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Nanotechnology
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Robotics & Automation
Outcomes Based Education
VISSER
Technopreneurship

Important Dates

July 1

Deadline of Submission of Paper

October 11

Notification of Acceptance

October 25

Deadline of Submission of Structured Abstract and Poster (electronic file)

October 31

Last Day of Registration (Presenting/Non-presenting participants)

November 8

Deadline of submission of Full Paper (Oral)

November 27-29

Conference Dates

Host



IRCIEST 2013 will be hosted by [Batangas State University](#)

[IRCIEST Conference Features](#)

Further Information

Conference Chair

Dr. Tirso A. Ronquillo

Vice President, Research, Development & Extension

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Home

WELCOME TO THE IRCIEST 2013!

Batangas State University, Batangas City, Philippines
November 27-29, 2013

Batangas State University proudly invites all of you to this year's biggest gathering of science, technology and engineering professionals, academicians, researchers and practitioners from the country and from other parts of the world: the **2013 International Research Conference on Innovations in Engineering, Science and Technology (IRCIEST 2013)**.

This year's IRCIEST will stage internationally renowned experts to discuss the most innovative concepts and trends on a wide array of emerging topics such as **Nanotechnology, Precision Agriculture, Robotics and Automation and Multidisciplinary Design**.

In addition, there will be in-depth discussions on the recent developments and best practices in the fields of **Outcomes-Based Education and Accreditation, Technopreneurship, and Versatile Instrument System for Science Education and Research (VISSER)**. Another highlight is an interactive panel discussion on **the ASEAN 2015**. The conference will also give good opportunity for the participants to attend to the presentation of peer-reviewed research papers authored by local and foreign researchers.

The **Industry Engagement and Awards Night** will provide an avenue for the local and international participants to engage with officials and representatives from various industries in the country for possible trade cooperation and collaboration. The award for the **Most Outstanding Innovative Research** presented in the conference will also be given on this night.

With a prestigious line up of reputable resource persons, together with the wide array of professional activities, we are confident that your participation in this conference would be very fruitful and meaningful.

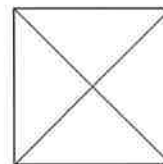
We hope to see you at Batangas State University in November!

DR. TIRSO A. RONQUILLO
General Conference Chair

[IRCIEST 2013 PROGRAM](#)

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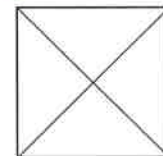
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International Research Conference on Innovations in Engineering, Science and Technology



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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 2013. 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 refereed journal on engineering, science and technology**, which is one of the major outputs of IRCIEST 2013.

Members of the International Scientific Committee (ISC)

Dr. Joseph L. Aurenesia

De La Salle University, Philippines

Ms. Lynette Johns - Boast

Australian National University, Australia

Dr. Nina M. Cadiz

University of the Philippines - Los Baños, Laguna, Philippines

Dr. Felicito S. Caluyo

Mapua Institute of Technology, Philippines

Dr. Celso B. Co

Technological Institute of the Philippines, Philippines

Dr. Aurelio A. Delos Reyes Jr.

University of the Philippines - Los Baños, Laguna, Philippines

Dr. Manuel Q. Esguerra

Louisiana State University, Baton Rouge, Louisiana, USA

Dr. Marco A. Galang

University of the Philippines - Los Baños, Laguna, Philippines

Dr. Andrew Gerrard

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Dr. Prue Howard

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Dr. Margaret Jollands

RMIT University, Australia

Dr. Harry Kim

Hansei University, Korea

Prof. Sang-Bong Kim

Pukyong National University, Korea

Dr. Esther Ventura - Medina

Monash University, Australia

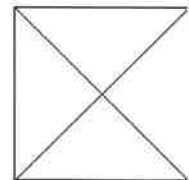
Dr. Kwang - Deoy Moon

Kyungpook National University, South Korea

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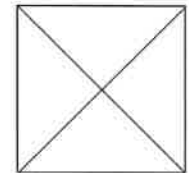
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MESSAGE



Dr. NORA LUMBERA-MAGNAYE
President, BatStateU

Dear Conference Attendees,

Batangas State University, Philippines warmly welcomes all of you to the 2013 International Research Conference on Innovations in Engineering, Science and Technology (IRCIEST 2013). This research initiative of the University brings together science and engineering professionals, practitioners, academicians and other researchers in the country and other parts of the world who will share insights, studies and practices that will widen each one's portfolio in research.

I am hopeful that this conference, with the theme, "*Beyond Borders: Advancing Engineering, Science and Technology for Multidisciplinary Convergence*", will spawn enriched and advanced knowledge in the fields of science, technology and engineering and that the concepts shared in the master's classes sessions in technologies, trends and practices concerning Outcomes-Based Education and Accreditation, Robotics and Automation, Technopreneurship, and Versatile Instrument System for Science Education and Research (VISSER) will find productive use in the academe and in research. Further, it is hoped that the paper presentations will serve as a springboard for inquiry and knowledge sharing with the speakers, facilitators and you, participants. It is likewise hoped that the peer-reviewed papers in this publication may become source of inspiration of other researchers in the field.

This three-day conference brings you opportunities to listen to national and international speakers, meet with industry officials where collaborations may be initiated and share communication tables with other professionals who speak the same language and share the same passion in learning. More importantly, this conference is the University's way of reaching out and building bridges to foster fellowship and collaborative relationships beneficial to your professional and personal development.

Thank you to our conference speakers for the generosity of time and effort in coming to the University to share with the conference attendees issues and trends in the science and engineering field. Thank you to the Vice President for Research, Development and Extension, Dr. Tirso A. Ronquillo, and the working committees; may this be a sustained activity through the years.

Here's to a fruitful and meaningful conference to everyone.



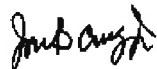
NORA LUMBERA-MAGNAYE, Ph. D.
President, Batangas State University
Chairperson, International Advisory Board

MESSAGE



Dr. JOSE B. CRUZ, JR.
Member, International
Advisory Board

As a member of the International Advisory Board, it is my pleasure to welcome the participants of the International Research Conference on Innovations in Engineering, Science and Technology, at the Batangas State University, November 27-29, 2013. The organizers and program committee successfully arranged a very interesting technical program and other activities during the conference. I hope that your participation will be very rewarding, and that you will make new contacts and strengthen your existing relationships with participants that you already know. For our international guests, I especially encourage you to spend some time visiting some other parts of the Philippines. It is "more fun in the Philippines".



JOSE B. CRUZ, JR., Ph.D.
Professor Emeritus
University of Illinois at Urban-Champaign
University of California at Irvine
The Ohio State University

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 IRCIEST 2013.

Chairperson: Dr. Nora L. Magnaye

*President, Batangas State University
Philippines*

Members:

Dr. Armando A. Apan

University of Southern Queensland, Australia

Dr. Tode Hideki

Osaka Prefecture University, Japan

Dr. John C. Chen

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USA*

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South Korea*

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De La Salle University, Philippines

Dr. Llewelyn Mann

*Swinburne University of Technology
Australia*

Dr. Romel D. Gomez

University of Maryland, USA

Dr. Chris Short

*Sheffield Hallam University,
United Kingdom*

Dr. Gourab Sen Gupta

Massey University, New Zealand

Oral Presentation – Session 2E: Material Science & Engineering

November 28, 1:30pm – 3:10pm; 2nd Flr., CITE Building, Multimedia Rm. No. 1
Session Chair: **Dr. Yong Sik Ahn & Dr. Expedito V. Acorda**

1:30pm – 1:50pm	DMMMSU Silkworm Germplasm materials for Sustainable Philippine Sericulture Industry <i>Julieta Abuan, Marybel Sanchez, Gemma Supsup, Marlyn Viduya, Maricris Ulat (Sericulture Research and Development Institute of the Don Mariano Marcos Memorial State University, La Union, Philippines)</i>
1:50pm – 2:10pm	Fibre reinforced polymer composites sandwich structure: Recent developments and applications in civil infrastructure <i>Allan Manalo (University of Southern Queensland, Toowoomba, Queensland, Australia)</i>
2:10pm – 2:30pm	Marinduque Mafic and Ultramafic Rocks as Vehicle Exhaust Gas Cleaner <i>Panchito M. Labay, Aero H. Mañanita (Marinduque State College, Marinduque, Philippines)</i>
2:30pm – 2:50pm	Prototype Development of Blended Concrete Roof Tile from Fly Ash <i>Ramela B. Ramirez, Renato R. Zaballa (Manuel S. Enverga University Foundation, Lucena City, Philippines)</i>
2:50pm – 3:10pm	Property Characterization of Fuel Oil from Waste Plastics Using Pyrolysis Method <i>Joselito A. Olalo (Technological University of the Philippines-Taguig, Philippines)</i>