



3rd International Research Conference on Innovations in Engineering, Science and Technology

co-hosted by: Rajamangala University of Technology Thanyaburi (Thailand)
University of Transport Technology (Vietnam)

3rd IRCIEST

CONFERENCE PROGRAM

SEPTEMBER 27 - 29, 2017

BatStateU Pablo Borbon Main I

Batangas City, Philippines



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INTERNATIONAL ADVISORY BOARD (IAB)

To provide a technical perspective on the conference proceedings, promote quality assurance and ensure strict adherence to accepted international standards in the conduct of the conference, an **International Advisory Board (IAB)** has been created for this International conference. The IAB shall be sought for professional and technical insights on matters that may impact the conduct of the conference. It is composed of experts and professionals from different local and foreign Universities and primarily serves as the general oversight committee of the 3rd IRCIEST.

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INTERNATIONAL SCIENTIFIC COMMITTEE (ISC)

To ensure the integrity and quality of the research papers to be presented in this conference and ultimately enhance the papers' impact factor, an **International Scientific Committee (ISC)** has been created specifically for IRCIEST 2017. The committee is composed of a pool of local and international experts on various fields of study, who shall primarily review the research papers by providing written, unbiased feedback on the scholarly merits and scientific value of the work and ensuring the work's accuracy and originality. Further, selected research papers will be published in the **International Research Journal on Innovations in Engineering, Science and Technology (IRJIEST)**, which is one of the major outputs of the 3rd IRCIEST.

Ms. Lynette Johns - Boast

Australian National University,
Australia

Dr. William SM. Gruezo

University of the Philippines - Los Baños,
Philippines

Dr. Celso B. Co

Technological Institute of the Philippines

Dr. Harry Kim

Hansei University, Korea

Dr. Aurelio Delos Reyes

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Dr. Cyren Rico

University of Texas, El Paso

Dr. Mario A. Galang

University of the Philippines - Los Baños,
Philippines

Dr. Mary Grace B. Saldajeno

Scientist, Agriculture Research and De-
velopment Division, DOLE Philippines Inc

Dr. Emmanuel A. Gonzales

Institute of Electrical and Electronics Engineers

Dr. Oliver B. Villaflores

University of Santo Tomas, Philippines

PROGRAM AT A GLANCE

Day 1: September 27, 2017—Wednesday		
7:00 am—8:30 am	Registration	Ground Floor, CITE Bldg.
8:30am – 9:00am	Opening Program Welcome Remarks: Engr. Albertson D. Amante Conference Chair, 3 rd IRCIEST Vice President for Research, Development & Extension Services Batangas State University Opening Message: Dr. Tirso A. Ronquillo President, Batangas State University	CITE Amphitheater, 4 th Flr.
9:00am – 10:00 am	Keynote Speech: Converging with the ASEAN Community in Fostering Innovative Researches in Engineering, Science and Technology Hon. Fortunato T. de la Peña Secretary, Department of Science and Technology	CITE Amphitheater, 4 th Flr.
10:00am – 10:15 am	Ribbon Cutting Ceremony for Poster Paper Presentation	4 th Flr., CITE Bldg.
10:15am – 10:45 am	Tea / Coffee Break; Poster Viewing	4 th Flr., CITE Bldg.
10:45am – 11:45 am	Plenary Session A: CDIO Framework for Education Reformation at RMUTT Associate Professor Dr. Natha Kuptasthien Assistant to the President for International Relations Director of International Strategy Division Rajamangala University of Technology Thanyaburi	CITE Amphitheater, 4 th Flr.
11:45am – 1:00 pm	Lunch	Gov. F. Leviste Gymnasium
1:00-3:00 pm	Parallel Paper Presentations Session 1A: Energy and Environment Session 1B: Science and Technology Education Session 1C: Material Science and Biochemistry	7 th Flr., CIRTC Bldg., AVR1 7 th Flr., CIRTC Bldg., AVR2 6 th Flr., CIRTC Bldg. ALTS Lab
1:00-2:00 pm	Master Class A: Robotics and Artificial Intelligence Speaker: Dr. Elmer P. Dadios De la Salle University	2 nd Flr., Lecture Room, CITE Bldg.
2:00-3:00 pm	Master Class B: Senses for Innovation: Role of Sensory and Consumer Science in Food Innovation Process Speaker: Dr. Maria Leonora dL. Francisco University of the Philippines - Diliman	2 nd Flr., Lecture Room, CITE Bldg.
3:00pm – 3:20pm	Tea / Coffee Break; Poster Viewing	7 th Flr., CIRTC Bldg., Function Hall, 2 nd Flr., CITE Bldg.
3:20pm – 5:40pm	Parallel Paper Presentations Session 1A (continuation): Energy and Environment Session 1B: Process Improvement Session 1C (continuation): Material Science & Biochemistry	7 th Flr., CIRTC Bldg., AVR 1 7 th Flr., CIRTC Bldg., AVR 2 6 th Flr., CIRTC Bldg. ALTS Lab
3:20-4:20 pm	Master Class C: LabVIEW and National Instruments Speaker: Engr. Jack Aguilar National Instruments	2 nd Flr., Lecture Room, CITE Bldg.
5:40pm – 6:00pm	Registration for the Conference Banquet	BatStateU Tower of Wisdom Grounds
6:00pm – 8:00pm	Conference Banquet	BatStateU Tower of Wisdom Grounds

PROGRAM AT A GLANCE

Day 2: September 28, 2017—Thursday		
8:00am – 8:15am	Re-cap of Day 1	CITE Amphitheater, 4 th Flr.
8:15am – 9:15am	Plenary Session B: The Model for Research and Innovation Development at the Rajamangala University of Technology Thanyaburi (RMUTT) Assistant Professor Dr. Sommai Pivsa - Art Vice President for Academic and Research Affairs Rajamangala University of Technology Thanyaburi	CITE Amphitheater, 4 th Flr.
9:15am – 9:45am	Tea / Coffee Break; Poster Viewing	4 th Flr., CITE Bldg.
9:45am – 10:45am	Plenary Session C: A Two Decade Journey of an Internet Entrepreneur Mr. Eric Tomacruz Trustee, Philippine Development Foundation	CITE Amphitheater, 4 th Flr.
10:45am – 11:45am	Plenary Session D: Israel Innovation System Mr. Sagiv Massad Director, Technology and Cyber Security Business Profile Board of Director, Israel Chamber of Commerce of the Philippines	
12:00nn – 1:00pm	Lunch	Gov. F. Leviste Gymnasium
1:00pm – 3:00pm	Parallel Paper Presentations Session 2A: Food and Agriculture Session 2B: Electronics Master Class D: Technovation Session The Philippine Startup Support Ecosystem Ms. April Ong Vaño Business Development and Project Consultant Startup Ecosystem Development Program Department of Trade and Industry	7 th Flr., CIRTC Bldg., AVR 1 7 th Flr., CIRTC Bldg., AVR 2
1:00pm-1:45pm		2 nd Flr., Lecture Room, CITE Bldg.
1:45pm-2:30pm	Building Batangas: What Can Local Founders Learn from the Nation's Most Successful Technopreneurs Mr. Ezra Ferraz University of California Berkeley Writer and Columnist Author of The Finishers: Tech Entrepreneurs	
2:30pm – 3:15pm	PhilDev Incubator and Mentorship Program Mr. Samuel Guevarra Executive Director, Philippine Development Foundation	
3:00pm – 3:20pm	Tea / Coffee Break; Poster Viewing	2 nd Flr., CITE Bldg.
3:20pm – 6:00pm	Parallel Paper Presentations Session 2A (Continuation): Food and Agriculture Session 2B: Electronics and ICT Master Class D (Continuation): Workshop: Ideation, Business Model Canvass and Pitching Mr. Jacinto Asuncion, Jr. UP Enterprise	7 th Flr., CIRTC Bldg., AVR 1 7 th Flr., CIRTC Bldg., AVR 2
3:30pm-4:15pm		2 nd Flr., Lecture Room, CITE Bldg
4:15pm-5:00pm	Mr. Artie Lopez Co-Founder & Startup Coach - Brainsparks	
6:00pm – 6:20pm	Registration for the Fellowship Night	
6:20pm – 8:00pm	Fellowship Night	Gov. F. Leviste Gymnasium

IRCIEST 2017 AGENDA**Opening Program** (September 27, 8:00am – 10:00am)Venue: **CITE Amphitheater, 4th Flr.**Master of Ceremonies: **Mr. Kristoffer Conrad Tejada**Invocation & Philippine National Anthem: **Ad Libitum Chorus**Welcome Remarks: **Engr. Albertson D. Amante**, Conference Chair
Vice President for Research, Development & Extension Services, Batangas State University

Message and Introduction of the Keynote Speaker:

Dr. Tirso A. Ronquillo
President, Batangas State UniversityKeynote Speech: **Converging with the ASEAN Community in Fostering Innovative Researches in Engineering, Science and Technology****Hon. Fortunato T. Dela Peña**
Secretary, Department of Science and Technology**Conference Banquet and Cultural Show** (September 27, 6:00pm – 8:00pm)Venue: **Batangas State University Grounds in front of Tower of Wisdom**Master of Ceremonies: **Mr. Michael Lagaya**Welcome Remarks: **Dr. Erma B. Quinay**,
Vice President for Academic Affairs, Batangas State University

Introduction of the Guest of Honor:

Dr. Tirso A. Ronquillo
President, Batangas State University

Message in behalf of RMUTT:

Associate Professor Dr. Natha Kuptasthien
Assistant to the President for International Relations and
Director of International Strategy Division

Message in behalf of UTT:

MSc. Le Thanh Hai
Department of Science, Technology and International CooperationClosing Remarks: **Atty. Luzviminda C. Rosales**,
Vice President for Administration and Finance, Batangas State University

Dinner and Cultural Presentations

Fellowship and Awards Night (November 28, 6:00pm – 8:00pm)Venue: **Gov. Feliciano Leviste Memorial Multipurpose Gymnasium**Master of Ceremonies: **Mr. Michael Lagaya**Opening Remarks: **Engr. Albertson D. Amante**,
Vice President for Research, Development & Extension Services, Batangas State University**Dinner and Company Presentations**Message: **Dr. Alexander R. Madrigal**
Director, DOST Region IVA

Awarding Ceremony (Best Oral Paper, Best Poster Paper)

Closing Remarks: **Dr. Tirso A. Ronquillo**
President, Batangas State University

IRCIEST 2017 AGENDA**Plenary Sessions (September 27 – 28)**Venue: **CITE Amphitheater, 4thFlr.**Master of Ceremonies: **Mr. Kristoffer Conrad Tejada**

Plenary Session A

Title: **CDIO Framework for Education Reformation at RMUTT**Speaker: **Associate Professor Dr. Natha Kuptasthien**Assistant to the President for International Relations and Director of International Strategy Division
Rajamangala University of Technology Thanyaburi

Plenary Session B

Title: **The Model for Research and Innovation Development at the Rajamangala University of Technology Thanyaburi**Speaker: **Assistant Professor Dr. Sommai Pivsa-Art**Vice President for Academic and Research Affairs
Rajamangala University of Technology Thanyaburi

Plenary Session C

Title: **A Two Decade Journey of an Internet Entrepreneur**Speaker: **Mr. Eric Tomacruz**

Trustee, Philippine Development Foundation

Plenary Session D

Title: **Israel Innovation System**Speaker: **Mr. Sagiv Massad**Director, Technology and Cyber Security Business Profile
Board of Director, Israel Chamber of Commerce of the Philippines**Master Classes (September 27, 1:00PM - 5:00PM)**Venue: **Lecture Room, International Affairs Office, 2nd Flr., CITE Bldg.**

Master Class A

Session Chair: **Engr. Divina Gracia D. Ronquillo**, Batangas State UniversityTitle: **Robotics and Artificial Intelligence**Speaker: **Dr. Elmer P. Dadios**

De la Salle University Taft, Manila, Philippines

Master Class B

Session Chair: **Dr. Shirley G. Cabrera**, Batangas State UniversityTitle: **Senses for Innovation: Role of Sensory and Consumer Science in Food Innovation Process**Speaker: **Dr. Maria Leonora dL. Francisco**

University of the Philippines - Diliman, Quezon City, Philippines

Master Class C

Session Chair: **Engr. Anton Louise De Ocampo**, Batangas State UniversityTitle: **LabVIEW and National Instruments**Speaker: **Engr. Jack Aguilar**

National Instruments

Master Class (September 28, 1:00PM - 5:00PM)Venue: **Lecture Room, International Affairs Office, 2nd Flr., CITE Bldg.**

Master Class D: Technovation Session

Session Chair: **Mr. John Richard Esguerra**, Batangas State UniversityTitle: **The Philippine Startup Support Ecosystem**Speaker: **Ms. April Ong Vaño**Business Development and Project Consultant, Startup Ecosystem Development Program
Department of Trade and IndustryTitle: **Building Batangas: What Can Local Founders Learn from the Nation's Most Successful Technopreneurs**Speaker: **Mr. Ezra Ferraz**University of California Berkeley
Writer and Columnist Author of The Finishers: Tech EntrepreneursTitle: **PhilDev Incubator and Mentorship Program**Speaker: **Engr. Samuel Guevarra**

Executive Director, Philippine Development Foundation

Title: **Workshop on Ideation, Business Model Canvass and Pitching**Speakers: **Mr. Jacinto Asuncion, Jr.** and **Mr. Artie Lopez**

UP Enterprise

Co-Founder & Startup Coach - Brainsparks

Poster Presentations (September 27 – 28)Venue: **4th Flr., CITE Building**

CONTRIBUTING PAPERS

Oral Presentation – Session 1C: Biochemistry		
Code	Time	Research Title
2017-03A	3:20 - 3:40	Dyslipidaemia Diminished Oxidative Burst Production and Intracellular Killing of Human Monocyte <ul style="list-style-type: none"> • Rungnapa, Sranujit Surachart, Buddhisa Kanchana, Usuwanthim Patcharaporn, Tippayawat Rajamangala University of Technology Thanyaburi
2017-03B	3:40 - 4:00	Optimization and Response Surface Modelling of Activated Carbon Production from Mahogany Fruit Husk for Removal of Chromium (VI) from Aqueous Solution <ul style="list-style-type: none"> • Bryan John A. Magoling, Angelica A. Macalalad Batangas State University
Oral Presentation – Session 2B: Electronics		
2017 - 05A	1:00 - 1:20	Implementation of Van der Waals Constants for LPG and Methane Gas Detection and Quantification <ul style="list-style-type: none"> • Gil B. Barte Batangas State University
2017- 05B	1:20 - 1:40	Hardware Implementation of an Error Detection Method using Parity Bit with ASK and FSK Wireless Transmitter <ul style="list-style-type: none"> • Robert R. Bacarro, MECE Surigao State College of Technology
2017 - 05C	1:40 - 2:00	Adaptive Lighting System to Characterize growth of crops <ul style="list-style-type: none"> • Anton Louise De Ocampo, Elmer P. Dadios Batangas State University De La Salle University
2017 - 05D	2:00 - 2:20	Programmable Logic Controller (PLC)-Based Intelligent Traffic Light Control Simulator <ul style="list-style-type: none"> • Ribomapil D. Nacorda, Jessie Nigparanon, Lloyd L. Tejano Bohol Island State University Main Campus
2017-05E	2:20 - 2:40	Motorcycle Anti-Theft Device (MAnDe) <ul style="list-style-type: none"> • Shirley E. Maranan, Jerome Z. Macalindong, John Carlo M. Payas, Ivanna Shane B. Furto, Jeffrey P. Maranan Batangas State University
2017-05F	2:40 - 3:00	Wireless Sensor Node For Real-Time Taal Gas Emission Monitoring (Taal Gem), A Device For Predicting Volcanic Activity <ul style="list-style-type: none"> • Gina R. Eje Batangas State University
2017-05G	3:00 - 3:20	Model of Dynamic Resource Sharing for Performance Analysis In 3G Communication Network <ul style="list-style-type: none"> • Do Xuan Thu University of Transport Technology
2017-05H	3:40 - 4:00	ECHO: A WiFi – Based Emergency Communication Platform <ul style="list-style-type: none"> • Edcel Torralba, Albertson Amante, Albert Villena Batangas State University
2017-05I	4:00 - 4:20	Wireless Acquisition for Vigilant Earthquake in the Sea (WAVES) <ul style="list-style-type: none"> • Albert Villena, Albertson Amante, Edcel Torralba Batangas State University
Oral Presentation – Session 1A: Energy and Environment		
2017 - 06A	1:00 - 1:20	Soil Density of the Extended Shoreline in Napo, Loon, Bohol <ul style="list-style-type: none"> • Nenita M. Abarado Bohol Island State University
2017 - 06B	1:20 - 1:40	Identification, Abundance and Diversity of Diatoms in Calumpang River, Batangas <ul style="list-style-type: none"> • Jodi Belina A. Bejer, Remilyne R. Labador, Marie Glaiza M. Montales Batangas State University
2017 - 06C	1:40 - 2:00	Sustainability of the Water Supply from Groundwater Extraction in OMSC Labangan Campus Basis for OMSC Labangan Water Development Plan <ul style="list-style-type: none"> • Michelle D. Enriquez Occidental Mindoro State College

CONTRIBUTING PAPERS

2017 - 06D	2:00 - 2:20	Evaluation and Comparison of Oil and Water Sorption Capacities of Inorganic Materials for Removal of Oil from Contaminated Water <ul style="list-style-type: none"> Lucita C. de Guzman, Hazel Lynn C. Maganto, Florgine R. Martizano, Reynelyn Lou E. Mistio, Mae Lann Joy G. Tayona University of the Philippines Visayas
2017 - 06E	2:20 - 2:40	Species Composition, Length-Weight Relationship And Catch Per Unit Effort (Cpue) Of Fishes In Puerto Princesa Bay, Palawan, Philippines <ul style="list-style-type: none"> Jeric B. Gonzalez, Bernie G. Mantes, Emily Moyu Romblon State University-San Agustin Campus
2017 - 06F	2:40 - 3:00	Biomass Production And Nutrient Uptake Of <i>Paraserianthes falcataria</i> (L.) As Affected By Carbonized Rice Hull And Arbuscular Mycorrhizal Fungi Grown In An Artificially Copper Contaminated Soil <ul style="list-style-type: none"> Reuben James C. Rollon, June Emmanuel V. Galleros, Gidel R. Galos Leo Jude D. Villasica, Chime M. Garcia Caraga State University
2017 - 06G	3:20 - 3:40	Assessment Of Groundwater Quality For Irrigation At Malamawi Island, Basilan, Philippines <ul style="list-style-type: none"> Alejandro A. Jalil, Roger A. Luyun, Jr., Aurelio A. Delos Reyes, Jr., Victorino A. Bato Basilan State College
2017 - 06H	3:40 - 4:00	Soil Erosion Modeling Using Usle/Rusle and Aced Method <ul style="list-style-type: none"> Irismay T. Jumawan Negros Oriental State University
2017 - 06I	4:00 - 4:20	A Comparative Study on the Performance of Selected Gasoline Engines using Hydroous Bioethanol Blend in the Philippines <ul style="list-style-type: none"> Nathaniel Ericson R. Mateo, Shirley C. Agrupis Mariano Marcos State University
2017 - 06J	4:20 - 4:40	Development of Portable Solar Dryer <ul style="list-style-type: none"> Angel T. Sabusap Southern Leyte State University
2017 - 06K	4:40 - 5:00	Performance Evaluation of a Zero Head Pico Hydro Turbine-Generator System <ul style="list-style-type: none"> Moheddin Sumagayan, Noel Estoperez Mindanao State University-Iligan Institute of Technology
2017 - 06L	5:00 - 5:20	Quality Of Groundwater Used For Drinking And Other Domestic Purposes in Selected Barangays In San Jose, Occidental Mindoro <ul style="list-style-type: none"> Norma B. Muyot Occidental Mindoro State College
Oral Presentation – Session 2A: Food and Agriculture		
2017 - 08A	1:00 - 1:20	KATMON (<i>Dillenia philippinensis</i>) WINE <ul style="list-style-type: none"> Ma. Rovie Andayog-Chavez Bicol State College of Applied Sciences and Technology
2017 - 08B	1:20 - 1:40	Type of Music on the Growth of Laying Performance, Behavior and Marketability of Quails <ul style="list-style-type: none"> Nora Cabaral, Hugo Untalan, Jr., Prime Gilbert Rieta, Mindoro State College of Agriculture and Technology Vet II—Regulatory Division, Department of Agriculture RFU IVB
2017 - 08C	1:40 - 2:00	Design And Development Of Hamonado Slicer For Productivity And Efficiency Improvements At C And M Food Enterprises <ul style="list-style-type: none"> Annalee S. Cabrera, Nicko Jay M. Gonzales, Aldrin S. Pagcaliwangan, Frederick S. Permante Batangas State University Lipa Campus
2017 - 08D	2:00 - 2:20	Probabilistic Measure of Microbial Quality of Vending Machine <ul style="list-style-type: none"> Rizalyn B. Cudera Sultan Kudarat State University
2017 - 08F	2:20 - 2:40	Development and Acceptability of <i>Gynura procumbens</i> Flavored Nutri-bar <ul style="list-style-type: none"> Maylen G. Eroa, Engelica C. De Castro, Noemi B. Lajara, Mark Adrian H. Mondala Batangas State University

CONTRIBUTING PAPERS

2017 - 08G	2:40 - 3:00	Antimicrobial Potential of Crude Extracts of <i>Caulerpa</i> Spp. (chlorophyceae) from Honda Bay, Puerto Princesa City, Palawan, Philippines <ul style="list-style-type: none"> • Jeric B. Gonzalez, Jhonamie Mabuhay-Omar Romblon State University-San Agustin Campus
2017 - 08H	3:20 - 3:40	Utilization of Pineapple (<i>Ananas comosus</i>) Peels in the Production of Single Cell Protein Using <i>Saccharomyces cerevisiae</i> <ul style="list-style-type: none"> • Elisa D. Gutierrez, Melanie Joy D. Asi, Judea P. Banawa, Nikki C. Morete Batangas State University
2017 08J	3:40 - 4:00	Morphological Diversity of Southeast Asian Weedy Rice Accessions and Implications for Weed Management <ul style="list-style-type: none"> • Rubylyn D. Mijan, Merlyn S. Mendioro, Ma. Elizabeth B. Naredo Batangas State University University of the Philippines Los Baños,
2017 - 08K	4:00 - 4:20	Design and Development of Longganisa Mixer-Stuffer in Salaban II Women's Multipurpose Cooperative at Brgy. Salaban II, Ibaan, Batangas <ul style="list-style-type: none"> • Quinia, Mark Gerald Batangas State University
2017 - 08L	4:20 - 4:40	Herbs and Spices Decoction Organic Promotant on the Growth, Blood Lipid and Meat Quality of Broilers <ul style="list-style-type: none"> • Nora C. Cabaral, Kemberly D. Reyes, Prime Gilbert T. Rieta Mindoro State College of Agriculture and Technology
2017 - 08M	4:40 - 5:00	Household Food Security is Associated with Stunting Among Preschool Children in Occidental Mindoro <ul style="list-style-type: none"> • Kim Leonard G. dela Luna, Ernani R. Bullecer University of the Philippines- Manila
Oral Presentation – Session 2B: ICT		
2017 - 09A	4:20 - 4:40	Face Detection and Recognition System using Skybiometry Applying with Facebook Graph API <ul style="list-style-type: none"> • Pongpon Nilaphrueka and JaturapithKrohkaewb Rajamangala University of Technology Thanyaburi
2017 - 09B	4:40 - 5:00	Tram Tracking System in the Case Study of Rajamangala University of Technology Thanyaburi <ul style="list-style-type: none"> • Jaturapith Krohkaew, Pongpon Nilaphruek Rajamangala University of Technology Thanyaburi
2017 - 09C	5:00 - 5:20	Development Of A Point-Of-Sale System With Data Forecasting For Company XYZ <ul style="list-style-type: none"> • Maria Beatrice Quilinguin, Paulo Angelo Nazareno, Juan Rafael Derpo, Mark Anthony Sabili, Ph.D., Giuseppe Ng, Edwin Olmos, Ph.D. University of Asia and the Pacific
2017 - 09D	5:20 - 5:40	Graph Analysis And Simulator For Automata Theory: A Mobile Application <ul style="list-style-type: none"> • Kristine Joy G. Bukid, Ian Dexter C. Marasigan, Renvel M. Tumbaga and Evelyn Z. Red, Ph.D. Batangas State University
Oral Presentation – Session 1C: Materials Science		
2017 - 11A	1:00 - 1:20	Seismic Assessment of Masonry Walls of the Basilica of Immaculada Concepcion in Batangas City: Static Linear and Time History Finite Element Analysis <ul style="list-style-type: none"> • Rhea S. De Ocampo Batangas State University
2017 - 11B	1:20 - 1:40	Application of Hawkeye Technology In Evaluating Expressway Pavement Conditions in Vietnam <ul style="list-style-type: none"> • Dr. Long Nguyen Hoang University of Transport Technology
2017 - 11C	1:40 - 2:00	Effectiveness As Performance Parameter In Solar Assisted Fabrication Of Natural Fiber Panel Board <ul style="list-style-type: none"> • Benjamin C. Tobias, Loriejoy P. Andico Siliman University Southland College

CONTRIBUTING PAPERS

2017 - 11D	2:00 - 2:20	Study on the Effect of Proportions of Asphalt Concrete on Rutting by Using Wheel Tracking Equipment <ul style="list-style-type: none"> • Dr. Long Nguyen Hoang, MSc. Minh Nguyen Van, MSc. Hai Le Thanh University of Transport Technology
2017 - 11E	2:20 - 2:40	Development of Fe-Doped Amorphous Nanosilica from Philippine Waste Rice Hull as Anode Material for Lithium Battery <ul style="list-style-type: none"> • Emie A. Salamangkit-Mirasol, Rinlee Butch M. Cervera Mariano Marcos State University University of the Philippines-Diliman
2017 - 11G	2:40 - 3:00	Utilization of Agricultural Wastes in the Manufacture of Composite Boards <ul style="list-style-type: none"> • Paulina M. Macatangay, Ernesto C. Magundayao, Cristina Amor M. Rosales Batangas State University Pablo Borbon Main II
2017 - 11H	4:00 - 4:20	Potential of Shredded Aseptic Packages as an Admixture in Autoclaved Aerated Concrete <ul style="list-style-type: none"> • Joseph Raniel Bienes, Guillermo O. Bernabe, Emmalyn Cajayon, Simon Mendoza, Sarah Jane Meer, Sonny Valderrama, Dyan Shandy Sarmiento Polytechnic University of the Philippines
2017 - 11I	4:20 - 4:40	Fiberglass Reinforced Laminating Film as Retrofitting Material <ul style="list-style-type: none"> • Orlean G. Dela Cruz, Joselinda M. Golpeo, Johnson Domingo, Abegail Eunice De Guzman, Christian Opanda, Martin Nicole Tolentino Christian Rafael Sinamban Polytechnic University of the Philippines
Oral Presentation – Session 1B: Science and Technology Education		
2017 - 13D	1:00 - 1:20	Predicting Enrolment using Time Series Analysis <ul style="list-style-type: none"> • Esmael V. Maliberan Surigao del Sur State University
2017 - 13E	1:20 - 1:40	Teaching of Multi-Paradigm Programming to Computer Science Introductory Course: A Need Assessment Analyses <ul style="list-style-type: none"> • Mark Dervin N. Mingoy Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology
2017-13G	1:40 - 2:00	The Comparison of Hearing's Visual Perception of Colors and the Deaf <ul style="list-style-type: none"> • Assistant Professor Dr. Waiyawut Wuthiastarn Rajamangala University of Technology Thanyaburi
2017-13H	2:00 - 2:20	Use of Active Learning Programs in Teaching Thai Language <ul style="list-style-type: none"> • Parichat Payungri Rajamangala University of Technology Thanyaburi
Oral Presentation – Session 1B: Process Improvement		
2017 - 15A	2:20 - 2:40	Improvement of Productivity and Quality Management through Development and Use of Checking Jig at Hitachi Cable Philippines, Inc. (HCPI) <ul style="list-style-type: none"> • Leoven Austria, Faisah Badron, Aida Kryzel Lumbea, Emelito Rosales Batangas State University
2017 - 15B	2:40 - 3:00	Labor Productivity Improvement for Thai SMEs: A Case Study <ul style="list-style-type: none"> • Natha Kuptasthien, Rapee Kanchana Rajamangala University of Technology Thanyaburi
2017 - 15C	3:00 - 3:20	A Root Cause Analysis of the Defects on TBR Models of Isuzu Philippines Corporation, Laguna Technopark <ul style="list-style-type: none"> • Jerson A. Culla, Daisy V. Hernandez, Alyssa Claire B. Villajuan Philippine Institute of Industrial Engineers
2017 - 15D	3:20 - 3:40	Line Balancing in Chassis Assembly for N- Series Truck at Isuzu Philippines Corporation Laguna Technopark Incorporated <ul style="list-style-type: none"> • Joesilin H. Gutierrez, Nomer M. Sarmiento Philippine Institute of Industrial Engineers

SESSION CHAIRS

Session	Thematic Area	Date	Schedule	Venue	Session Chair	Co-Session Chair
1A	Energy and Environment	Sept 27	1:00pm - 5:20pm	CIRTC AVR 1	Dr. Elisa D. Gutierrez	Dr. Rungnapa Sranujit
1B	Science and Technology Education Process Improvement	Sept 27	1:00pm - 3:40pm	CIRTC AVR 2	Dr. Neil Mame	Assoc. Prof. Natha Kuptasthien, Ph. D.
1C	Material Science Biochemistry	Sept 27	1:00pm - 4:40pm	CIRTC 6th flr. Food Laboratory	Prof. Rogelio A. Antenor	Mr. Pongpon Nilaphuruek
2A	Food and Agriculture	Sept 28	1:00pm - 5:00pm	CIRTC AVR 1	Dr. Romel U. Briones	Asst. Prof. Dr. Waiyawut Wuthiastarn
2B	Electronics Information and Communications Technology	Sept 28	1:00pm - 5:40pm	CIRTC AVR 2	Prof. Enrico M. Dalangin	Asst. Prof. Sommai Pivsa-Art, Ph. D.

CONTRIBUTING PAPERS

Poster Presentation – Biochemistry	
Code	Research Title
P_2A	Development of an Automated Bill of Materials with Cost Estimates <ul style="list-style-type: none"> Geraldine B. Mangmang, Rec Alfonso P. Cinco Southern Leyte State University
Poster Presentation – Electronics	
P_5A	Computer- Assisted Programmable Logic Controller Simulator <ul style="list-style-type: none"> Ribomapil D. Nacorda, Ph.D. Jessie Nigparanon, MSIT, Lloyd L. Tejano, MSIT Bohol Island State University
P_5B	RFID—Based Student Identification System <ul style="list-style-type: none"> Heidee Soliman Western Mindanao State University
P_5D	MCU Programming Trainer Using Arduino Technology <ul style="list-style-type: none"> Japhet G. Bagsit, Carlo E. Bagsit, Angel Roman S. Lumanglas, Neymar Razo Batangas State University
P_5E	Advisory and Real Time Monitoring System for Water Level of River Using Raspberry Pi <ul style="list-style-type: none"> Christine A. Luzon Mindoro State College of Agriculture and Technology
Poster Presentation – Energy and Environment	
P_6A	Vulnerability Assessment on the Coastal Areas in Panabo City <ul style="list-style-type: none"> Joy L. Picar, Sevetrim B. Torrejos, Samuel A. Plando, Maria T. Corcino, Engr. Maria Corcino, Engr. Rogelio Flores Davao Del Norte State College
P_6C	Hazard And Risk Identification For The Development Of Water Safety Plan Of San Jose Water District <ul style="list-style-type: none"> Michelle D. Enriquez Occidental Mindoro State College
P_6E	Model Rainwater Harvester for Residential Buildings in Rinconada for Climate Change Adaptation <ul style="list-style-type: none"> Francia H. Tomenio, Elias L. Tomenio Camarines Sur Polytechnic Colleges
Poster Presentation – Food and Agriculture	
P_8A	Agricultural Practices in Brgy. Gutad, Calapan, Oriental Mindoro <ul style="list-style-type: none"> Josefa C. Laurente – Laudencia, Perlie B. Alvarez Mindoro State College of Agriculture and Technology Sta. Teresa College
P_8B	Acceptability of Cogon Grass Rhizomes (<i>Imperata Cylindrica</i>) in Making Vinegar <ul style="list-style-type: none"> Ma. Theresa G. Palmares, Renejun B. Belgica Northern Iloilo Polytechnic State College
P_8D	Status of Exposed Coral Reef and Threatened Mollusk Associates in Pag-asa Island, Kalayaan Island Group Philippines <ul style="list-style-type: none"> Jeric B. Gonzales, Bernie G. Mantes, Emily Moyu Romblon State University-San Agustin Campus
P_8E	Cagayan Valley's Innovation and Product Development <ul style="list-style-type: none"> Arthur G. Ibañez, Dennis V. Policar, Johnmel A. Valeroso, Melanie Arugay, Abigail Anzia, Mark Kenneth C. Sumbillo Cagayan State University – Carig Campus
P_8F	Performance of Carrot (<i>Daucus carota</i>) Grown in Clayey Soil Ameliorated with Different Levels of Biochar <ul style="list-style-type: none"> Dr. Marcela S. Icalla Mindoro State College of Agriculture and Technology

CONTRIBUTING PAPERS

Poster Presentation – ICT	
P_gA	Responsive Web-Based Student Government Voting System for Negros Oriental State University Bayawan – Sta. Catalina Campus <ul style="list-style-type: none"> Milon G. Nama, Franco T. Abequibel, Eugene S. Pabol, Rogelio T. Eperwis, Jomari V. Baconawa, Lemie S. Abella Negros Oriental State University Bayawan – Sta. Catalina Campus
P_gC	Grade Six Elementary Science Mobile App <ul style="list-style-type: none"> James Earth V. Vergara, Jake D. Cornelia, Nickarter Cornelia, Angel Lorien P. Torres, Elbert B. Omambonga, Noli V. Gaduyon II Negros Oriental State University Bayawan – Sta. Catalina Campus
P_gD	Mobile Application: Digitized Instructional Material in EDF-204 Statistics in Education <ul style="list-style-type: none"> Isidro L. Duran Don Mariano Marcos Memorial State University-SLUC
P_gF	One Two Teach: An E-Learning System for Preschoolers Concentrating on Mathematics <ul style="list-style-type: none"> Lenna S. Erespe, Cindy A. Lasco Davao Oriental State College of Science and Technology,
P_gG	GRADEXPRESS: An Online Grading Assistant with Mobile Inquiry System <ul style="list-style-type: none"> Michael Manalo, Remedios Ado Batangas State University ARASOF Polytechnic University of the Philippines
P_gH	Development and Implementation of Point of Sale System (POS): Profitability Measurement for Retail Business <ul style="list-style-type: none"> Geraldine B. Mangmang Southern Leyte State University
P_gI	Development and Implementation of Grade Inquiry System using Short Messaging Service <ul style="list-style-type: none"> Geraldine B. Mangmang Southern Leyte State University
P_gJ	Designing Information Management Module Based on Learning Difficulty and Structured Query Language (SQL) Error Logs <ul style="list-style-type: none"> Challiz D. Omorog Camarines Sur Polytechnic Colleges
P_gM	Internship Management System <ul style="list-style-type: none"> Richard L. Hernandez Cavite State University – Carmona Campus
Poster Presentation – Material Science	
P_11A	Establishing Proportions Of Concrete Hollow Blocks Utilizing Currimao Bof Steel Slag As Partial Replacement Of Fine Aggregates <ul style="list-style-type: none"> Karen Joyce B. Santiago, Romeo R. Duldulao, Kenneth L. Edra, Charles A. Mateo Mariano Marcos State University
P_11B	Low Cost Housing Model Intergrated With Pre-Fabricated Waste Lime Slab Composite <ul style="list-style-type: none"> Benjamin C. Tobias, Giovanni B. Narciso Southland College
P_11C	Mortarless Interlocking Hollow Blocks: An Innovation <ul style="list-style-type: none"> Francia H. Tomenio, Elias L. Tomenio Camarines Sur Polytechnic Colleges
P_11D	Stretcher Bag <ul style="list-style-type: none"> Deceryl Gen M. Tumamos, Angeline Baldapan, Mary Grace Guigayoma, Dario Gawala, Genisa Samijon Bohol Island State University

CONTRIBUTING PAPERS

Poster Presentation – Science and Technology Education	
P_13A	Caet Developed Motor Control Trainer Adoption Rate <ul style="list-style-type: none"> Emelita Vino Macadaeg, Abe Joyna C. Roque, Marlyn R. Atienza Occidental Mindoro State College
P_13B	Fuzzy Time Series Approach For Enrolment Forecasting: A Review <ul style="list-style-type: none"> Esmael V. Maliberan Surigao del Sur State University
P_13C	Instructional Personal Computer (PC) Hardware Troubleshooting Station: A Multi-Unit Servicing Model <ul style="list-style-type: none"> Mark Joseph V. Dellosa Bohol Island State University – Main Campus
Poster Presentation – Process Improvement	
P_15B	An Assessment of Product Returns Related to Non-Conformities in Cariño and Son's Agri- Dev. Inc. <ul style="list-style-type: none"> Dr. Aile T. Amorado, Jean S. Magtibay, Ramel M. Manalo, Jenica Marie M. Pulmones Batangas State University
P_15C	Compact Tool Cart <ul style="list-style-type: none"> Angeline D. Baldapan, Deceryl Gen P. Tumampos, Mary Grace Guigayoma, Dario V. Gawala, Ramonito Lincuna Bohol Island State University
P_15D	Modified Pedal Operated Coconut Dehusker <ul style="list-style-type: none"> Jose P. Monteroso, Anacleta L. Dagaas, Virgencita C. Saavedra Southern Leyte State University
P_15E	Modified Foundation Design of Four-Storey School Building <ul style="list-style-type: none"> Cristina Amor M. Rosales, Rocel M. Polintang, Marjorie A. Manalo, Maria Alheinna D. Sazon, Bernard S. Villa Viray, Marie Joy R. Wagan Batangas State University Pablo Borbon Main II

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Office of the Vice President for Research, Development and Extension Services

Tel. no.: (+63) 43 980 0385 loc 1114 / (+63) 43 300 2202 loc 108

Email: irciest2017@gmail.com

Conference Website: <http://www.irciest.com.ph>

