

Two DLSU projects get DOST support to boost country's AI, data science

Two DLSU projects led by College of Computer Studies (CCS) faculty that seek to boost the country's disaster management and public healthcare system through AI and data science have received support from the Department of Science and Technology-Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCIEERD).

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The research projects, "Intelligent Structural Health Monitoring via Mesh of Tremor Sensors (meSHM)" led by CCS Assistant Dean for Research and Advanced Studies Dr. Marnel Peradilla and "Development of Multilingual Chatbot for Health Monitoring of Public School Children" spearheaded by Advanced Research Institute for Informatics, Computing and Networking Director Dr. Judith Azcarraga, were among the research initiatives launched in an event hosted by DOST-PCIEERD last April 8.

The meSHM project, which is also supported by the DLSU Advanced Research Institute for Informatics, Computing, and Networking, involves the development and deployment of low-cost multi-sensor nodes around a structure as a mesh, collecting data for a period of time, relaying then storing the data. Data is then analyzed to detect structural defects or anomalies based on relative sensor signals in the mesh using AI.

Peradilla said that the cost-efficient meSHM could help in the development of a concrete disaster-prevention policy for all public and private structures in the country.

Members of the meSHM team are Peradilla for network and communications; Dr. Arnulfo Azcarraga for AI visualization; Dr. Lessandro Garciano for structural engineering; Clement Ong for mechatronics engineering; and Fritz Kevin Flores for network and communications machine learning.

For her part, Dr. Judith Azcarraga explained that the multilingual chatbot for health monitoring seeks to answer the need for routine wellness checking of public school children, in view of the limited number of health wellness experts and limitations in healthcare monitoring systems. It also aims to address the lack of technology specifically designed for Philippine languages.

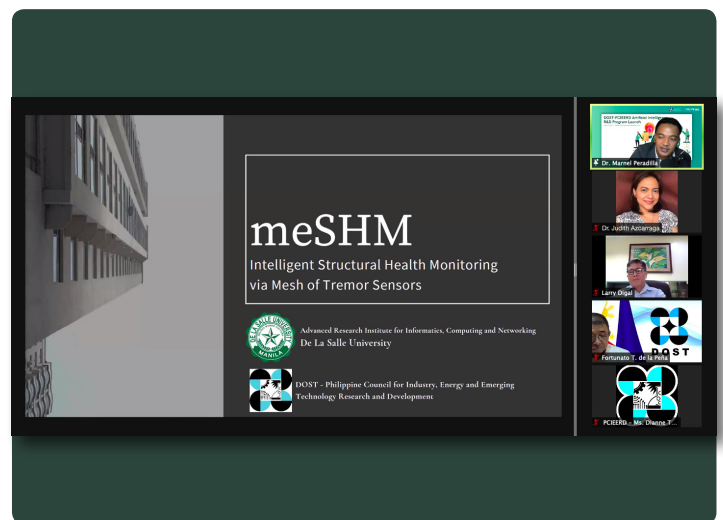
The team aims to develop an automated physical and mental health wellness assessment system using chatbot, one that can converse with children in Filipino and Bisaya. As a regular healthcare monitoring system in public schools, it can be used even without the presence of a doctor or medical practitioner.

Targeted for completion in January 2023, the chatbot project also hopes to encourage the children users independence and accountability to their own health. Azcarraga further noted that the research also hopes to foster collaboration among experts from different fields.

The two projects were among the nine AI research and development projects launched simultaneously by DOST-PCIEERD and undertaken by the DOST-Advanced Technology Science Institute (ASTI). The other projects come from UP Mindanao, UP Los Baños, and Caraga State University.

Other members of the chatbot team are: Dr. Charibeth Cheng for natural language modelling; Dr. Ronald Pascual for audio signal processing; Ma. Christine Gendrano and Candy Joyce Espulgar for knowledge building and telemedicine; Jaymee Pantaleon for mental health wellness; and Dr. Alona Ardales for the development of Filipino chatbot.

During the launch, DOST Secretary Fortunato De La Peña talked about the department's 10-year Framework for AI R&D in the Philippines.



INSPIRATIONAL BOOK FOR LAWYERS LAUNCHED

LAST MARCH 27, "FAITH, JOY, AND JUSTICE: INSPIRATIONS FROM FILIPINO LAWYERS" authored by formator for College of Law (COL) and Graduate Studies of the Lasallian Pastoral Office Gracita Santos Perez was launched virtually.

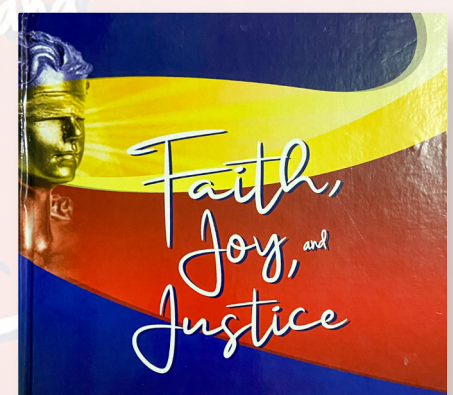
Published by Rex Bookstore, the book seeks to inspire law students, new lawyers, and all those aspiring to be lawyers. It is a collection of personal and unique stories of the 21 lawyers, including Philippine Vice President Leni Robredo and former COL dean Atty. Jose Manuel Diokno,

while they were in law school and during their legal practices.

According to Perez, the book explores faith, which is the source of strength of aspiring lawyers; joy, which pertains to the joy in their vocation; and justice, which is mirrored in their utmost dedication to preserve it and to work for the common good.

In his foreword, Br. Armin Luistro FSC, Brother Visitor of the Lasallian East Asia District, shared that, "This collection of stories and struggles, aspirations

and inspirations of legal pundits may rupture the rather disciplined and punctilious world of the legal profession. It is my hope and prayer that you will discover in these pages that the journey is as important and as enjoyable as the destination."



STUDENT DELEGATES REAP AWARDS IN INTERNATIONAL MUN VIRTUAL CONFERENCES

STUDENT DELEGATES FROM DLSU RECENTLY GARNERED SEVERAL AWARDS IN SEPARATE MODEL UNITED NATIONS (MUN) COMMUNITY VIRTUAL CONFERENCES, with hosts from Toyo, Japan and New York City, USA.

At the Toyo Model United Nations Virtual Conference last March 27-28 sponsored by Toyo University Japan, 12 of 13 representatives of the DLSU MUNCom were recognized.

The World Health Organization delegation was composed of the following: Jose Peregrine Argana, Delegate of Russia (Best Delegate and Best Position Paper); Hannah Marie Antoinette De Peralta, Delegate of Luxembourg (Outstanding Delegate); Noelle Patricia Azarcon, Delegate of New Zealand (Honorable Mention); Hyacinth Flores, Delegate of Singapore (Honorable Mention); Jona Acedilla, Delegate of Australia (Verbal Commendation); Roschela Oabel, Delegate of Venezuela (Verbal Commendation); and Marianne Era, Delegate of Seychelles. For the Social Humanitarian and Cultural Committee (General Assembly 3), Erika Arcega, Delegate of China, won the Best Position Paper while Theodore Christopher Alberto, Delegate of Myanmar, was named as Outstanding Delegate.

Winners at the United Nations Educational, Scientific, and Cultural Organization were Benedict Rafael Mateo, Delegate of Argentina (Best Delegate) and Samantha De Leon, Delegate of China (Outstanding Delegate). Andrea Beverly Tan, Delegate of Saudi Arabia, won Honorable Mention and Rocio Maria Francesca Tabamo, Delegate of Ghana, won Verbal Honorable Mention.

The TOYOMUN followed the Harvard format for MUN simulation.

Meanwhile, at the National Model United Nations New York 2021 last April 5 to 8, the DLSU delegation won the Honorable Mention Delegation award as the Republic of Poland.

Delegates Marianne Era and Theodore Alberto also received the Outstanding Delegates Award at the Human Rights Council.

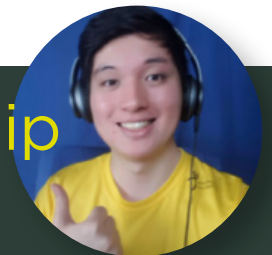
The other members of the delegation were: Jose Peregrine Argana and Andrea Beverly Tan, General Assembly 1 (Disarmament and International Security); Hannah De Peralta and Roschela Oabel, General Assembly 2 (Finance and Economics); Jona Acedilla, General Assembly 3 (Social, Humanitarian and Cultural); Noelle Azarcon and Hyacinth Flores, United Nations Environment Assembly;

and Erika Arcega and Benedict Mateo, Non-Proliferation Treaty of Nuclear Weapons Review Conference.

The NY conference was conducted online via the Gatherly Platform where almost 1,000 participants from 130 countries gathered to debate relevant international issues.



Engineering major bags championship in 3-day Battle of the Brains



AN ELECTRONICS AND COMMUNICATIONS ENGINEERING (ECE) STUDENT FROM THE DLSU GOKONGWEI COLLEGE OF ENGINEERING EMERGED AS CHAMPION in the three-day Quiz Bee "Battle of the Brains" Season 2 hosted by SMART EDGE ECE Review Specialist from April 17-19 via Zoom/Quizizz and streamed through Facebook Live.

Grant Lewis Bulaong won the top prize in the competition's Diamond Category, which was participated in by Engineering majors from 4th year and up. Samuel Alexander Pasia, a fellow Lasallian, was a finalist.

In the Gold Category for students from 1st year to 3rd year levels, Christian Anabeza emerged as 1st runner-up while Galvin Brice Lim was 2nd runner-up.

A total of 74 contestants from different colleges and universities participated in the activity.

ECE faculty members Dino Dominic Ligutan and Jose Martin Maningo served as their coaches.

DOST CRADLE 2 PROJECT INNOVATES ON DESIGN GUIDELINES FOR AUTOMOTIVE APPLICATIONS



FOLLOWING THE SUCCESSFUL LAUNCH OF THE DOST CRADLE PROJECT ON THE DEVELOPMENT OF SEMICONDUCTOR PACKAGING DESIGN GUIDELINES LAST YEAR,

DLSU Laguna Campus and Integrated Micro-Electronics Inc. (IMI) hosted “DOST CRADLE Phase 2 Project: Development of a Design Guideline Using Finite Element Analysis (FEA) for Semiconductor and Electronics Packaging Systems for Automotive Applications” last March 23 via Zoom.

DLSU Mechanical Engineering Department Chair Dr. Aristotle Ubando and faculty member Engineer Jeremias Gonzaga, with IMI Head of Global Technology New Product

Introduction Enrique Sonoy, Jr., proposed the employment of FEA to investigate thermomechanical behaviors of the semiconductor package and as an economical and expedient process for evaluating packaging design.

Their research focuses on the development of crucial semiconductor and electronics packaging systems, such as cameras, digital displays, and their Integrated Circuit (IC) packages for automobile, industrial, and commercial applications.

The project is also aimed at strengthening cooperation between the academe and industry through research, as well as

building the capacity and capability of the Thermomechanical Analysis Laboratory (TALa) in DLSU Laguna Campus. The research produced will also aid IMI in producing enhanced semiconductor products.

During the program, DOST Balik Scientist Engineer Vicente Dy Reyes introduced FEA and stressed the need for training on the software to enable local talents to collaborate with industries worldwide.

The event was attended by the IMI managers, DLSU faculty and academic staff, DOST officers, and industry stakeholders.

Support for PGH medical staff and frontliners

IN A MESSAGE TO THE LASALLIAN COMMUNITY LAST

APRIL 19, DLSU President Br. Raymundo Suplido FSC announced that the University is partnering with the Philippine General Hospital (PGH) and the City of Manila to provide hospitality and shelter to PGH medical staff and frontliners.

The Lasallian Center, a currently unoccupied dormitory located on Augusto Francisco Street in Malate, has been identified as an isolation facility for health workers in need of physical rest.

Health, safety, and security protocols will be strictly observed to ensure the health and well-being of the guests, as well as the residents of the neighboring areas. The management of the isolation facility will be under the supervision of the PGH, including the

implementation of the quarantine protocols, provisions for meals and other necessities for the healthcare workers, and medical, housekeeping, and security and safety services.

The University will continue to work closely with PGH and support the efforts of the local LGU and the Manila city government to help curb the spread of the virus.

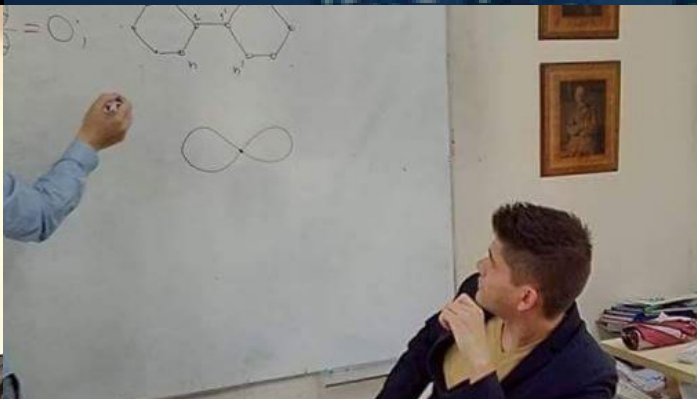
“These frontliners are our present day heroes who have been fighting for us day in and day out for over a year now. As we currently face a severely strained health and medical workforce, we are called to support them so that they may continue to serve our people,” Br. Ray said in his message.



Santos



Hartmann



RESEARCHERS AT DE LA SALLE UNIVERSITY FOCUSING ON THE STUDY OF NANOTECHNOLOGY are advancing in the field with their latest projects in collaboration with local and international partners.

For Physics Department Full Professor, and concurrently the Vice Chancellor for the Laguna Campus, Dr. Gil Nonato Santos, together with PhD graduate student Renebeth Payod, it was their involvement in the development of an on-chip integrated carbon-based optoelectronic nanocircuits, a transition from semiconductor materials to a new advance material such as a single wall carbon nanotube with graphene nanoribbons.

“They are the building blocks of such technology that is fast and a non-invasive approach with its structure. While there is an available catalog of experimental data regarding the structure of carbon nanotubes, on the other hand, there is none with graphene nanoribbons,” Santos shares.

The study is Payod’s PhD dissertation, while Santos is her adviser. Other co-

authors involved in the research are Davide Grassano and Olivia Pulci from University of Rome Tor Vergata, Dmitry Levshov of Southern Federal University, and Vasil Saroka of Norwegian University of Science and Technology.

When asked how it is to mentor graduate students in doing their dissertation, Santos had this to say: “Young researchers should keep in mind to contribute to the advancement of new knowledge. Be observant and think differently in the approach to understanding nature’s phenomenon.”

Meanwhile, Dr. Richard Rudolf Hartmann, another faculty member from the Physics Department, has collaborated with international researchers, this time in investigating various forms of carbon nanostructures that can be used to create portable, affordable sources and detectors of THz radiation.

“Unlike X-rays, THz radiation is non-ionising, and can penetrate some distance through body tissue. [This means] it could be used in medical diagnostic equipment, such

as aiding in the detection of cancer cells, or tooth decay (both major problems in the Philippines). Other applications of THz radiation include drug detection and communication applications,” Hartmann explains.

Hartmann co-authored the research titled, “Excitonic Fine Structure in Emission of Linear Carbon Chains” together with other international researchers and was published in the American Chemical Society Journal.

For Hartmann, it’s the excitement of discovery and learning things which are previously unknown that motivates him to pursue research. “It’s developing the theoretical framework for future devices which could have great societal and technological impacts downstream. It is also the challenge of solving a problem that is intrinsically motivating. As Voltaire said, ‘no problem can withstand the assault of sustained thinking’, so if you work hard enough eventually you will come to a solution, although not always to the question you originally asked!”

“Try to carry out your duties well and apply yourself to your spiritual exercises, for it is these that will sanctify you and lead you to God.”

De la Salle

Letter 60 - To Brother Mathias in Mende



DE LA SALLE UNIVERSITY CARE DESK



The DLSU Care Desk is a virtual hub that consolidates existing services and programs responding to the needs of the members of the Lasallian community particularly those struggling with the demands and effects of the pandemic.

4 Services



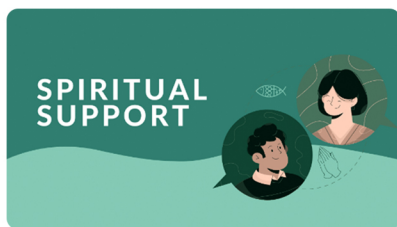
- Telemedicine
- COVID-19 Procedure

8 Collaborating units

- Lasallian Center for Inclusion, Diversity and Well-being (LCIDW)
- Office of Student Affairs (OSA)
- Lasallian Pastoral Office (LSPO)
- Lasallian Mission - Laguna, Office of Counseling and Career Services (OCCS)
- IS Guidance Office
- Lasallian SHINE Project
- Health Services Office (HSO)
- University Student Government (USG)



- Faculty and Staff
- Undergraduate and Graduate Students
- Integrated School



- Spiritual Direction
- Mass Intentions
- DLSU Prayer Wall



Lasallian Student Welfare Program

Visit: DLSU Care Desk (<https://www.dlsu.edu.ph/dlsu-care-desk/>)

Source: Lasallian Center for Inclusion, Diversity, and Well-being



2401 (twen'te fôr',o, wun) is a landmark number along Taft Avenue. It is the location ID of De La Salle University, home to outstanding faculty and students, and birthplace of luminaries in business, public service, education, the arts, and science. And 2401 is the name of the official newsletter of DLSU, featuring developments and stories of interest about the University.

2401 is published bi-weekly by the Office for Strategic Communications (AH-21F, intercom 144). Editorial deadline is 3 p.m. Tuesdays. Contributions should include the name, office and signature of the sender. Materials may be edited for clarity or space.

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