



## APRU MH2015 INTERNATIONAL SYMPOSIUM

### OVERALL PROGRAM

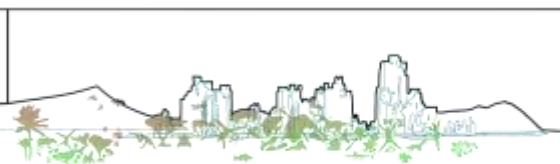
DAY 0: October 7 – Public Event (Launch of Resilience Game Tournament, Quezon Hall Lobby)

15:00 PM to 18:00 PM

|                 |                                                                          |                                                                                                                                                                                               |
|-----------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3:00 to 3:30 PM | Registration                                                             | <b>APRU Secretariat / BaR C2 Team</b>                                                                                                                                                         |
| 3:31 to 3:40 pm | Welcome Remarks                                                          | <b>Dr. Benito M. Pacheco</b><br><i>Vice Chancellor for Academic Affairs<br/>University of the Philippines Diliman, &amp;<br/>BaR Program Head</i>                                             |
| 3:41 to 4:00 PM | Background and Introduction of Resilience: Survive and Thrive™ Card Game | <b>Dr. Laura T. David</b><br><i>Project Leader<br/>Biodiversity and Resilience - C2<br/>University of the Philippines Diliman</i>                                                             |
| 4:01 to 4:30 PM | Launching of Paladino't Paladina: A Resilience: Survive and Thrive™      | <b>Dr. Elena E. Pernia</b><br><i>Tournament Co-Project Leader<br/>Biodiversity and Resilience - C2<br/>University of the Philippines Diliman</i>                                              |
| 4:31 to 5:30 PM | Playing the game                                                         | <b>BaR C2 Team</b>                                                                                                                                                                            |
| 5:31 to 5:45 PM | Awarding of prizes to winners                                            | <b>Dr. Laura T. David</b><br><i>BaR C2 Project Leader</i><br><br><b>Dr. Benito M. Pacheco</b><br><i>BaR Program Head</i><br><br><b>Dr. Elena E. Pernia</b><br><i>BaR C2 Co-Project Leader</i> |
| 5:21 to 5:30 PM | Closing Remarks                                                          | <b>Ms. Cheryl C. Torrado</b><br><i>Program Director (Global Leadership)<br/>Association of Pacific Rim Universities</i>                                                                       |
| 5:31 to 7:00 PM | Merienda                                                                 |                                                                                                                                                                                               |

**Welcome Dinner hosted by President Alfredo E. Pascual at the Executive House.**

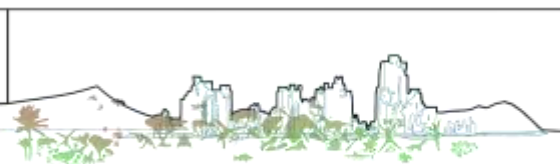
19:00 PM to 21:00 PM



**DAY 1: October 8 – Oral and Poster Presentations**  
**(Microtel by Wyndham, Technohub, UP Diliman QC)**

| Time          | Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:30-9:00     | Registration                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 9:00-9:55     | Inaugural Ceremony<br>Message from Dr. Gisela P. Concepcion, Vice-President for Academic Affairs, University of the Philippines                                                                                                                                                                                                                                                                                                                                                       |
| 9:55-10:00    | Premiere of original musical composition for chorus and percussion by Dr. Ramon P. Santos with poetry by Dr. Gemino H. Abad.                                                                                                                                                                                                                                                                                                                                                          |
| 10:00-10:40   | Keynote Addresses<br>Prof. Toshio Yamagata, Japan Agency for Marine-Earth Science and Technology<br>Chancellor Michael L. Tan, University of the Philippines Diliman                                                                                                                                                                                                                                                                                                                  |
| 10:40-10:45   | Group Photograph                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 10:45-11:00   | Coffee Break                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 11:00-12:00   | Plenary Session 1<br>Presentations on APRU & APRU Multi-Hazard Program<br>Ms. Cheryl C. Torrado, Program Director (Global Leadership) APRU<br>Prof. Takako Izumi, IRiDeS, Tohoku University<br>Prof. Supot Teachavorasinskun, Chulalongkorn University: <i>Building a flood resilient community; A case study from 2011 Thailand devastated flood</i><br>Prof. Kuniyoshi Takeuchi, International Center for Water Hazard and Risk Management.<br>Session Chair: Dr. Benito M. Pacheco |
| 12:00-13:00   | Lunch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 13:00 – 15:00 | Parallel Sessions 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|               | Session 1A: Understanding disaster risk and risk factors ( 6 papers)<br>Session Chair: Dean Elena E. Pernia                                                                                                                                                                                                                                                                                                                                                                           |
|               | Session 1B: Effects of natural hazards on exposed elements ( 6 papers)<br>Prof. Rhodora M. Gonzalez                                                                                                                                                                                                                                                                                                                                                                                   |
|               | Session 1C: Identifying & quantifying multi-hazard exposure 1 ( 6 papers)<br>Session Chair: Prof. Mark Albert H. Zarco                                                                                                                                                                                                                                                                                                                                                                |
| 15:00 – 15:30 | Coffee Break                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 15:30 – 16:30 | Plenary Session 2<br>Dr. Renato U. Solidum, PHIVOLCS<br>Prof. Alfredo Mahar F. Lagmay, Project NOAH<br>Prof. Lei Yan, Peking University<br>Session Chair: Prof. Carlo Primo C. David/Co-Chair: Prof. Elenita N. Que                                                                                                                                                                                                                                                                   |
| 16:30 - 17:30 | Poster Session: Session Chair: Dean Leonardo C. Rosete (10 posters)                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 17:00 – 18:00 | APRU MH Core Group and UP Meeting                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 18:00 – 19:30 | Conference Dinner                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Overall Moderator: Dean Elena E. Pernia**



**DAY 2: October 9 Oral Presentation**  
**(Microtel by Wyndham, Technohub, UP Diliman QC)**

| Time          | Activity                                                                                                                                                                                                                                              |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:30 – 9:00   | Summary of the first day(Dr. Umali)                                                                                                                                                                                                                   |
| 9:00- 10:00   | Plenary Session 3<br>Prof. Yuichi Ono, IRIDeS, Tohoku University<br>Undersecretary Alexander Pama, Executive Director, NDRRMC<br>Dean Felino P. Lansigan, College of Arts and Sciences, UP Los Baños<br>Session Chair: Prof. Aurora Odette C. Mendoza |
| 10:00-10:05   | Group Photograph                                                                                                                                                                                                                                      |
| 10:05-10:30   | Coffee Break                                                                                                                                                                                                                                          |
| 10:30-12:30   | Parallel Sessions 2                                                                                                                                                                                                                                   |
|               | Session 2A:Communities of Interest, Sectors of concern, and Elements of interest (6 papers)<br>Session Chair: Dean Mario Delos Reyes                                                                                                                  |
|               | Session 2B : Enhancing Disaster Preparedness for Effective Response 1 (6 papers)<br>Session Chair: Prof. FlaudetteMay V. Datuin(1 reserved)                                                                                                           |
|               | Session 2C: Investing in DRRM for resilience& sustainability (6 papers)<br>Session Chair: Dean Prof. Ramon L. Clarete/Prof. Grace C. Ramos                                                                                                            |
| 12:30-13:30   | Lunch                                                                                                                                                                                                                                                 |
| 13:30 – 15:30 | Parallel Sessions 3                                                                                                                                                                                                                                   |
|               | Session 3A:“Build Back Better” in recovery, rehabilitation and reconstruction (6 papers) Session Chair: Prof. Laura T. David (1 reserved)                                                                                                             |
|               | Session 3B:Identifying & quantifying multi-hazard exposure 2 (6-papers)<br>Session Chair: Prof. Jaime Y. Hernandez, Jr.                                                                                                                               |
|               | Session 3C: Enhancing Disaster Preparedness for Effective Response 2 (6 papers)<br>Session Chair: Prof. Aleli B. Bawagan                                                                                                                              |
| 15:30 – 16:00 | Coffee Break                                                                                                                                                                                                                                          |
| 16:00 - 17:00 | Plenary Session 4<br>Prof. Perry S. Ong, UP Diliman<br>Prof. JC Gaillard, University of Auckland<br>Dr. German Velasquez, UNISDR Geneva<br>Session Chair: Dr. Rhodora V. Azanza                                                                       |
| 17:00 – 17:30 | Closing Ceremony<br>Summary of Proceedings by Benito M. Pacheco, UP Diliman                                                                                                                                                                           |

**Overall Moderator: Dean Elena E. Pernia**

DAY 3: October 10 – Technical Tour (optional; by separate registration)

6:00 AM to 6:00 PM Taal Volcano and its vicinity.

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 1A: Understanding Disaster Risk and Risk Factors**

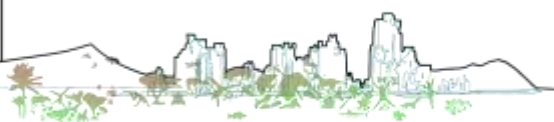
**Session Chair: Dean Elena E. Pernia**

**13:00 – 15:00**

**8 October 2015**

|   | Title                                                                                        | Presenter        |
|---|----------------------------------------------------------------------------------------------|------------------|
| 1 | Modeling risk behavior: Disaster Schema and the role of information                          | Kristofer Berse  |
| 2 | An ordinal regression approach to understand earthquake risk perception                      | Kristofer Berse  |
| 3 | Bangkok's Unplanned Development: Shaping Vulnerability to the 2011 Floods                    | Danny Marks      |
| 4 | Need for Holistic Flood Risk Management: Case of Pasig-Marikina River Basin of Metro Manila  | Guillermo Tabios |
| 5 | Understanding risk and coping in the context of disaster evacuation in Central Philippines   | Soledad Dalisay  |
| 6 | Earthquake Preparedness Literacy (EPL) among Residents of Barangay Barangka in Marikina City | Christine Cox    |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 1B: Effects of Natural Hazards on Exposed Elements**

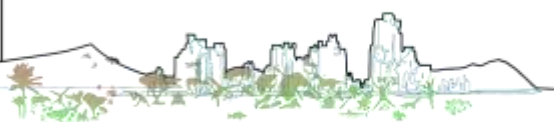
**Prof. Rhodora M. Gonzalez**

**13:00 – 15:00**

**8 October 2015**

|   | Title                                                                                                                           | Presenter           |
|---|---------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1 | A Novel Tsunami Simulation by Lattice Boltzmann Method for Shallow Water Equations                                              | Kenta Sato          |
| 2 | Building damaged detection using ALOS-2/PALSAR-2 dual polarimetric SAR intensity imagery                                        | Yanbing Bai         |
| 3 | Pushover Analysis of Reinforced Concrete Columns Using Rigid Body Spring Discrete Element Method                                | Romeo Longalong     |
| 4 | Super Typhoon Haiyan (Yolanda) Ocean Surface Wind: Satellite Scatterometry derived wind speed and WMO Storm Surge Wave Equation | Ruben Lim           |
| 5 | Post-Yolanda Mangrove Rehab                                                                                                     | Jonathan Anticamara |
| 6 | Neglected disasters in a neglected space: Implications and challenges of DRR                                                    | Jake Cadag          |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 1C: Identifying & Quantifying Multi-Hazard Exposure 1**

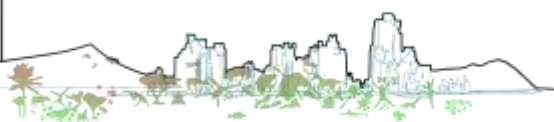
**Session Chair: Prof. Mark Albert H.Zarco**

**13:00 – 15:00**

**8 October 2015**

|   | Title                                                                                                                         | Presenter           |
|---|-------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1 | Application of GIS-based Logistic Regression Modelling for Landslide Susceptibility Assessment of Antipolo, Rizal Philippines | Jaime Angelo Victor |
| 2 | Wind Vulnerability Assessment of a Standard School Building in Tacloban using Reliability-based modeling                      | Liezl Raissa E. Tan |
| 3 | Quantification of Flood Vulnerability of Key Building Types in the Greater Metro Manila Area, Philippines                     | Raniel Suiza        |
| 4 | Quantifying Typhoon Hazards: Historical Wave Overtopping along Roxas Boulevard Seawall                                        | Eric C. Cruz        |
| 5 | Simulative Analysis of Storm Tide Levels along Roxas Boulevard Seawall                                                        | Jeane B. Camelo     |
| 6 | Estimating Typhoon Haiyan's Wind Speeds Using Windicators                                                                     | Joshua Agar         |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 2A: Communities of Interest, Sectors of Concern, and Elements of Interest**

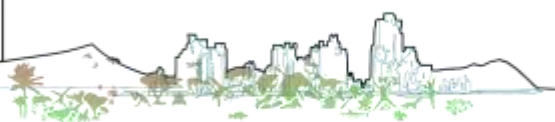
**Session Chair: Dean Mario Delos Reyes**

**10:30 – 12:30**

**9 October 2015**

|   | Title                                                                                                                                                                      | Presenter            |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1 | Displacement Experiences of Students and Teachers after Typhoon Haiyan: Recommendations on Mental Health and Psychosocial Support within Academic Institutions             | Ana Tuazon           |
| 2 | Flood, Evacuate: Implication of Disasters to Women in an Evacuation Center in Brgy. San Vicente, Angono                                                                    | Victor G. Obedicen   |
| 3 | Building Sustainable and Disaster Resilient Informal Settlement Communities                                                                                                | Mario R. Delos Reyes |
| 4 | Exposure and Sensitivity Analysis of Disaster Risk Areas in Barangay Tumana, Marikina City as input to Barangay Development Planning                                       | Nicasio Espina, Jr   |
| 5 | A Strategic Model in Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in Quezon City Comprehensive Land Use Planning (QC-CLUP), Philippines | Tabassam Raza        |
| 6 |                                                                                                                                                                            |                      |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 2B : Enhancing Disaster Preparedness for Effective Response 1 (6 papers)**

**Session Chair: Prof. Flaudette May V. Datuin**

**10:30 – 12:30**

**9 October 2015**

|   | Title                                                                                                                                   | Presenter                |
|---|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1 | Developing A Landslide Early Warning System As Input For BLISTT Disaster Risk Reduction Management                                      | Florence Leslie Campolet |
| 2 | Tracking Yolanda: An exploratory study on government transparency                                                                       | Rachel Khan              |
| 3 | Development of a highly-performed tsunami evacuation simulation<br>-Basic verification and validation in Kesenuma city, Tohoku, Japan - | Fumiyasu Makinoshima     |
| 4 | Challenges in Developing National Guidelines for MHPSS under the Philippine DRRM Framework                                              | Violeta Bautista         |
| 5 | Lessons learned from Typhoon Haiyan and future challenges for Disaster Risk Reduction                                                   | Shuichi Kure             |



**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 2C: Investing in DRRM for Resilience & Sustainability**

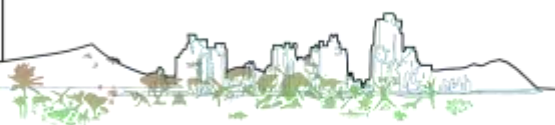
**Session Chair: Prof. Maja-Leah V. Ravago**

**10:30 – 12:30**

**9 October 2015**

|   | Title                                                                                                                                              | Presenter              |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1 | Enhancing Education Resilience at the Disaster-Affected Schools through Learning from the Disaster Experiences: A Case of Ishinomaki City in Japan | Aiko Sakurai           |
| 2 | Risk Drivers vs. Game Changers: Comparative Frames of Local Practices of Resource Management and Disaster Risk Reduction and the Sendai Framework  | Sarah Raymundo         |
| 3 | Harnessing Participatory and Community-Based Approach in Disaster Recovery Planning in Areas Affected by the Earthquake in Bohol                   | Emmanuel M. Luna       |
| 4 | Continuing Post-Pinatubo Resilience and Biodiversity Activities among Aytas                                                                        | Cynthia N. Zayas       |
| 5 | Vulnerability assessments of coral reef fishes and small-scale fisheries: Building resilience through ecosystem approach to fisheries management   | Antonio Samuel Mamauag |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 3A: “Build Back Better” in Recovery, Rehabilitation and Reconstruction**

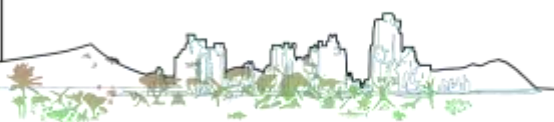
**Session Chair: Prof. Laura T. David**

**13:30 – 15:30**

**9 October 2015**

|   | Title                                                                                    | Presenter          |
|---|------------------------------------------------------------------------------------------|--------------------|
| 1 | Tacloban Post-Yolanda, Unprecedented Post Disaster Housing Relocation                    | Liz Maly           |
| 2 | The Recovery of the Survivors of Mount Pinatubo Eruption of 1991 in Tokwing Resettlement | Lucille Quiambao   |
| 3 | Mainstreaming of Climate change and Risk                                                 | Nora Diaz          |
| 4 | Building back better: the Guiuan and Panay experience                                    | Geraldine Matabang |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 3B: Identifying & Quantifying Multi-hazard Exposure 2**

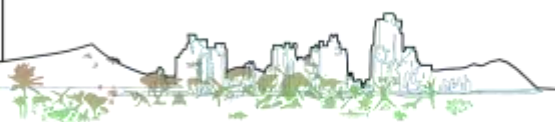
**Session Chair: Prof. Jaime Y. Hernandez, Jr./Prof. Mark Albert H. Zarco**

**13:30 – 15:30**

**9 October 2015**

|   | Title                                                                                                                                                          | Presenter         |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1 | Research on Disaster-related Infectious Disease after Great Tohoku Earthquake at International Research Institute for Disaster Science at Tohoku University. . | Toshio Hattori    |
| 2 | Ambient Vibration Measurement and System Identification of a Lattice-type Telecommunication Tower                                                              | William Mata      |
| 3 | Seismic Risk Assessment of UPLB Campus                                                                                                                         | Richelle Zafra    |
| 4 | Model of the Typhoon Haiyan storm surge and exposure of Leyte Gulf to storm surges                                                                             | Cesar L. Villanoy |
| 5 | Accounting for multi hazards in the preliminary engineering of an archipelagic beach pier                                                                      | Eric C. Cruz      |
| 6 | Computing the Inland Penetration of Historical Tsunamis along an Open Coastline                                                                                | Eric C. Cruz      |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Session 3C: Enhancing Disaster Preparedness for Effective Response 2**

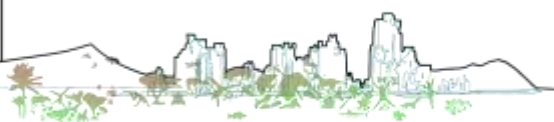
**Session Chair: Prof. Aleli B. Bawagan**

**13:30 – 15:30**

**9 October 2015**

|   | Title                                                                                                                            | Presenter      |
|---|----------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1 | Development of a Robust and Rapidly Deployable GSM Base Station and Backhaul for Emergency Response (ROGER)                      | Joel Marciano  |
| 2 | Weathering the storm: Developing a community-directed strategic communication plan for hydrometeorological disaster preparedness | Lagman, Angelo |
| 3 | Establishing a Network on Earthquake Monitoring and Disaster Preparedness Through Volunteer Computing and Simulation Games       | Rafael Saldaña |
| 4 | Real-time Disaster-Emergency Information Collected and Decision System with UAV-Mobile Vehicle                                   | Lei Yan        |

**APRU**  
**MH2015**



**PHILIPPINES**

11th APRU Research Symposium on Multi-Hazards around the Pacific Rim

**Poster Session**

**8 October 2015**

**16:00 to 17:30**

|   | Title                                                                                                               | Presenter              |
|---|---------------------------------------------------------------------------------------------------------------------|------------------------|
| 1 | A PRACTICAL APPLICATION OF A CHILDREN'S DISASTER EDUCATION PROGRAM IN THE PHILIPPINES                               | M. Yasuda              |
| 2 | Field Survey and Analysis of Damaged School Buildings by the 2013 Typhoon Haiyan and Storm Surge                    | Anawat Suppasri        |
| 3 | Geospatial database development and disaster risk management: Case of Typhoon Haiyan, the Philippines               | Carine J. Yi           |
| 4 | Investigation of Pesticide Malathion Contamination in Pagsanjan, Lumban Watershed, Philippines                      | Erwin Quimbao          |
| 5 | Geometric Modification of Gable Roof for Low-Rise Buildings to Reduce Wind Demand                                   | Julian Eymard Maliwang |
| 6 | Soil Profile Effects on Earthquake Ground Motion Amplification Using Actual and Derived Synthetic Earthquake Motion | Kristian Azul          |
| 7 | Disasters and the public school system: Distribution and impacts                                                    | Claire David           |

## **LOCAL ORGANIZING COMMITTEE**

Prof. Benito M. Pacheco  
*Chairman*

Prof. Rhodora V. Azanza  
*Co-Chairman & Overall Coordinator*

## **Members**

Prof. Laura T. David  
Prof. Carlos Primo C. David  
Prof. Louie P. Balicanta  
Prof. Jaime Y. Hernandez, Jr.  
Prof. Grace C. Ramos  
Prof. Elenita N. Que  
Prof. Ramon L. Clarete  
Dean Mario R. delos Reyes  
Prof. Flaudette May D. Datuin  
Dean Elena E. Pernia

Prof. Gerry Bagtasa  
Prof. Perry C. Ong  
Prof. Rhodora M. Gonzalez  
Prof. Mark Albert H. Zarco  
Prof. Aurora Odette C. Mendoza  
Prof. Aleli B. Bawagan  
Prof. Ebinezzer R. Florano  
Dean Leonardo C. Rosete  
Prof. Violeta A. Umali

## **Staff**

Arlene Bibiana P. Boro  
Frenchly Joyce O. Caspe  
Arlene D.R. Santiago  
Kristina Cordero  
Sheila Ruth T. Magdaraog  
Dianne Dimas

## **Sponsored by:**