



2nd
IMCETEMDS
INTERNATIONAL MULTIDISCIPLINARY CONFERENCE ON ENGINEERING AND TECHNOLOGY,
EDUCATION, MANAGEMENT AND DEVELOPMENT STUDIES



CAMARINES SUR POLYTECHNIC COLLEGES

in partnership with

UNIVERSITI TEKNOLOGI MARA-Kelantan Branch, Malaysia and ILOILO SCIENCE AND TECHNOLOGY UNIVERSITY

BEST PAPER AWARD

is presented to the research entitled

A DEEP LEARNING APPROACH FOR AUTOMATIC SCOLIOSIS COBB ANGLE IDENTIFICATION

TRACK 1: ENGINEERING AND COMPUTER TECHNOLOGY

Authors: Renato R. Maaliw III, Julie Ann B. Susa, Alvin S. Alon, Ace C. Lagman, Shaneth C. Ambat, Manuel B. Garcia, Keno C. Piad, Ma. Corazon Fernando-Raguro

during the

**2nd International Multidisciplinary Conference on Engineering and Technology, Education,
Management and Development Studies (2nd IMCETEMDS)**

with the theme

"Strengthening Research and Innovation as Drivers towards Sustainable and Resilient Future"

held on December 9-10, 2022 via Video Conferencing and Facebook Live.

Given this 10th day of December 2022 at Camarines Sur Polytechnic Colleges, Nabua, Camarines Sur, Philippines.


ENGR. HAROLD JAN B. TERANO

Conference Chair,
Director, Center for Research and Development


TERESITA B. SALAZAR, Ph.D.

Vice-President for Research, Extension, Production
& Entrepreneurial Development


CHARLITO P. CADAG, Ph.D.

SUC President III

About CSPC

CSPC is at the forefront of academic and intellectual research. Those who come here to learn, research, teach, work, and grow to join a community of nearly four decades of students and scholars in their quest for truth, knowledge, and a better world.



Vision, Mission, Goals & Objectives



Facts and Figures



Ten-Point Agenda

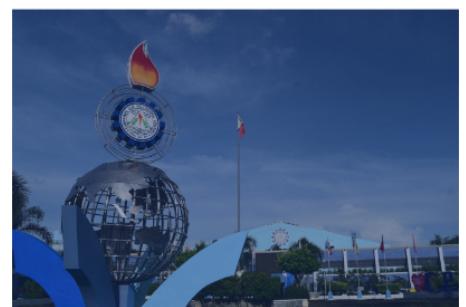


History of CSPC



College Seal

Quality and Environmental Policy



CSPC Hymn

About UiTM



Universiti Teknologi MARA (UiTM) is the largest comprehensive university in Malaysia providing innovative education with state-of-the-art infrastructure and technology within reach at its 34 campuses, 4 colleges of studies, 14 faculties, and 9 academic centres all over the country.

UiTM offers over 500 academic programmes at Foundation, Pre-Diploma, Diploma, Bachelor's, Master's, and PhD levels, as well as Professional Programmes. It continues to expand access to higher education, playing its role in nation-building by unleashing potentials and shaping the future.

Amongst its long list of recent accolades, UiTM is ranked 104th in the QS Asia University Rankings 2023, placed 555 in the QS World University Rankings 2023, and was ranked 361-380 for QS World University Rankings: Sustainability 2023 and 4th in Malaysia. Moreover, UiTM was in the 101-200th position in the Times Higher Education Impact Rankings 2022 and is the proud recipient of the 3G SDGs Championship Award 2022. In June 2022, UiTM received the Reader's Digest Trusted Brand Gold Award for the 12th time in the public university category and for the first time, UiTM was bestowed The BrandLaureate Best Brands Awards 2022 – the Nation's Pride Higher Education. The university ranked 128th in the UI GreenMetric (UIGM) World University Rankings 2021 and won gold for the Best International Print-Ads at the QS APPLE Creative Awards 2020. UiTM is also proud to have been voted as one of the Employers' Preferred Universities in 2023 by Talentbank, based on an extensive survey in collaboration with top employers who identified their favourite picks for graduate recruitment.

The year 2023 also sees another fantastic achievement for the university as UiTM's Art and Design subjects are ranked 201-240 for the first time since 2017 while subjects for Hospitality and Leisure Management, Petroleum Engineering, and Architecture/Built Environment maintain their Top 100, Top 150, and Top 200 positions worldwide respectively in the QS World University Rankings by Subject. UiTM's other ranked subjects in 2023 include Accounting and Finance, Pharmacy and Pharmacology, Law, Electrical Engineering, Business and Management Studies, Economics and Econometrics, Mechanical Engineering, Medicine, and Computer Science and Information Systems.

With over 900,000 alumni in science, technology, humanities, and entrepreneurship, UiTM offers opportunities to shape national, industry, and global leaders and is well poised to become a Globally Renowned University by 2025.

FACTS & FIGURES

Graduates
1,003,241

Students
187,994

Staff
18,818

Programmes
522

Campuses
34

Postgraduate Students
11,082

Professors
186

*Data as of April 2023 | Source: University Transformation Division

ACHIEVEMENT

3

QS Asia University
Rankings 2022

19

QS University Rankings
2022

0

Subjects ranked in the QS
World University Rankings
by Subject

0

4th in Malaysia for QS
World University Rankings:
Sustainability 2023

UiTM LOCATIONS



QUICK LINKS

Ministry of Higher Education
Academic Calendar
Intake Calendar
Graduate Quick Search
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News
UiTM Holdings
WiFi UiTM

Masjid UiTM
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PHILIPPINE ASSOCIATION OF STATE UNIVERSITIES AND COLLEGES

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Tel. Nos. 8376-6213/6217 and 7792-7798; Fax No. 8376-6215

Email address: pasucoffice@gmail.com

PASUC ADVISORY NO. 089, s. 2022

For : All SUC Presidents/Heads

From : Dr. Tirso A. Ronquillo
President

Subject : **2ND INTERNATIONAL MULTIDISCIPLINARY CONFERENCE ON ENGINEERING AND TECHNOLOGY, EDUCATION, MANAGEMENT AND DEVELOPMENT STUDIES (2ND IMCETEMDS)**

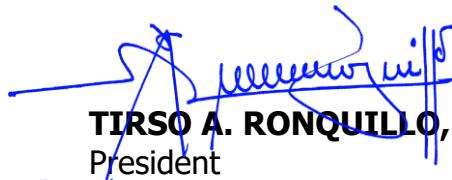
Date : October 19, 2022

This is to endorse the 2nd International Multidisciplinary Conference on Engineering and Technology, Education, Management and Development Studies (2nd IMCETEMDS) with the theme "*Strengthening Research and Innovation as Drivers towards Sustainable and Resilient Future*", organized by the Camarines Sur Polytechnic Colleges (CSPC), in partnership with the University Teknologi MARA, Kelantan Branch, Malaysia, and Iloilo Science and Technology University (ISAT-U), to be held on December 9-10, 2022.

This online conference aims to provide an academic platform for researchers, professionals, scholars, and academicians to present the latest research findings and describe emerging technologies and directions in Engineering and Technology, Education, Management, and Development Studies toward sustainable academic, industry, and community developments. The conference also seeks to contribute to presenting novel research results in the fields.

The organizer shall be receiving abstract submissions until November 11, 2022. Interested presenters and participants may pre-register by visiting the conference website <https://imcetemds.cspc.edu.ph> and know more about this event.

Enclosed is the conference briefer, for your ready reference. Your office may contact Engr. Harold Jan R. Terano, 2nd IMCETEMDS Conference Chair, thru email at imcetemds@cspc.edu.ph, for further inquiries.


TIRSO A. RONQUILLO, ASEAN Eng.
President

2nd International Multidisciplinary Conference on Engineering and Technology, Education, Management and Development Studies (2nd IMCETEMDS)

December 9-10, 2022 | Full Online

Conference Theme: Strengthening Research and Innovation as Drivers towards Sustainable and Resilient Future

Main Host : Camarines Sur Polytechnic Colleges (CSPC)
Co-Hosts : Universiti Teknologi MARA (UiTM), Malaysia
Iloilo Science and Technology University (ISATU)
Website: <https://imcetemds.cspc.edu.ph>
Email: imcetemds@cspc.edu.ph

Rationale:

The Camarines Sur Polytechnic Colleges, in partnership with Universiti Teknologi MARA (UiTM), Kelantan Branch, Malaysia and Iloilo Science and Technology University (ISATU) commit to providing academic institutions and industries with opportunities for intellectual discussion and dissemination of research through presentations. With this, there will be an exchange of ideas and experiences from scholars, researchers, and professionals that will highly contribute to educational and technological advancement and development.

The **2nd International Multidisciplinary Conference on Engineering and Technology, Education, Management and Development Studies (2nd IMCETEMDS)** anchored on the theme, "**Strengthening Research and Innovation as Drivers towards Sustainable and Resilient Future**" will provide an academic platform for researchers, professionals, scholars, and academicians to present the latest research findings and describe emerging technologies and directions in Engineering and Technology, Education, Management and Development Studies toward sustainable academic, industry and community developments. The conference also seeks to contribute to presenting novel research results in the fields.

Objectives:

The conference aims to:

1. Provide an avenue for researchers, professionals, scholars, and academicians to exchange and share their knowledge, information, ideas and experiences, as well as to discuss current development in their respective fields.
2. Strengthen the research and development capabilities of researchers to communicate research results to the academic and industrial community.
3. Establish a venue for scholars, researchers and professionals who can work with others for future research and development endeavors.

Scope and Conference Topics:

1. Engineering
2. Science and Technology
3. Agriculture, Aquatic and Natural Resources
4. Education
5. Business Management and Entrepreneurship
6. Health Sciences
7. Public Management
8. Social and Behavioral Sciences
9. Gender and Development

"Strengthening Research and Innovation as Drivers Towards Sustainable and Resilient Future"

Important Dates:

ACTIVITIES	DATES
Conference Dates	December 9-10, 2022
Extended Deadline for Abstract Submission	November 11, 2022
Notification of Abstract Acceptance	October 31-November 11, 2022
Deadline for Submission of Full Papers	November 18, 2022
Registration	November 18, 2022
Deadline for Submission of Recorded Video Presentation	November 25, 2022

Abstract Submission:

1. Submit a 200 to 250-word abstract consisting of the following sections:
 - a. Title of the Paper
 - b. Name of Author/s
 - c. Affiliation
 - d. Email Address
 - e. Content must contain the following: rationale, objectives, methods, results, and conclusion and recommendations.
 - f. Keywords

Submit abstract to the conference website: <https://imcetemds.cspc.edu.ph>

Full Paper Submission:

1. The final paper should follow the prescribed format with the following sections:
 - a. Title of the Paper
 - b. Name of Author/s
 - c. Affiliation
 - d. Email Address
 - e. Abstract
 - f. Keywords
 - g. Introduction
 - h. Methodology
 - i. Results and Discussions
 - j. Conclusion and Recommendations
 - k. References.
2. Final papers should be submitted electronically in pdf format.
3. Full paper must be comprised of maximum of 10 pages only (5,000-7,000 words).
4. All submitted papers will be evaluated for selection of Best Papers. The evaluation criteria are as follows:

CRITERIA	PERCENTAGE
Originality	20%
Technical Merit of the Study	25%
Significance and contribution of the Findings/Outputs	25%
Quality of Information	20%
Language Usage	10%
Total	100%

Oral Research Presentation Guidelines:

1. To minimize technical error and difficulties during the conference, all presentations will be pre-recorded and must be submitted on or before **November 25, 2022**. Send it through the email: imcetemds@cspc.edu.ph.
2. Presenters must be present during the live open forum and question and answer portion.

3. The video presentation can be made through the OBS Studio program or Powerpoint Program with video.
4. Use standard English as the medium of oral presentation.
5. The suggested number of slides is 15-30, however, it will depend on the decision of the presenter as long as it will not exceed the allotted time of 10-15 minutes.
6. Best Presenter will be selected based on the following criteria:

CRITERIA	PERCENTAGE
Mastery of the topic (Shows extensive knowledge of the topic)	30%
Language use and delivery (Communicate effectively)	25%
Quality of the video presentation (Clarity of video and audio)	25%
Powerpoint Presentation (Clarity of presentation of graphs/images)	20%
Total	100%

Conference Fees:

1. One paper presentation: **(USD 24) Php 1,200**; Extra paper presentation: **(USD 20) Php 1,000**
2. **Free** for Attendees

Payment:

For Philippine Accounts:

Landbank of the Philippines

Account Name : Camarines Sur Polytechnic Colleges
 Account Number : 2772-1029-87

For International Payments:

Send payments via PayPal at: haroldterano@cspc.edu.ph

Contact Details:

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CAMARINES SUR POLYTECHNIC COLLEGES (CSPC)

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ILOILLO SCIENCE AND TECHNOLOGY UNIVERSITY (ISATU)

2nd

INTERNATIONAL MULTIDISCIPLINARY CONFERENCE ON ENGINEERING AND TECHNOLOGY, EDUCATION, MANAGEMENT AND DEVELOPMENT STUDIES

"Strengthening Research and Innovation as Drivers towards Sustainable and Resilient Future"

DECEMBER 9-10, 2022 VIA &
8am - 5pm

Meeting ID: 874 4405 2058 | Passcode: 2IntelCon



CONFERENCE COMMITTEE

Conference Chair

Engr. Harold Jan R. Terano

Conference Co-Chairs

Mr. Joseph Jessie S. Oñate

Ms. Cherry Lyn M. Odsinada

Moderators

Ms. Riza V. Rian

Ms. Bernadette Grace B. Delgaco

Ms. Jayvie B. Margate

Ms. Myra B. Martinez

Ms. Audrey Millicent S. Hugo

Ms. Ma. Anjelica N. Ampongan

Dr. Ian P. Benitez

Mr. Mark Kevin P. Candelaria

Mr. Renato A. Adriano IV

Mr. Kevin B. Capoles

Mr. Juan Carlos A. Barela

Mr. Jay Christian M. Fajardo

Mr. Manuel C. Guanzon, Jr.

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Assistants

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Ms. Elena Clarexe R. Gulane

Ms. Judy Ann O. Billones

Ms. Kathleen Mae Corbito

Program

Mr. Manuel C. Guanzon, Jr.

Dr. Marlon S. Pontillas

Ms. Audrey Millicent S. Hugo

Lay-out and Design

Hosts

Consultants

Dr. Charlito P. Cadag

Dr. Teresita B. Salazar

PROGRAMME

Day 1 (December 9, 2022)

REGISTRATION	8:00 AM–9:00 AM
OPENING PROGRAM	9:00 AM-11:00 AM
Invocation	AVP
Philippine National Anthem Malaysia National Anthem	AVP
Corporate AVP and Cultural Presentation	
Opening Remarks	DR. TERESITA B. SALAZAR Vice-President for Research, Extension, Production and Entrepreneurial Development Camarines Sur Polytechnic Colleges
Welcome Messages	DR. CHARLITO P. CADAG President Camarines Sur Polytechnic Colleges
	PROFESSOR DR. HAJI ABDOL SAMAD BIN NAWI Rector Universiti Teknologi MARA Kelantan Branch, Malaysia
	DR. RAUL F. MUYONG President Iloilo Science and Technology University
Inspirational Messages	HON. PIA S. CAYETANO Senator, Republic of the Philippines Committee Chair, Sustainable Development Goals and Futures Thinking Senate of the Philippines
	HON. ALDRIN A. DARILAG, PhD, RMT, RN, CHRP Commissioner, Commission on Higher Education Chairman, CSPC Board of Trustees
Acknowledgement of Participants	AVP
Introduction of the Keynote Speaker	ASSOC. PROF. FILMOR J. MURILLO Director, Center for International Linkages and Public Affairs Camarines Sur Polytechnic Colleges
Keynote Speaker	DR. TIRSO A. RONQUILLO, ASEAN ENG. President Batangas State University-The National Engineering University and Philippine Association of State Universities and Colleges
	Topic: Strengthening Research and Innovation as Drivers Towards Sustainable and Resilient Future

Awarding of Certificate of Recognition to the Keynote Speaker

PLENARY TALK **11:00 AM to 12:00 NN**

Introduction to Plenary Speaker

DR. APRIL Z. LUZON, JD

Dean, College of Arts and Sciences
 Camarines Sur Polytechnic Colleges

Plenary Speaker

PROF. OJO SUNDAY FAYOMI, MNSE, RCOREN, AMWISA

Executive Dean, College of Engineering
 Full Professor of Mechanical Metallurgy
 Bells University of Technology, Ota, Nigeria

Topic: Importance of R&D Contribution for Achieving Sustainable Development Goals

Awarding of Certificate of Recognition to the Keynote Speaker

Mechanics of the Program and Presentation

PARALLEL SESSIONS **1:00 PM - 4:30 PM**

Day 2 (December 10, 2022)

REGISTRATION	8:00 AM– 8:30 AM
PARALLEL SESSIONS	8:30 AM - 12:00 NN
PLENARY TALK	1:00 PM - 2:00 PM
Introduction of the Plenary Speaker	DR. JOCELYN O. JINTALAN Dean, Graduate School Camarines Sur Polytechnic Colleges
Plenary Speaker	ASSOC. PROF. TS. DR. MOHD NASIR ISMAIL Information Science Studies College of Computing, Informatics and Media Universiti Teknologi MARA Kelantan Branch, Malaysia
	Topic: Futures Thinking in Education and Research
	<i>Awarding of Certificate of Recognition to the Plenary Speaker</i>
AWARDING AND CLOSING CEREMONY	2:00 PM - 4:00 PM
	<i>Awarding of Certificates (Judges, Best Paper and Best Presenter)</i>
Closing Remarks	ENGR. HAROLD JAN R. TERANO Director, Center for Research and Development, Camarines Sur Polytechnic Colleges Conference Chair, 2nd IMCETEMDS

Track 1 -ENGINEERING AND COMPUTER TECHNOLOGY

Schedule of Presentation: December 9, 2022 (1:00 PM - 4:30 PM)

Moderator: Ms. Riza V. Rian

Panel of Judges: Engr. Rizza T. Loquias; Dr. Ramil G. Lumauag

Technical Staff: Mr. Mark Kevin P. Candelaria

Paper ID	Title	Author/s	Affiliation
010	CHARACTERIZING THE ENERGY USE OF AN ACADEMIC BUILDING USING BUILDING PERFORMANCE SIMULATIONS: A CASE STUDY OF CEBU TECHNOLOGICAL UNIVERSITY, MOALBOAL CAMPUS, GRADUATE SCHOOL BUILDING	Jeffrey I. Ator	Cebu Technological University - Moalboal Campus
029	APPLICATION OF THE INNOVATIVE DESIGN OF PERMISSIVE OVERREACH TRANSFER TRIP (POTT) SCHEME USING IEC61850 GOOSE MESSAGING	Neil John V. Nahial	University of Science and Technology of Southern Philippines
033	A DEEP LEARNING APPROACH FOR AUTOMATIC SCOLIOSIS COBB ANGLE IDENTIFICATION	Renato R. Maaliw III ¹ Julie Ann B. Susa ¹ Alvin S. Alon ² Ace C. Lagman ³ Shaneth C. Ambat ³ Manuel B. Garcia ³ Keno C. Piad ² Ma. Corazon Fernando-Raguro ³	¹ Southern Luzon State University ² Batangas State University ³ FEU Institute of Technology
052	UTILIZATION OF TRENDLINES IN DETERMINING ANTENNA HEIGHTS FOR MICROWAVE COMMUNICATIONS	Jonnel K. Pabico	Laguna State Polytechnic University
056	DESIGN OF SEPTAGE TREATMENT FACILITY IN CENTRAL PHILIPPINES STATE UNIVERSITY, KABANKALAN CITY	Laarni Castor	Central Philippines State University
110	APPLICATION OF NATURAL LANGUAGE PROCESSING IN CLASSIFYING EXAMINATION QUESTIONS ACCORDING TO REVISED BLOOM'S TAXONOMY	Kierven A. Villaruel Leonard L. Alejandro	Adamson University

Track 2-TECHNOLOGY AND PRODUCT DEVELOPMENT

Schedule of Presentation: December 9, 2022 (1:00 PM - 4:30 PM)

Moderator: Ms. Bernadette Grace B. Delgaco

Panel of Judges: Dr. Yolanda A. Santorcas; Dr. Pablo N. Minerva, Jr.

Technical Staff: Mr. Manuel C. Guanzon, Jr.

Paper ID	Title	Author/s	Affiliation
008	DEVELOPMENT AND ACCEPTABILITY OF LONGGANISA USING RABBIT MEAT (LONGABBIT)	Michelle M. Gatdula Eleonora V. Uy Amylin E. Infortuno Sonny E. Dela Cruz	Bulacan Agricultural State College
038	PRODUCTIVITY IMPROVEMENT THROUGH DISTANCE SENSOR OF WOBBLE CHECKER AT ABC COMPANY	Joel R. Cornejo Elaine Jeneth B. Cuevillas Alyssa Mae M. Malolos Ric L. Yambot Jr.	Batangas State University
057	UTILIZATION OF BIO SYNTHESIZED MAGNETIC IRON OXIDE NANOPARTICLES WITH BROWN SEAWEEDS (SARGASSUM POLYCYSTUM) FOR THE REMOVAL OF METHYLENE BLUE DYE	Sherald G. Agustin Arvin D. Dimaunahan, Christine Joy P. Lapiz, Rhonalyn V. Maulion	Batangas State University
082	GRADATION AND COMPRESSIVE STRENGTH EVALUATION OF RECYCLED CONCRETE AGGREGATE FOR STRUCTURAL CONCRETE	Orly Jay L. Beray ¹ Ulmen Riff L. Circulado ²	¹ Zamboanga Peninsula Polytechnic State University ² Western Mindanao State University
105	RISK ASSESSMENT OF CAR PAINTING PROCESS: BASIS ON WORKSTATION IMPROVEMENT FOR ERGONOMIC SAFETY	Maricel M. Lacbay	Batangas State University-The National Engineering University
106	DEVELOPMENT OF CTRA: CSS NC 2 TRAINING AID MOBILE APPLICATION	Shiela Dona B. Sillan Maricris Ramizares Kezia Abigail Velasco	Camarines Sur Polytechnic Colleges
113	COMPRESSIVE STRENGTH OF CONCRETE USING RECYCLED COARSE AGGREGATES	Elias L. Tomenio Franci H. Tomenio	Camarines Sur Polytechnic Colleges

Zoom Meeting

Recording

A Deep Learning Approach for Automatic Scoliosis Cobb Angle Identification

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