



36th Annual PAASE Meeting & Symposium (36th APAMS)

"Converging Academe-Government-Industry Science and Technology Stakeholders

to Accelerate Philippine Innovation"

July 14-15, 2017, The Manila Hotel, Manila, Philippines

Day 1 -- July 14, 2017		
9:00 – 9:15 AM	Opening Ceremonies	
	Welcome Remarks and Introduction on Theme of 36th APAMS Dr. Gonzalo “Al” Serafica President, PAASE	
9:15 – 9:25 AM	Message of Support for Philippine S&T Hon. Sung Kim Ambassador of the United States of America to the Philippines	
9:25 - 9:45 AM	Keynote Lecture -- The Philippine Development Plan and S&T Dr. Ernesto Pernia Secretary of Socioeconomic Planning National Economic and Development Authority (NEDA)	

9:45 – 10:00 AM	Plenary Lecture 1 – Government Vision of Convergence Hon. Fortunato De La Peña Secretary, Department of Science and Technology (DOST)	
10:00 – 10:05 AM	5 min Break	
10:05 – 10:20 AM	Plenary Lecture 2 – Industry Participation Edgar O. Chua Chairman, MBC & former CEO Shell Phils.	
10:20-10:35 AM	Plenary Lecture 3 – The Role of Academe Dr. Fabian Dayrit Acting President National Academy of Science and Technology (NAST -PHL)	
10:35 – 10:50 AM	Panel Discussion with the Speakers Moderated by Dr. Giselle Concepcion , University of the Philippines	
10:50 - 11:00 AM	10 min Break and Group Photos	
11:00 – 11:10 PM	Introduction of Koh Lectureship Awardees Dr. Joel Cuello , The University of Arizona Vice President, PAASE	
11:00-11:30 PM	Dr. Ma. Corazon De Ungria 2016 Recipient, Koh Lectureship Award in Science DNA Analysis Laboratory of the Natural Sciences Research Institute, University of the Philippines, Diliman	

<p>11:30-11:50 PM</p>	<p>Dr. Raymond Tan 2017 Recipient, Koh Lectureship Award in Engineering Vice Chancellor for Research and Innovation De La Salle University, Manila</p>	
<p>11:50-12:10 PM</p>	<p>Dr. Sevilla Detera-Wadleigh 2017 Recipient, Koh Lectureship Award in Science U.S. National Institutes of Health Bethesda, Maryland, USA</p>	
<p>12:10 – 1:00 PM</p>	<p>LUNCH</p>	
<p>1:00 – 1:15 PM</p>	<p>Government Programs and Initiatives: Overview of the Philippine Research and Development Agenda Dr. Rowena Guevara, Department of Science and Technology (DOST) Undersecretary for R&D</p> <p>Industry Responses</p>	
<p>1:15 -1:25 PM</p>	<p>Dr. Beth Q. Lahoz, President, Technological Institute of the Philippines</p>	
<p>1:25 –1:35 PM</p>	<p>Emerson Atanacio, President & CEO of NCST, Philippine Chamber of Commerce and Industry (PCCI) Science Representative</p>	
<p>1:35 – 1:50 PM</p>	<p>Panel Session Moderated by Dr. Amelia Guevara (TBC), Former DOST Undersecretary for R&D</p>	
<p>1:50-2:05 PM</p>	<p>Dr. Carlos Primo David Executive Director, Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)</p>	

<p>2:05-2:15 PM</p> <p>2:15 – 2:25 PM</p> <p>2:25- 2:40PM</p>	<p>Industry Responses</p> <p>Dr. Francisco Viray, CEO of Phinma Energy and former Secretary of the Department of Energy</p> <p>Rafael Nestor V. Mantaring, Head, Design and Development, Integrated Micro-Electronics (IMI)</p> <p>Panel session Moderated by Dr. Alvin Culaba, DLSU, Manila</p>	
	<p>5 min break</p>	
<p>2:45– 3:00 PM</p> <p>3:00-3:10 PM</p> <p>3:10- 3:20 PM</p> <p>3:30-345 PM</p>	<p>Dr. Jaime Montoya Executive Director, Philippine Council for Health Research and Development (PCHR)</p> <p>Industry Responses;</p> <p>Jude Sasing President, Orthopedic International</p> <p>Dr. Earl Qua Vice President of Ionics, RXBox Industry Partner</p> <p>Moderated by Dr. Lourdes Cruz, University of the Philippines Diliman</p>	
<p>3:45 – 4:00 PM</p> <p>4:00-4:10 PM</p> <p>4:10– 4:20 PM</p>	<p>Dr. Reynaldo Ebor Executive Director, Philippine Councils for Agriculture, Aquatic and Natural Resources Research and Development (PCAARD)</p> <p>Industry Responses</p> <p>Maria Bella Javier Chief Scientific Officer, Del Monte Philippines</p> <p>Alfredo Pedrosa III, President, Seaweed Association of the Philippines</p>	

4:20-4:35 PM	Panel Moderated by Dr. Ester Garcia , President, University of the EAST	
4:35 – 4:50 PM	Engr. Edgar Garcia Director, Technology Application and Promotion Institute (TAPI)	
4:50- 5:00 PM	Industry Response Mr. Roberto Batungbacal , Country Manager, Dow Chemical Philippines	
5:00– 5:10 PM	Jennifer Alcabao , Director, ICCP SPI Venture Partners	
5:10-5:25 PM	Moderated by Dr. Carlito Lebrilla , University of California Davis	
5:25-5:40 PM	Industry-Academe S&T Collaborations Dr. Richard Abendan , Research and Industry Partnerships Manager USAID Science Technology Research Innovation for Development (STRIDE) Program, RTI International	
5:40-5:55 pm	Academe –Industry Linkages Love Basilote Executive Director, Philippine Business for Education (PBED)	
5:55-6:10	Panel Session Moderated by Dr. Larry Ilag , Deputy COP, USAID Stride	
Day 2 -- July 15, 2017		

9:00-9:15 AM		Recap of Day 1 - Dr. Kathleen Aviso, De La Salle University, Manila, Philippines	
9:15-10:15 AM		Parallel Session 1A: Health, Dr. Lourdes Cruz, University of the Philippines Diliman, Chairperson	Parallel Session 2A: Agriculture, Dr. Joel Cuello, The University of Arizona, Chairperson – Chairperson
9:15	1	High-Throughput Antibacterial and Antiproliferative Screening of Philippine Marine Sponges by Viviene S. Santiago , <i>Zabrina Bernice Malto, Patrick Alegre, Shalice Susana and Lilibeth Salvador-Reyes, Ph.D.</i>	5 When Farming Goes Vertical: Advances in the Global Controlled-Environment Vertical Farming Industry Dr. Joel L. Cuello, University of Arizona
9:30	2	Teratogenic Effects of Ethanolic Ipomoea triloba Linn. Extracts on Anas platyrhynchos domesticus embryos Kurt Renz F. Fonte, Carmelita P. Mapanao and Chester C. Deocaris,	6 Aflatoxin B1 detection in tapioca starch using an aptamer based assay <i>Jeffrey P. Tamayo and Aldwin M. Anterola, Southern Illinois University, Carbondale, IL, USA</i>
9:45	3	Development of a Dual Heroin and HIV-1 Vaccine By Dr. Oscar B. Torres, Mangala Rao, Kristina K. Peachman, Zoltan Beck, Nelson L. Michael, Kenner C. Rice, Arthur E. Jacobson, Carl R. Alving and Gary R. Matyas,	7 Indigo Formation in Plants: The Green Way to be Blue Aldwin M. Anterola and <i>Laxmi Sagwan-Barkdoll</i>
10:00	4	Protective Effects of Peperomia pellucida (L.) Crude Methanolic Extract Against Elevated Blood Glucose Levels and Alterations in Pancreas Histology of HFD/STZ-Induces Diabetic <i>Mus musculus</i> by Kimberly B. Benjamin, Rohani B. Cena, Dawn S. de Loreto and Junel Carla O. Magbuhat	8 Chemical Profiling and Characterization of Pharmaceutical Biomarkers of Honey Samples from Philippines <i>Angelica L. Suarez, April G. Tirador, Jonel P. Saludes and Doralyn S. Dalisay, University of San Augustin, Iloilo City</i>

10:00 – 10:10		Parallel Session 1B: Energy R&D in the Philippines Dr. Alvin Culaba, DLSU and Ernie Terrado, EU- ASEP Key Expert -- Chairpersons		Parallel Sessions 2B: Environment Research Raymond Tan, DLSU - Chairperson
10:15	9	The EU-Supported Access to Sustainable Energy Programme (ASEP): Bringing clean sustainable energy to off - grid households in the Philippines Dr. Ernie Terrado, EU-SASEP program	13	Structural Analysis of Saponins from the body wall of the sea cucumber <i>Stichopus horrens</i> <i>Eizadora T. Yu, Dessa Camille R. Batoctoy, Rafael Junnar Dumalan and Marie Antoinette Junio-Menez</i>
10:30	10	Cost Benefit Analysis of Alternative Fuel Vehicles : Philippine Scenario, Dr. Manuel Biona, De La Salle University, Manila	14	Water Quality, Geological Structures and Macroinvertebrates of Wawa Dam, Rizal, Philippines: An Assessment <i>Jacqueline E. Hilario, Chloe Danica L. Rosayaga, Mary Justine P. Capule, Erwin O. Se, Jose Jacob D. Almonte, Rafael Miguel D. Almonte and Jett Edzen S. Garcia</i>
10:45	11	Metabolic Engineering of E. coli for Production of Short Chain Fatty Acids as Precursors of Biofuel <i>Emil C. Lat and Aldwin M. Anterola,</i>	15	Optimization of Algal Solar Dryer through CFD Simulation: An Economic Approach Ivan Henderson V. Gue, Aristotle T. Ubando, Alvin B. Culaba
11:00	12	Bioethanol production at MMSU pilot scale facility by Dr. Shirley Agrupis, Mariano Marcos State University, Laoag City, Ilocos Norte	16	The prospects of microalgae for biofuels production in the Philippines – <i>Alvin Culaba and Aristotle Ubando, De La Salle University</i>

		Parallel Session 1C: ICT and AI Dr. Elmer Dadios, DLSU, Chairperson		Parallel Session 2C: Entrepreneurship in Advanced Technologies Dr. Carlito Lebrilla, University of California at Davis and Luis Sison , UP TTBD
11:15	17	Brain-on-a-chip: Efficient platform for understanding neuronal circuit function Dr. Vincent Daria, Australian National	22	Highly Efficient and Specific Dengue detection kit for the Philippines, Dr. Raul Destura of <i>University of the Philippine Manila (UPM) and Manila Health Technologies</i>

		<i>University</i>		<i>Inc. (MTEK) Marikina, Philippines</i>
11:30	18	Assessing the Survivability of Disrupted Integrated Bioenergy Systems using Dynamic Inoperability Input-Output Modeling Michael Francis D. Benjamin, Luis F. Razon and Raymond R. Tan, DLSU, Manila	23	Converting Mango Waste from the Dried Mango Industry to High value products, Dr. Evelyn Taboada, University of San Carlos, Cebu City and GEM Corp Cebu City, Philippines
11:45	19	Human Activity Recognition Using LVQ Neural Network in Smart Homes Ramtin Aminpour and Dr. Elmer Dadios, DLSU, Manila	24	Commercialization of Smart Surface, A Technology that converts any surface to be interactive like an Ipad. Dr. Nestor Tiglao, University of the Philippines Diliman
12:00	20	Implementation of MATLAB Edge Detection for pattern-definite targets using Fuzzy Logic Ryann Alimuin, Argel Bandala and Elmer Dadios, Technological Institute of the Philippines, Quezon City	25	Translating Basic Science into Companies: \$30M Probiotics for Infants Venture and a Cancer detection start-up company, Dr. Carlito Lebrilla, University of California in Davis, CA, USA
12:00 – 1:00	Lunch and Opening of Poster Exhibits			
1:00-1:15	Commission on Higher Education (CHED) S&T Programs Dr. Napoleon K. Juanillo Director, Office of Planning, Research and Knowledge Management			
1:15 – 2:45	PCARI Projects to be introduced by Dr. William Padolina, CHED PCARRI Executive Director			
1:15-1:30	High Throughput Screening of Philippine Terrestrial and Marine Organisms for Antimalarial Properties and Identification of Novel Drug Targets by Dr. Christine Hernandez, University of Philippines, and Dr. Joseph DeRisi University of California in San Francisco (UCSF)			
1:30-1:45	Accessible Detection of Dengue Using BioMEMS and MIP Material by Dr. Florian del Mundo, University of the Philippines and Dr. Luke Lee, University of California in Berkeley(UCB)			

1:45-2:00	Metagenomic Contributions to Type 2 Diabetes Among Filipino Populations by Dr. Eva Maria Cutiongco-de la Paz University of the Philippines Manila and <i>Dr. Mark Seielstad (UCSF)</i>
2:00-2:15	The Village Base Station by Dr. Cedric Angelo Festin (UP Diliman) and Dr. Eric Brewer (UCBerkeley)
2:15-2:30	Cost-Effective Manufacturing Using Printing Fabrication Technologies for Energy Generation, Conditioning and Monitoring Devices by Dr. Erwin Enriquez (ADMU) and Dr. Vivek Subramanian (UC Berkeley)
2:30-2:45	Cloud-Based Intelligent Total Analysis System Using Geospatial Wireless Sensors and Mobile Microscopy by Dr. Maria Regina Estuar (ADMU) and Dr. Daniel Fletcher (UC Berkeley)
2:45-3:00	Afternoon Break
3:00– 4:15	USAID Stride Funded Projects to be introduced by Dr. Larry Ilag, Deputy Chief of Party, USAID Stride
2:45-3:00	Microencapsulated mango polyphenol powder by spray drying by Dr. Evelyn B. Taboada , <i>University of San Carlos, Cebu City</i>
3:00-3:15	Developing a sustainable dairy cattle genetic stock in the Philippines: Phase I – Establishing the base for future breeding by Dr. Agapita J. Salces – <i>University of Philippines Los Baños, Laguna</i>
3:15-3:30	Process streamlining of the algae industry in the Philippines by Dr. Aristotle T. Ubando – <i>De La Salle University, Manila</i>
3:30-3:45	Automation of coco-sugar production by Dr. Elmer P. Dadios – <i>De La Salle University, Manila</i>
3:45-4:00	Production and nutritional value of fermented sweet potato as a high protein meal in the diets of cultured aquatic

	animals by Dr. Rex Ferdinand Traifalgar – <i>University of the Philippines Visayas, Miagao, Iloilo</i>	
4:00-4:15	Simplified grow-out framing system of abalone <i>Haliotis asinina</i> in the coastal areas by Dr. Lota Creencia – <i>Western Philippines University, Puerto Princesa, Palawan</i>	
4:15–5:30	Future S&T Programs and Activities chaired by Dr. Al Serafica , President, PAASE	Space Technology chaired by Dr. Joey Comiso , NASA, USA and Dr. Romar Sese , DOST
4:15-4:30	Training the Future “Trainers”: Leveraging DOST’s ERDT Visiting Researcher Programs Dr. Joost Santos <i>George Washington University, Washington DC, USA</i> and Dr. Joel Cuello , <i>University of Arizona</i>	Philippine Space Agency and Policies by Dr. Romar Sese , DOST
4:30-4:45	Examples of Academe, Government Industry Collaboration and Innovation Hubs Dr Luis Sison , <i>University of the Philippines, Technology Transfer Business Development Office</i>	Understanding the Universe Dr. Reina Reyes , <i>Ateneo de Manila University</i>
4:45-5:00	The role of data science and advanced analytics in industry, academia, and government collaborations by Dr. Erika Fille Legara , <i>Asian Institute of Management</i>	Understanding the Earth Climate System Dr. Gay Jane Perez , <i>University of the Philippines, Diliman</i>
5:00- 5:15	PITCorp: ROTC for Scientists to become entrepreneurial and key member of a Start- Up Team Dr. Al Serafica , <i>Balik Scientist DOST and USAID Stride Consultant</i>	Remote Sensing: Balancing Platform with Scale, Spectrum, and Accuracy Dr. Mark Boise , <i>Research Support Instruments, Lanham, MD</i>
5:15-5:30	Session Panel discussion and Q&A	Advanced Space Technology and Applications Dr. Josefino C. Comiso
5:30 -6:00	PAASE Business meeting	

An Overview of APAMS 2017

Day 1 AM - The theme will be introduced and explained by the PAASE President. A 10 min message of support for Philippines S&T will be delivered by the United States Ambassador to the Philippines. The Keynote speech is delivered by the NEDA Secretary outlining the Philippine Development Plan (PDP) and the importance of S&T. The details of the specific S&T chapters on the PDP will then be discussed by the DOST Secretary. The Industry representative will then speak on the importance of Academe and Industry linkages and how Government can support such linkages and collaborations. Finally, Academe will respond and indicate the best practices through which it has collaborated with Industry through Government support.

The Koh Lectureship Awards recipients will be introduced by the PAASE Vice President. Each awardee in Science and Engineering will elaborate on his/her research activities and how help from Government and potential partnerships with Industry can result in sustained societal impact.

Day 1 PM will be devoted to Government/DOST providing the specifics of the Philippine R&D agenda by the Undersecretary for R&D. The individual Council Executive Directors will also detail the various programs in Industry, Energy, Health, and Agriculture as well Technology Application and Promotion. Industry representatives will respond to each DOST speaker. Final presentation on best practices on creating Academe-Industry linkages will be described by both USAID STRIDE program and Philippine Business for Education (PBED).

Day 2 AM will focus on the various scientific sessions on several sectors including Health, Agriculture, Energy, Environment, ICT and Entrepreneurship. Presenters are from both Philippine and U.S. universities, and are done by mostly PAASE members. Opening of the poster area during lunch break will commence..

Day 2 PM CHED will start the afternoon session with the outline of their S&T activities and will be followed by the technical presentation of research studies conducted under the multi-billion-peso program Philippine California Advanced Research Institute. This is then followed by oral presentations of six USAID STRIDE grantees on their various projects in agriculture, health energy and information technologies. Finally, a parallel session on Space and Future Activities by PAASE members will be presented. Poster viewing and individual discussions with grantees may continue while the PAASE business meeting is ongoing.