-2014
➤ Dr. Ricardo Jose
- Charged particle system development for modification of polymeric surfaces
➤ Dr Magdaleno Vasquez Jr. (BP)
- Learning Tourism Destination: Creating functional partnership and initiating positive change for sustainable tourism development in local economies
➤ Dr. Miguela Mena
- Development of laboratory scale production protocols for recombinant enzymes towards commercialization
➤ Dr. Roberta Garcia
- CrowdSSENSE (Crowdsourced Sensing for Student Enhanced Science Education)
➤ Dr. Rheo B. Lamorena-Lim
- OPEN FORM

SESSION G New Projects

- 3:15-3:30 pm Petrology and geochemistry of mantle xenoliths: Implications on the evolution of the mantle wedge beneath the Philippine island arc system
➤ Dr. Betchaida Payot (BP)
- 3:30-3:45 pm Ten Years after the Millennium Ecosystem Assessment of Laguna de Bay: Towards a Sustainable Future
➤ Dr. Ma. Victoria Espaldon
- 3:45-4:00pm Forest CANopy Observation, Positioning and Investigation (forestCANOPI)
➤ Dr. Nathaniel Bantayan
- 4:00-4:15 pm Development of bioactive cyclotides from Philippine biodiversity
➤ Dr. Christine Hernandez
- 4:15-4:30 pm Conus structural exogenomics program
➤ Dr. Arturo Lluisma
- 4:45-5:00 pm Molecular and culture-based characterization of bacterial community from selected hyperalkaline environments in the Philippines
➤ Dr. Nacita Lantican
- 5:00-5:15 Towards green approaches in insect behavior modification
➤ Dr. Hiyas Junio

OPEN FORUM

SESSION H New Projects

- Towards an enhanced health care system by community managed health programs (CMHPs) to achieve better health outcomes: a community participatory research for advocacy to local government units (LGUs), Department of Health (DOH), Philippine Institute for Traditional and Alternative Health Care (PITAHC), and Philippine Insurance Corporation (PhilHealth)
➤ Dr. Edna Co
- Control aspects of the cardiovascular-respiratory system
➤ Dr. Aurelio delos Reyes
- Polymer-TiO₂ nanocomposites as photoelectrocatalytic materials for the sensing and removal of synergistic organic pollutants
➤ Dr. Allan Christopher Yago
- Integrative genomics analysis workbench for rice science
➤ Dr. Jan Michael Yap
- Efficacy of copper-based hollow kapok fiber nanocomposite for environmental purification
➤ Dr. Mary Donabelle Balela
- Conduction in disordered materials in low-frequency region
➤ Dr. Alvin Karlo Tapia
- On the decomposition of matrices into matrices related to symmetric or skew symmetric bilinear and its relation to some known matrix decompositions
➤ Dr. Ralph John L. Dela Cruz

OPEN FORUM