



Geological Society of the Philippines
GEOCON 2019
 Geoscience for a resilient and sustainable Philippines

Day 1: December 04, 2019 (Wednesday) – Fiesta Pavilion	
07:30 – 08:30	Registration
08:30 – 08:45	Welcome Remarks Carla Dimalanta President, Geological Society of the Philippines
08:45 – 09:00	Introduction of Keynote Speaker Teresito Bacolcol Vice President, Geological Society of the Philippines
09:00 – 09:45	Keynote Speech Undersecretary Rosemarie Edillon National Economic and Development Authority
09:45 – 10:00	Group Photo
10:00 – 10:20	Coffee Break
10:20 – 10:50	Re-opening new paths for the Philippines' search for energy independence (Plenary talk) Arthur Saldivar-Sali Geotecnica Corporation
10:50 – 11:20	Paving a new landscape in risk valuation: The GeoRisk Philippines initiative (Plenary talk) Mabelline Cahulogan Philippine Institute of Volcanology and Seismology
11:20 – 11:50	The October 2019 Cotabato earthquake sequence: Parameters and impacts Jeffrey Perez Philippine Institute of Volcanology and Seismology
12:00 – 13:00	Lunch
13:00 – 14:00	Poster Sessions
14:00 – 17:00	Parallel Sessions

	Session 1 Tectonics and Geodynamics I Moderator: Karlo Queaño Rigodon Room	Session 2 Multidisciplinary Approaches I Moderator: Leo Armada Polkabal Room	Session 3 Stratigraphy and Paleontology Moderator: Allan Gil Fernando Pandango Room
14:00 – 14:20	Tectonics of the South China Sea: Birth and imminent death of a marginal basin Mario Aurelio National Institute of Geological Sciences, University of the Philippines, Diliman	The use of qualitative methods in volcanology: Oral history, narratives analysis and phenomenology Ma. Mylene Martinez-Villegas Philippine Institute of Volcanology and Seismology	Cenozoic index fossils of the Philippines Alyssa Peleo-Alampay National Institute of Geological Sciences, University of the Philippines, Diliman
14:20 – 14:40	Tectonic history of the Camotes Group of Islands: Emergence from a submarine volcano to an isolated carbonate platform Kenneth Jan Sangalang Mines and Geosciences Bureau - Region VII	Unexploded ordnance (UXO) detection in Marawi City, Lanao del Sur, Bangsamoro Autonomous Region in Muslim Mindanao, Philippines using ground penetrating radar and magnetometer Angela Flores Aero 360 Solutions, Inc.	Geology of the mid-section of the Zamboanga Peninsula Lawrence Zamoras Mines and Geosciences Bureau - Region IX
14:40 – 15:00	Petrography and whole-rock geochemistry of the Pandan Formation clastic rocks in Central Cebu: Plate interactions at the oceanic leading edge of Australia in the Late Mesozoic Jerali Rodrigo Mines and Geosciences Bureau - Region VII	Assessment of aquifer vulnerability using GIS-aided drastic index-overlay method and mapping of saline water intrusion using electrical resistivity sounding method: A case study of Masbate City, Masbate Emar Basilan Mines and Geosciences Bureau - Region V	A re-evaluation of the Cenozoic stratigraphy and paleontology of the Sta. Ignacia Quadrangle, Tarlac Province Ranajae De Lara Mines and Geosciences Bureau – Central
15:00 – 15:20	Marginal basins, paleo-plates and tectonics of the Philippines: Presumed recognitions, conjectural applications and postulated significance Graciano Yumul, Jr. Cordillera Exploration Co. Inc.	Going multiscale and estimating uncertainty on 3D geological models Ranee Joshi University of Western Australia	Corals reveal interhemispheric ITCZ migration in western Pacific over the last 7,000 years Kevin Garas Mines and Geosciences Bureau - Central
15:20 – 15:40	Coffee Break		

	Session 4 Tectonics and Geodynamics II Moderator: Jeffrey Perez Rigodon Room	Session 5 Multidisciplinary Approaches II Moderator: Kimberly dela Peña Polkabal Room	Session 6 General Geology Moderator: Alyssa Peleo-Alampay Pandango Room
15:40 – 16:00	Seismic hazard assessment of Buruanga Peninsula for earthquake resilience of NW Panay Island, Philippines Iris Yvette Cesista National Institute of Geological Sciences, University of the Philippines, Diliman	Lahar risk mapping of Banahaw Volcano, southern Luzon using LaharZ Ralph Zaballero Mining, Geology and Ceramic Engineering Department, Adamson University	Geology of Naga City, and San Fernando, Cebu and its implication on the evolution of the Visayan Basin Paola Jayme Romaguera National Institute of Geological Sciences, University of the Philippines, Diliman
16:00 – 16:20	Seafloor features reveal faults in the Verde Island Passage Keanu Jershon Sarmiento Marine Science Institute, University of the Philippines, Diliman	Mapping mangrove forest cover change (1947-2018) at the river mouth section of the Jaro Floodway using satellite imagery Paul Caesar Flores Marine Science Institute, University of the Philippines, Diliman	Petrological and structural characteristics of the Camarines Norte Ophiolite Complex: Implications to the evolution of the Calaguas Island Group Nathaniel Parcutela National Institute of Geological Sciences, University of the Philippines, Diliman
16:20 – 16:40	Carbonate build-up and slump events on the Benham Bank Denise Faye Janer Marine Science Institute, University of the Philippines, Diliman	Flood inundation modeling of Kaliwa River, Tanay, Rizal using HEC-RAS Adam Paulo Reyes School of Civil, Environmental and Geological Engineering, Mapua University	New interpretations of the geology of the Tadian-Bauko-Sabangan area, Mt. Province Loris Bianca Aballa National Institute of Geological Sciences, University of the Philippines, Diliman
16:40 – 17:00	Multi-phase rifting in the Macolod Corridor: Clues from derivatives of magnetic field anomalies Rurik Austria National Institute of Geological Sciences, University of the Philippines, Diliman	Saltwater intrusion in modeling of affected sedimentary aquifers in Metro Manila Earl Joyce Arnoco School of Civil, Environmental and Geological Engineering, Mapua University	Textural and geochemical evidence for mantle-melt interaction in the peridotites and gabbros of the southern Palawan Ophiolite Florence Annette Labis National Institute of Geological Sciences, University of the Philippines, Diliman
17:30 ~	Cocktails		



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Day 2: December 05, 2019 (Thursday) – Fiesta Pavilion			
08:30 – 12:10	Parallel Sessions		
	Session 7 Mineral Resources I Moderator: Zareth Quimba Rigodon Room	Session 8 Energy Resources Moderator: Edgar Benedict Cutiongco Polkabal Room	Session 9 Geohazards: Landslides Moderator: Liza Socorro Manzano Pandango Room
08:30 – 08:50	Heap leach gold mining in tropical environments: Could this be successfully applied in the Philippines? Douglas Kirwin Geological Consultant	Sandakan Basin, Sulu Sea - Revisited Karla Angelique Valdellon Philodrill Corporation	Rainfall-induced landslide prediction using machine learning: Preliminary results and challenges Ricarido Saturay, Jr. Philippine Science High School – Cordillera Administrative Region Campus
08:50 – 09:10	Mineralogical factors affecting gold recovery in the Masara epithermal Au deposit Isaac Norman Rivera Apex Mining Company Incorporated Itogon-Suyoc Resources Incorporated	Reading into the seismic trace: Seismic attribute mapping in Service Contract No. 6A – offshore Northwest Palawan Basin, Philippines Lara Angeli Mambuay Philodrill Corporation	The September 2018 Naga landslide: Analysis and lessons learned Nathan Azriel Veracruz Philippine Institute of Volcanology and Seismology
09:10 – 09:30	Drill hole grid spacing analysis in nickel laterite exploration: A geostatistical comparison of two Ni-laterite deposits with varying drill hole spacing Rogel Santos MacroAsia Mining Corporation	Exploring for groundwater in a parched section of the tropical island of Marinduque, Philippines Ida Marie Buen Tekton GeoMetrix, Incorporated	Adapting a proactive, risk-based approach in mitigating landslide risk along Philippine roadways Marcius Elaeo Isip Mines and Geosciences Bureau – Central

09:30 – 09:50	Ore-forming mechanisms of diatreme-hosted breccia and vein orebodies: A case for the Acupan epithermal deposit, Baguio Mineral District, Philippines Acer Jian Figueroa National Institute of Geological Sciences, University of the Philippines, Diliman	How geochemical processes influence groundwater signatures Nikki Orcio OceanaGold	GIS based landslide susceptibility mapping of Tiwi, Albay using the landslide information method Sherry May Buentiempo Mines and Geosciences Bureau - Region V
09:50 – 10:10	Implication of lithology and alteration to gold grade and vein width in Masara mine, Eastern Philippines: A present level of understanding Juan Alex Vianne Amoroso Apex Mining Company Incorporated	Clay mineral alteration of selected wells from the Biliran geothermal field John Paul Mendoza Department of Physical Sciences, University of the Philippines, Baguio	Morphometric analysis and identification of debris-flow susceptible alluvial fans after the 2015 Lando and Nona typhoons Francesca Llanes National Institute of Geological Sciences, University of the Philippines, Diliman
10:10 – 10:30	Coffee Break		
	Session 10 Mineral Resources II Moderator: Rogel Santos Rigodon Room	Session 11 Multidisciplinary Approaches III Moderator: Jethro Antonio David Polkabal Room	Session 12 Geohazards: Earthquakes Moderator: Teresito Bacolcol Pandango Room
10:30 – 10:50	Structural controls in Sangilo vein system Mark Lester Llagas Apex Mining Company Incorporated	Satellite remote sensing as a tool for monitoring earthquake- and volcano-related ground deformations Bryan Marfito Philippine Institute of Volcanology and Seismology	Overprinting styles of tectonic deformation: Evidence of shifting primary stress directions around Metro Manila Emmanuel Ramos Tekton GeoMetrix, Incorporated
10:50 – 11:10	Didipio underground Q block model Czarina Reola OceanaGold	Seismic liquefaction assessment of unconsolidated soils using various field methods Patricia Nicole Quimora GHD Pty Ltd.	Impacts of the 27 July 2019 magnitudes (M_w) 5.4, 5.9, and 5.8 Itbayat, Batanes Earthquakes Jeffrey Perez Philippine Institute of Volcanology and Seismology

11:10 – 11:30	Ore mineralization in the Sangilo Mine, Itogon, Benguet Karl Jabagat National Institute of Geological Sciences, University of the Philippines, Diliman	Sedimentary records of extreme wave event deposits in the coastal areas of Zamboanga del Sur, Philippines Sheinna May Claro National Institute of Geological Sciences, University of the Philippines, Diliman	Fault geometry and seismic hazard assessment of the Central Cebu Fault system Raul Benjamin Mendoza National Institute of Geological Sciences, University of the Philippines, Diliman
11:30 – 11:50	Experimenting 2D hot spot analysis for determining top cuts for the Great Hamish Vein in Co-O Mine Lizalyn Giezelle Cadeliña Philsaga Mining Corporation	Biogeography of freshwater fishes as indicator of paleogeographic and tectonic divides Loucel Cui School of Environmental Science and Management, University of the Philippines, Los Baños	Seismotectonics and geologic impacts of the 22 April 2019 Central Luzon earthquake Deo Carlo Llamas Philippine Institute of Volcanology and Seismology
11:50 – 12:10	Mapping hydrothermally-altered minerals in Mankayan, Benguet using Landsat8 and ASTER Jenielyn Padrones Institute of Renewable Natural Resources, University of the Philippines, Los Baños	Modeling the impacts of predicted climate changes on landslide frequency in the Philippines Decibel Faustino-Eslava School of Environmental Science and Management, University of the Philippines, Los Baños	Mid- to deep-focus seismicity as extent implications of the Molucca Sea microplate subduction beneath the Celebes Sea Basin Kent Raven Olario University of Southeastern Philippines
12:10 – 13:00	Lunch		
13:00 – 14:00	Poster Sessions		
14:00 – 14:30	Proto-South China Sea, South China Sea and the Philippine arc system: Chasing and stitching lost, separated, and failed conjugate slabs (Plenary talk) Graciano Yumul, Jr. Cordillera Exploration Co. Inc		
14:30 – 15:00	Proposed Philippine Mineral Reporting Code (PMRC) 2020: An overview Ciceron Angeles, Jr.		
15:00 – 15:30	Continuing Professional Development (CPD) Updates Benjamin Austria		
15:30 – 17:00	Business Meeting Announcement of Newly Elected Board of Trustees		



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POSTER PRESENTATIONS

Day 1 – December 04, 2019 13:00-14:00
 Day 2 – December 05, 2019 13:00-14:00

Tectonics, Stratigraphy and Paleontology	
TSP - 1	Tectonics of the Manila subduction zone: New insights from recent geophysical datasets Leo Armada National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 2	Geology of the Tadian-Cervantes area, Central Cordillera region – revisited Virgillio Elijah Ringor III National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 3	Petrology and geochemistry of the tuff and volcanic breccia in Siquijor Island: Implications for the Cretaceous evolution of Central Philippines John Michael Ausejo Physics and Geology Department, Negros Oriental State University
TSP - 4	Petrogenesis of Ni-rich olivines in the mantle peridotites of the Pujada Ophiolite, southeastern Mindanao Valerie Shayne Olfindo National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 5	Petrogenesis of ultramafic rocks from central Palawan, Philippines Julius Pasco National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 6	Petrological signatures of mafic rocks from the central Palawan Ophiolite, Philippines Jesley Mei Dycoco National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 7	Metamorphosed podiform chromitites in Ulugan Bay, Palawan Betchaida Payot National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 8	Preliminary whole-rock geochemistry of pillow lavas in the Calaguas Island Group, Camarines Norte John Emmanuel Fungo National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 9	How old is Cebu? Clues from zircon U-Pb geochronology Sarena Tarongoy National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 10	Micropaleontological biostratigraphy of a section of Cabagan Formation exposed along Magat River, Isabela Province (Cagayan Valley Basin, Philippines) Abigael Castro National Institute of Geological Sciences, University of the Philippines, Diliman
TSP - 11	Geology and petrography of metamorphic rocks in Calaguas Island Group, Philippines Loraine Faye Sarmiento National Institute of Geological Sciences, University of the Philippines, Diliman

Geohazards: Landslides, Earthquakes and Volcanoes	
LEV - 1	Modeling landslides in Cordillera Administrative Region (CAR) Arturo Daag Philippine Institute of Volcanology and Seismology
LEV - 2	Application of single baseline Real-Time Kinematic (RTK) GPS in the characterization of deep-seated landslides in Brgy. Immuli, Pidigan, Abra and Brgy. Parasanon, Pinabacdao, Samar Morgan Mercado Philippine Institute of Volcanology and Seismology
LEV - 3	Preliminary results on the hydrodynamic modeling of lahars under the Newton-Agham project on quantitative lahar impact and loss assessment under changing land use and climate scenarios Arturo Daag Philippine Institute of Volcanology and Seismology
LEV - 4	Development of earthquake-induced landslide hazard modeling for Cordillera Administrative Region (CAR), Philippines Margarita Dizon Philippine Institute of Volcanology and Seismology
LEV - 5	Horizontal-to-vertical spectral ratio from three-component microtremor measurements to determine ground predominant periods in Metro Davao Maeben Mariah Angay Philippine Institute of Volcanology and Seismology
LEV - 6	Seismic site classification microzonation of Metro Davao based on geology and shear-wave velocity Angelica Olaes Philippine Institute of Volcanology and Seismology
LEV - 7	Estimation of long period ground motion levels using microtremor array measurements in Metro Davao, Philippines Hans Jake Felosopo Philippine Institute of Volcanology and Seismology
LEV - 8	Determination of liquefaction potential index of selected sites in Bacolor and Guagua, Pampanga using refraction microtremor method Oliver Paul Halasan Philippine Institute of Volcanology and Seismology
LEV - 9	GPR as a complementary tool for site specific liquefaction assessment Mij Dela Cruz Philippine Institute of Volcanology and Seismology
LEV - 10	Screw Driving Sounding (SDS): An emerging method in site-specific evaluation of liquefaction potential in selected areas of Pampanga affected by the April 22, 2019 M_w 6.1 Zambales earthquake event Andrew Serrano Philippine Institute of Volcanology and Seismology
LEV - 11	Horizontal to vertical spectral ratio: A microtremor study at the liquefaction sites in Guagua and Bacolor, Pampanga Leandro Ernesto Aque Philippine Institute of Volcanology and Seismology
LEV - 12	Isoseismal map generation of significant earthquakes in the Philippines from 2017 to 2019 using spatial interpolation of intensity reports Daniel Jose Buhay Philippine Institute of Volcanology and Seismology

LEV - 13	Monitoring the interseismic deformation of the Valley Fault System through Global Positioning System Teresito Bacolcol Philippine Institute of Volcanology and Seismology
LEV - 14	“TITAN MK. II: Earthquake simulation table” Development of an earthquake simulation table for structural excitations of high rise building models Emmanuel Balanon Ultra Construction Innovators
LEV - 15	An interdisciplinary study of volcanic hazards: Case study associated with a AD1754 type eruption of Taal Volcano, Batangas Province, Philippines Perla Delos Reyes Philippine Institute of Volcanology and Seismology

Energy and Mineral Resources

EMR - 1	Impacts of igneous units on the coal quality: Malangas case Ricardo Luna IV School of Civil, Environmental and Geological Engineering, Mapua University
EMR - 2	Petrology of igneous units in the Suyoc epithermal prospect: Implications to the magmatic conditions in the Mankayan Mineral District in North Luzon Jillian Aira Gabo-Ratio National Institute of Geological Sciences, University of the Philippines, Diliman

Multidisciplinary Approaches

MDA - 1	Crustal structure of the Macolod Corridor: Deep imaging through 2D gravity modelling Edd Marc Reyes National Institute of Geological Sciences, University of the Philippines, Diliman
MDA - 2	Cretaceous basement of Cebu island: Constraints from gravity and magnetic anomalies Carla Dimalanta National Institute of Geological Sciences, University of the Philippines, Diliman
MDA - 3	Coastline change in Jaro, Iloilo City in response to the construction of a flood canal Paul Caesar Flores Marine Science Institute, University of the Philippines, Diliman
MDA - 4	GeoMapperPH: Accurate data collection anytime, anywhere Princess Di Pascual Philippine Institute of Volcanology and Seismology
MDA - 5	Hazards and risk assessment using GeoAnalyticsPH: A case study for tsunami hazard in the Philippines Margarita Andrea Mahor Philippine Institute of Volcanology and Seismology
MDA - 6	Use of geographic information system to fast track tsunami hazard mapping in the Philippines John Harold Tabuzo Philippine Institute of Volcanology and Seismology
MDA - 7	Liquefaction assessment of Malabon City, Metro Manila using geomorphological and geotechnical approach Jedrick Baylon School of Civil, Environmental and Geological Engineering, Mapua University

MDA - 8	Geologic and geotechnical data optimization for a resilient water resource system in Metro Manila Clement Fajardo Cardno Emerging Market Services (Philippines) Inc.
MDA - 9	Determination of forms of concrete deterioration in selected government structures using concrete petrography Jeremy James Jimenez National Institute of Geological Sciences, University of the Philippines, Diliman
MDA - 10	Petrographic investigation of concrete aggregates of the deteriorated Otis Bridge in Paco, Manila Patria Jela Peña School of Civil, Environmental and Geological Engineering, Mapua University
MDA - 11	Elemental analysis of parts of atomizers and aerosol produced by electronic cigarettes Hannah Grace Ernia Department of Physical Sciences and Mathematics, University of the Philippines, Manila
MDA - 12	Indoor PM _{2.5} and PM ₁₀ in two fitness centers along Pedro Gil Street, Manila Gabriel Ian Guiao Department of Physical Sciences and Mathematics, University of the Philippines, Manila
MDA - 13	Physico-chemical characterization of inhalable ash particles collected during the February 2018 volcanic event of Mt. Mayon Jelly Ayz Beo Department of Physical Sciences and Mathematics, University of the Philippines, Manila
MDA - 14	GIS-based spatial analysis of sinkhole occurrence in Cebu City, Philippines Regina Martha Lumongsod National Institute of Geological Sciences, University of the Philippines, Diliman