



RACCETCon x SEECON 2026

March 12-13, 2026

Bai Hotel Cebu, Mandaue City, Cebu

RACCETCon 2026: Synergizing Transformative Technologies for a Sustainable Society

SEECOn 2026: Charting New Frontiers towards a Smart and Green Society

DAY 1 March 12, 2026

8:00 - 9:00 AM Registration

9:00 - 9:05 AM Opening Ceremonies
Invocation
The Philippine National Anthem

9:05 - 9:15 AM Welcome Address
Fr. Jesuraj Anthoniappen, SVD, PhD
Vice President for Academic Affairs, University of San Carlos

9:15 - 9:20 AM Rationale and Setting the Tone
Dr. Marlowe Edgar C. Burce
Professor, Department of Computer Engineering
Former Asst. Dean, School of Engineering, University of San Carlos

9:20 - 9:30 AM Inspirational Message
Dr. Tristan L. Abando
Regional Director, DOST Region 7

9:30 - 10:00 AM Keynote Address 1
Dr. Michael Lochinvar Abundo
CEO, OceanPixel
Adjunct Professor, University of San Carlos

10:00 - 10:10 AM Q&A and Awarding of Certificate

10:10 - 10:25 AM Spotlight Sessions
Video Presentation: **AHCIL Laboratories, Inc.**
Video Presentation: **Skanlog**

Ms. Jogen Mil
Representative, **Cebuano Arts Club**

10:25 - 10:40 AM Health Break

10:40 - 12:10 PM Break Out 1

Parallel Session 1
ROBOTICS TECHNOLOGY IN BIOMEDICAL DEVICES
Venue: ZULA 1
Moderator: Dr. Luis Gerardo S. Cañete Jr.

Parallel Session 2
SOFTWARE SYSTEMS FOR THE COMMUNITY
Venue: ZULA 2
Moderator: Dr. Marlowe Edgar C. Burce

Parallel Session 3
INTELLIGENT CONTROLS FOR SUSTAINABLE SYSTEMS
Venue: HUMABON 1
Moderator: Dr. Alberto Baniacia

10:40 - 11:00 AM Paper 1
Dumalagan, Danica Marie A.
Reduction of Forearm Electrical Stimulation-Induced Discomfort by Evaluating Envelope Signal Parameters

Paper 5
Duero, Dione S.
Development of a Lightweight Deep Learning Model for Gesture-to-Speech Conversion of Cantilangnon Sign Language

Paper 9
Petilla, Chito
Enabling smart sustainable energy: Advances in IoT-driven real-time monitoring for stand-alone solar charge control systems

11:00 - 11:20 AM Paper 2
D'Silva, Andre Kimberly Trish D.
Investigation of Forearm Electrode Matrix Locations in Functional Electrical Stimulation for Finger Extension

Paper 6
Plaza, Nelyne Lourdes
Hybrid Online Archiving System using Pagerank Algorithm

Paper 10
Metra, Danilo
Experimental investigation of air as an alternative working fluid in a hydraulic ram pump system

11:20 - 11:40 AM Paper 3
Galanida, John Von Lawdwig S.
Development of an FES-based Foot Drop Assist System

Paper 7
Cantila, Breig Dinese A.
E-HEALom: A Mobile Application Integrating AI and Forecasting to Improve Mental Health Accessibility and Support

Paper 11
Infante, Paul John
Development of a low-cost power harmonics monitoring device for LED lighting systems: An experimental case study

11:40 - 12:00 PM Paper 4

Paper 8

Paper 12

	Dalin, John Roy R. <i>Machine Learning-Based Analysis of fNIRS Signals for Drowsiness Detection in Motorcycle Helmets</i>	Bucalon, Sharon A. <i>One-Tap Emergency Application</i>	Carreon, Ranjea <i>From policy intent to adoption outcomes: A systematic review of electric vehicle policy effectiveness in the Philippines</i>
12:00 - 12:10 PM	Presentation of Certificates		
12:10 - 1:30 PM	Lunch break		
1:30 - 3:00 PM	Break Out 2 Parallel Session 4 APPLIED SMART AUTOMATION Venue: ZULA 1 Moderator: Engr. Alvin Joseph S. Macapagal Parallel Session 5 COMPUTER SYSTEMS INTEGRATION 1 Venue: ZULA 2 Moderator: Dr. Antoniette M. Cañete Parallel Session 6 ADVANCES IN RENEWABLE ENERGY Venue: HUMABON 1 Moderator: Engr. Jonathan Brusas		
1:30 - 1:50 PM	Paper 13 Dela Rama, Ralph Arven E. <i>Investigating Temperature & Humidity Regulation Factors in a non-Image-based Sensor Fusion Chicken Egg Incubation System</i>	Paper 17 Imperial, Thairell C. <i>Development of a Raspberry Pi-FPGA Prototype Platform Using Secondary Memory Interface Protocol for Educational Robotics Applications</i>	Paper 21 Alegarbes, Jay Emanuel <i>Integration of artificial intelligence and solar hydroponics: A system dynamics evaluation in a local context</i>
1:50 - 2:10 PM	Paper 14 Canque, Ivor Louisetyne <i>Automated Imaging System for Microplastics Sample Classification using Convolutional Neural Network</i>	Paper 18 Haim, Stephen H. <i>Automated HDL Code Generation for Reconfigurable Robotic Platforms: A Template-Based Correctness-By-Reuse Approach</i>	Paper 22 Balbalozza, Kyle Shan Leouel <i>Hydrodynamic modeling and motion control strategies for floating photovoltaic systems: A comprehensive review</i>
2:10 - 2:30 PM	Paper 15 Dumalagan, Josef Dante A. <i>Low-Cost Automated Fluid Mixing Device for Agitation Experiments: Computational Fluid Dynamics-Based Analysis of Design Specifications</i>	Paper 19 Aguilar, Sean Karl Tyrese G. and Elciario, Von Juztis A. <i>Lab in A Box: A Portable and Low-Cost Electronics Learning System for Filipinos</i>	Paper 23 Bulawin, Jenny Rose <i>Integration of H-Type Darrieus wind turbine with Magnus wind turbine for alternative electric power generation</i>
2:30 - 2:50 PM	Paper 16 Torres, Emmanuel <i>Study on Resilient Real-Time Edge Device Localization in Wi-Fi Mesh Networks</i>	Paper 20 Acaín, Jhaycee Anthony P. <i>Lab in A Box: Performance Assessment and Reimplementation of LABSoft</i>	Paper 24 Lamadrid, Peter Clyde <i>Physical characterization of distillate oil produced from waste lubricant oil using small-scale fabricated reactor equipment</i>
2:50 - 3:00 PM	Presentation of Certificates		
3:00 - 3:15 PM	Health Break		
3:15 - 4:45 PM	Break Out 3 Parallel Session 7 ROBOTICS IN ENVIRONMENTAL RESEARCH Venue: ZULA 1 Moderator: Engr. James Michael C. Cañete Parallel Session 8 SOFTWARE SYSTEMS ANALYSIS AND DESIGN 1 Venue: ZULA 2 Moderator: Engr. Blasmina C. Mayol		
3:15 - 3:35 AM	Paper 25 Paquibot, Jun Niel <i>Development of an ArUco Marker-based Localization System for an Underwater Glider Robot</i>	Paper 29 Etchon, Fae Mylene M. <i>Comparative Analysis of Existing and Proposed Pipeline Leak Detection System</i>	
3:35 - 3:55 AM	Paper 26 Cañete, Luis <i>A Parametric Approach to Modeling Multiple Buoyancy Controller Enabled Underwater Glider</i>	Paper 30 Ganancias, Franklin M. <i>Development of Courier Management Application for NEMSU Cantilan's Centralized Recommender System of Extension Program and Services</i>	
3:55 - 4:15 PM	Paper 27 Ablir, Precious Julia <i>Initial Investigation of Voith Schneider Propeller Thrust Performance with Pitch Angle Variation using NACA 0012</i>	Paper 31 Maligsa, Iza F. <i>Integration of Sentiment Analysis Algorithm on Customer Satisfaction of Frontline Offices in NEMSU – Cantilan</i>	
4:15 - 4:35 PM	Paper 28 Ogoc, Shyrill D. <i>Thermal Energy Harvesting Using Thermoelectric Generator (TEG) Across Different Soil Types: An In-Depth Review and Future Directions</i>	Paper 32 Calipayan, Jose Jr. P. <i>The Role of Facebook Group Engagement in Moderating the Relationship Between E-Waste Awareness, Environmental Concern, and Intentions to Dispose of E-Waste Properly for Sustainability</i>	
4:35 - 4:45 PM	Presentation of Certificates		
5:00 PM	End of Day 1		



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SEECON 2026: Charting New Frontiers towards a Smart and Green Society

DAY 2 March 13, 2026

8:00 - 9:00 AM	Registration		
9:00 - 9:10 AM	Day 1 RECAP Dr. Patrick John Y. Lim Director, Research, Development, Extension, and Publications Office (RDEPO), University of San Carlos		
9:10 - 9:40 AM	Keynote Address 2 Prof. Yasuyuki Ikegami Director, Institute of Ocean Energy, Saga University		
9:40 - 9:50 AM	Q&A and Awarding of Certificate		
9:50 - 10:20 AM	Keynote Address 3 Prof. Kangbin Yim Supervisor, Lab of Information Systems Security Assurance, SoonChunHyang University		
10:20 - 10:30 AM	Q&A and Awarding of Certificate		
10:30 - 10:40 AM	Health Break		
10:40 - 10:45 AM	Spotlight Sessions Video Presentation: AHCIL Laboratories, Inc. Video Presentation: Skanlog		
10:45 - 11:30 AM	Industry Insights by Skanlog Engr. Jeff Allego Senior Software Manager, Skanlog		
11:30 - 11:40 AM	Q&A and Awarding of Certificate		
11:40 - 1:00 PM	Lunch break		
1:00 - 2:30 PM	Parallel Session 9 ROBOTICS TECHNOLOGIES FOR SUSTAINABILITY Venue: ZULA 1 Moderator: Dr. Philip Virgil B. Astillo Parallel Session 10 COMPUTER SYSTEMS INTEGRATION 2 Venue: ZULA 2 Moderator: Engr. Jan Dave Q. Campañera Parallel Session 11 SUSTAINABLE ENVIRONMENTAL RESOURCE SYSTEMS Venue: HUMABON 1 Moderator: Dr. Francis Dave Siacor		
1:00 - 1:20 PM	Paper 33 Ogue, Dave Nelson F. <i>Redevelopment and Evaluation of an IoT Urban Farming System Using ESP32 with Sensors, Cloud Database, and Mobile App Monitoring</i>	Paper 37 Gayondato, Elen Luz N. <i>BIDS: A Web-based Borrowing System Integrated with An Automated Electrical and Electronic Components Dispensing System</i>	Paper 41 Alegado, Erwin <i>Simulating the water distribution system of Barangay Lawaan, Alcantara, Cebu: A system dynamics modelling approach</i>
1:20 - 1:40 PM	Paper 34 Grijaldo, Vicky Q.	Paper 38 Abellana, Benedict A. and Ruiz, Jehu Lyndon J.	Paper 42 Cabije, Angelo

	<i>Fogponics as an Emerging Soilless System for Urban Agriculture: A Comparative Review</i>	<i>Design and Development of a Low-Cost Portable Functional Electrical Stimulation (FES) with Touch User Interface</i>	<i>Mechanistic insights into the simultaneous biosorption and bioprecipitation of copper, nickel, and chromium in an alkaline rotating biological contractor (RBC-PMT)</i>
1:40 - 2:00 PM	Paper 35 Galicia, Ivan Michael Jon <i>Non-Intrusive Coconut Maturity Characterization Using Ultrasonic Wave Analysis With Machine Learning-Based Maturity Level Identification</i>	Paper 39 Pastor, Marc Daniel R. <i>Enhanced Web Application for USC DCPE Homegrown Attendance Monitoring System</i>	Paper 43 Sandoval, Milcarl <i>Water supply adequacy of Casay Rural Waterworks and Sanitation Association, Inc. (CARWASAI): A system dynamics modeling approach</i>
2:00 - 2:20 PM	Paper 36 Sodario, Sharina B. <i>EcoFarm Connect: Integrating Digital Market Access and IoT-Enabled Smart Farming in ASEAN Agriculture</i>	Paper 40 Astillo, Philip <i>AiO-SPARK: Development of All-in-One Self-service Printing Access and Retrieval Kiosk</i>	Paper 44 Villarosa, Rica <i>Why urban retention ponds underperform: A system-level diagnostic framework of urban retention pond</i>
2:20 - 2:30 PM	Presentation of Certificates		
2:30 - 2:40 PM	Health Break		
2:40 - 4:10 PM	Break Out 5		
	Parallel Session 13 SOFTWARE SYSTEMS ANALYSIS AND DESIGN 2 Venue: ZULA 2 Moderator: Dr. Godwin S. Monserate		Parallel Session 14 SMART AND ENERGY EFFICIENT SYSTEMS Venue: HUMABON 1 Moderator: Engr. Earl Ray Aniñon
2:40 - 3:00 PM	Paper 45 Rubenial, Jehu Roeh C. <i>GIYA: A Web Application for Effective Information Dissemination</i>		Paper 49 Credo, Marvin <i>Voltage sag phenomena: A comprehensive review of classification techniques and mitigation strategies</i>
3:00 - 3:20 PM	Paper 46 Villarosa, Knash Josef <i>Offline Capable Learning Management System for SHS-STEM Education</i>		Paper 50 Bundoc, Rei Eryca <i>Volatile matter dynamics and drying characteristics of mahogany leaves for energy efficient biochar production</i>
3:20 - 3:40 PM	Paper 47 Saavedra, Linda E. <i>Digital Greenhouses for Cebu: Progress, Gaps and Educational Solutions</i>		Paper 51 Laput, Carl Benz <i>Design, fabrication, and testing of a fouling deposition rate system of window-type airconditioner using load cell analysis</i>
3:40 - 4:00 PM	Paper 48 Fabian, Elline L. <i>Intent-Aware Artificial Intelligence: Frameworks, Applications, and Emerging Research Directions – A Survey</i>		Paper 52 Rollan, Aisha Marie <i>Machine learning path loss model of 5G microcell base stations in a selected area of Cebu City</i>
4:00 - 4:10 PM	Presentation of Certificates		
4:10 - 4:25 PM	Health Break		
4:25 - 4:50 PM	Awarding and Closing Ceremonies		
4:50 - 5:00 PM	Closing Remarks Dr. Rosana J. Ferolin Dean, School of Engineering, University of San Carlos		