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**3rd International Conference
on Information and Computing Research (iCORE)**

FUTURE EARTH: TECHNOLOGY'S ROLE IN SHAPING SUSTAINABLE OUTCOMES

JULY 19 - 20, 2024
NATIONAL UNIVERSITY
Mall of Asia Philippines

Organized By:

NATIONAL UNIVERSITY
1900

PROGRAMME
DAY 1 | JULY 19, 2024

TIME	EVENT
8:00 - 9:00	Registration
9:00 - 10:10	Conference Inauguration & Special Messages:

Welcome Remarks

   Dr. Vladimir Mariano
   General Chair, iCORE2024

Special Message

   Dr. Renato Carlos H. Ermita
   President/CEO, National University Philippines

Special Message

   Dr. Jessie Barrot
   AVP,Research & Development Office of National University

Messages from University Partners

   Prof. Xu, Yong - Anhui University of Finance and Economics
   Prof. Marilou Jamis - NU – MOA
   Fr. Jesuraj Anthoniappen - University of San Carlos

Video Messages

   Anhui Xinhua University
   Bicol University
   University of Cordilleras
   Don Mariano Marcos Memorial University
   Laguna State Polytechnic University
   Jiangxi V&T College of Communications

TIME	EVENT
10:10 - 10:30	**NU Chorale Presentation**
10:30 - 11:15	Coffee Break

Keynote Address:

   Dr. Simon See
   Professor, NTU, Coventry University and University of Newcastle
   Global Head Nvidia AI Technology Centre NVIDIA
   Executive Director of ASEAN Applied Research Centre, Professor

11:15 - 12:00	**Keynote Address:**

   Dr. Vladimir Mariano
   Lead Faculty for Technology and Innovation,
   YSEALI Academy of Fulbright University Vietnam

TIME	EVENT
12:00 - 1:00	Lunch Break
1:00 - 1:30	Industry Talk by Alibaba Cloud

   JV Roig
   Senior Solutions Architect at Alibaba Cloud

TIME	EVENT
1:30 - 4:45	Parallel Sessions
4:45 - 5:00	**Day 1 Synthesis**

   Session Chairs

TIME	EVENT
5:00 - 5:30	Claiming of Certificates

PROGRAMME
DAY 2 | JULY 20, 2024

TIME	EVENT
8:00 - 9:00	Registration
9:00 - 12:15	Parallel Sessions
12: 15 - 1:30	Lunch Break
1:30 - 2:15	**Industry Talk: Google** **Julian Salazar** Senior Research Scientist on Perception Team, Google Research
2:15 - 3:00	**Industry Talk: IBM** **Phaedra Boinodiris** Global Leader for Trustworthy AI, IBM Consulting
3:00 - 3:20	Coffee Break
3:20 - 3:45	**Industry Talk by SAS** **Beatrix Palomar** Fraud and Security Intelligence Practice Lead
3:45 - 4:15	Awarding Ceremony **Best Paper** **Best Presentations**
4:15 - 4:30	**Closing Keynote** **Dr. Vladimir Mariano** General Chair, iCORE2024
4:30 - 5:00	Claiming of Certificates

Master of Ceremonies
Dr. Mark Christian Ledda & Dr. Angie Canillo - Ceniza

Parallel Sessions
Day 1 – July 19, 2024, 1:30 PM – 4:45 PM

Day 1 – July 19, 2024, 1:30 PM – 4:45 PM		
Track 1 - Sustainability and Social Good		
Session Chair: Dr. Rex Bringula		
Session Co-Chair - Jean V. Malolos		
Usher - Nick C. Zuidema		
Time	Paper ID	Title/Presenter
1:30 - 1:45	31	*Alertrash: A Web-based Reporting System for Waste Disposal Violations* Authors: Stefany Mae Caliao (University of the Cordilleras), Aldith Faith Mirador* (University of the Cordilleras), Melinda Beninsig (University of the Cordilleras) and Lovely Jenn Reformado (University of the Cordilleras).
1:45 - 2:00	32	*presQRx: A Mobile Application for QR-Code Prescriptions* Authors: Lhorexcel Bombarda (University of the Cordilleras), Agnes Nazarro* (University of the Cordilleras), Earl Alexus Serafica (University of the Cordilleras) and Melinda Beninsig (University of the Cordilleras).
2:00 - 2:15	38	*Design and Implementation of Web-base with Mobile Application for Water Quality Monitoring* Authors: Analyn Morite* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Geraldine Roldan (Surigao del Norte State University) and Jude Michael Bautista (Surigao del Norte State University).
2:15 - 2:30	52	*Price Forecasting Model for Selected Agricultural Commodities in the Philippines* Authors: Hannah Dorothy Morales* (Don Mariano Marcos Memorial State University - Mid La Union Campus), Raymond Tabafunda (Don Mariano Marcos Memorial State University - Mid La Union Campus), Loreen Caud (Don Mariano Marcos Memorial State University - Mid La Union Campus), Sydrick Lois Roque (Don Mariano Marcos Memorial State University - Mid La Union Campus) and Alvin Malicdem (Don Mariano Marcos Memorial State University - Mid La Union Campus).
2:30 - 2:45	54	*OSCAre: Senior Citizen Management System with Data Visualization* Authors: Shieh Carambias* (Don Mariano Marcos Memorial State University), Charles Andrei Aspuria (Don Mariano Marcos Memorial State University), Jo-Ana Enriquez (Don Mariano Marcos Memorial State University), Roland John Gracias (Don Mariano Marcos Memorial State University) and Sheena Sapuay-Guillen (Don Mariano Marcos Memorial State University).
2:45 - 3:00	59	*Analysis of the application of NLP in the field of tunnel fire rescue* Authors: Xiaobing Liu* (Jiangxi Communications Vocational and Technical College China) and Rodolfo C. Raga Jr. (College Of Computing And Information Technologies, National University Philippines).

Day 1 – July 19, 2024, 1:30 PM – 4:45 PM
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Time	Paper ID	Title/Presenter
3:00 - 3:15	64	***FLOOD WATCH: Flood Monitoring and Early Warning System in the City of San Fernando, La Union*** Authors: Hortizuela Manny (Don Mariano Marcos Memorial State University), Monica Estrada (Don Mariano Marcos Memorial State University), Chenie Ann Boado (Don Mariano Marcos Memorial State University), Hannah April Aricheta* (Don Mariano Marcos Memorial State University) and Jervin Balcita (Don Mariano Marcos Memorial State University).
3:15 – 3:30	72	***Awareness and Competencies in Data ANALYTICS of the Public Practice Sector of Accountancy*** Authors: Justine Lemuel Juano (National University), Ivy Claire Tong, Angelica Benico (National University), Rachelle Anne Villacorte (National University), Tessie Cua*, Araceli Angeles (National University), and Mario Camacho (National University)

Day 1 – July 19, 2024 1:30 PM – 4:45 PM
Track 2 - AI and Machine Learning
Session Chair: Dr. Davood Pour Yousefan Barfeh
Session Tech /Co Chair - Mico C. Magtira
Usher - Ren Joseph E. Ayangco

Time	Paper ID	Title/Presenter
1:30 - 1:45	30	***Spose-YOLOv8 Students 'After-class Learning Distraction Behavior Detection Model Deployed on Mobile Devices*** Authors: Zhendan Sun* (College of Computing & Information Technologies of National University of Manila) and Vladimir Y. Mariano (College of Computing & Information Technologies of National University of Manila).
1:45 - 2:00	37	***Tracking Of Leaffolder and Stem Borer On Rice Plant Using Deep Learning Through UAV*** Authors: Catherine Verallo* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Scott Diaz (Surigao del Norte State University) and Jivson Cala (Surigao del Norte State University).
2:00 - 2:15	49	***Maturity Assessment of Lactuca sativa Using Image Processing Based on Morphological Analysis And Convolutional Neural Network*** Authors: Emman Brenzo Tero* (Department of Computer Information Sciences and Mathematics University of San Carlos Cebu City, Philippines),

Day 1 – July 19, 2024 1:30 PM – 4:45 PM
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Time	Paper ID	Title/Presenter
		John Robert Tiempo (Department of Computer Information Sciences and Mathematics University of San Carlos Cebu City, Philippines) and Christian Maderazo (Department of Computer Information Sciences and Mathematics University of San Carlos Cebu City, Philippines).
2:15 - 2:30	55	*Analysis of Spatio-temporal Data Characteristics and Modeling with LSTM Networks for Traffic Flow Prediction* Authors: Wei Xu* (National University), Eric Blancaflor (Mapua University) and Mideth Abisado (National University).
2:30 - 2:45	58	*Research on Pose-guided Occluded Unsupervised Person Re-identification* Authors: Jianbo Liang* (College of Computing and Information Technologies, National University) and Abisado Mideth (College of Computing and Information Technologies, National University).
2:45 - 3:00	60	*Research on orange disease recognition model based on feature fusion four-branch parallel convolutional neural network* Authors: Xuefeng Yang* (National University Philippines or Jiangxi College of Applied Technology China), Vladimir Mariano (YSAELI Academy at Fullbright University) and Mideth Abisado (National University Philippines).
3:00 – 3:15	67	*A Research Review of High-Dimensional Dataset Prediction Models* Authors: Jue Zhao* (National University) and Vladimir Mariano (National University).

Day 1 – July 19, 2024 1:30 PM – 4:45 PM
Track 3 – Hypermedia
Session Chair: Prof. Marilou Jamis
Session Co-Chair - Aiken Joaquin E. Gunay
Usher - Miguel Alexis B. Partosa

Time	Paper ID	Title/Presenter
1:30 - 1:45	51	*Web-Based Microclimate Monitoring System* Authors: Darwin Mangca (Surigao del Norte State University), Robert Bacarro (Surigao del Norte State University), Vrian Jay Ylaya* (Surigao del Norte State University), Vance Rey Najera (Surigao del Norte State University) and Rolyn Mae Duque (Surigao del Norte State University).

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Time	Paper ID	Title/Presenter
1:45 - 2:00	71	*SEE Turtles: A Cross-Platform Application For Safeguarding Endangered Ecology Of Marine Turtles* Authors: Rizalyn B. Florague
2:00 - 2:15	101	*iDesign: A Mobile and Web Consultation Application for Clients and Architects of Suizo Company* Authors: Jill Shyrine Alejandrino* (National University Manila), Cyril Bien Aribon (National University Manila), Jonh Anferney Dawson Alladin (National University - Manila) and Leonila Valdez (National University - Manila).
2:15 - 2:30	11	*LagipAR: An Augmented Reality Based Mobile Application for Cultural Preservation of Musical Instruments in the Cordillera* Authors: Xhyple Au Limmong* (University of the Cordilleras), Lei Aries Jb Gapuz (University of the Cordilleras), Francheska Louise Serrano (University of the Cordilleras) and Melinda Beninsig (University of the Cordilleras).
2:30 - 2:45	99	*Ready, Set, Survive: An Informative Video Animation For Barangay Disaster Preparedness During Typhoon and Fire* Authors: Francheska Nicole Limson* (National University Philippines), Maria Jearand Bulawan (National University Philippines), Abdallah Mohammed Kashta (National University Philippines) and Juancho Iii Ramores (National University Philippines).
2:45 – 3:00	104	*EQUAL PERSPECTIVES: A Framework for Parallax Website Journey Through Gender Equality on Men* Authors: Veronica Silva (National University), Matt Klarenz De Vera (National University), Rei Krishna Vergara (National University), and Roben Juanatas* (National University)

Day 1 – July 19, 2024 1:30 PM – 4:45 PM
Track 4 - Emerging Technologies
Session Chair: Prof. Xu, Yong
Session Co-Chair - John Carlo P. Jimenez
Usher - Earlan Josh Q. Sabillano

Time	Paper ID	Title/Presenter
1:30 - 1:45	23	*Design and Development of a Portable Beam Deterioration Detection System using Impulse Radar with CNN for Efficient Bridge Management*

Day 1 – July 19, 2024 1:30 PM – 4:45 PM
Track 4 - Emerging Technologies
Session Chair: Prof. Xu, Yong
Session Co-Chair - John Carlo P. Jimenez
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		Authors: Rosanne Andaluz* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Wearl Webster Donoso (Surigao del Norte State University) and Ece Van Baclay (Surigao del Norte State University).
1:45 - 2:00	26	***Classification on Three Phases of Vermicomposting using VGG-16 Implemented in Impulse Radar*** Authors: Lucilyn Borja* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Arrianne Mae Angob (Surigao del Norte State University) and Glanestly Abarca (Surigao del Norte State University).
2:00 - 2:15	35	***Design and Comparison of Vivaldi Antennas for Impulse Radar*** Authors: Robert Bacarro* (Surigao del Norte State University), Darwin Mangca (Surigao del Norte State University), Vrian Ylaya (Surigao del Norte State University), Merlinda Pabinguit (Surigao State College of Technology) and Junrich Escabal (Surigao del Norte State University).
2:15 - 2:30	36	***Readiness Of Vermicomposting Soil Conditioner Using Impulse Radar*** Authors: Romy Jun Sunico* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Ferie Ann Dumaguit (Surigao State College of Technology) and Mary Jessebel Clavero (Surigao del Norte State University).
2:30 - 2:45	41	***Design and Implementation of IoT-based Microclimate Monitoring System with Wireless Sensor Networks*** Authors: Darwin Mangca (Surigao del Norte State University), Robert Bacarro (Surigao del Norte State University), Vrian Jay Ylaya* (Surigao del Norte State University), James Paul Degamon (Surigao del Norte State University) and Vincent Nicole Dihayco (Surigao del Norte State University).
2:45 - 3:00	42	***Design and Development of Poultry Automation System for the Gallus Gallus Domesticus*** Authors: Leopoldo Besinio Jr.* (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State Univeristy), Edgar Gardose (Surigao del Norte State Univeristy) and Tulip Menor (Surigao del Norte State University).
3:00 - 3:15	43	***IoT- Enabled Piggery Automation System*** Authors: Darwin Mangca (Surigao del Norte State University), Robert Bacarro (Surigao del Norte State University), Vrian Jay Ylaya* (Surigao del Norte State University), Russel Asilo (Surigao del Norte State University) and Fernando Yabo (Surigao del Norte State University).
3:15 - 3:30	44	***Soil Moisture Analysis implemented using FMCW through USRP 2932***

Day 1 – July 19, 2024 1:30 PM – 4:45 PM **Track 4 - Emerging Technologies** Session Chair: Prof. Xu, Yong Session Co-Chair - John Carlo P. Jimenez Usher - Earlan Josh Q. Sabillano		
		Authors: Robert Bacarro* (Surigao del Norte State University), Darwin Mangca (Surigao del Norte State University), Vrian Jay Ylaya (Surigao del Norte State University), Sorene Castones (Surigao del Norte State University) and Mercy Penarejo (Surigao del Norte State University).
3:30 – 3:45	78	***Exploring Diverse Approaches to Enhance Pedestrian Lane Detection Performance*** Authors: Russell Roy Escobar (Saint Michael's College of Laguna), Anna Liza Ramos (Saint Michael's College of Laguna), Steven Albero* (Saint Michael's College of Laguna), John Kenneth Guevarra (Saint Michael's College of Laguna), and Jessa Adorna (Saint Michael's College of Laguna)

Parallel Sessions

Day 2 – July 20, 2024, 9:00 AM – 12:15 PM

<table>
<tr><td colspan="3">Day 2 – July 20, 2024, 9:00 AM – 12:15 PM
Track 1 - Sustainability and Social Good
Session Chair: Prof. Bernie Fabito
Session Co-Chair - Jean V. Malolos
Usher - Nick C. Zuidema</td></tr>
<tr><td>Time</td><td>Paper ID</td><td>Title/Presenter</td></tr>
<tr>
<td>9:00 - 9:15 AM</td>
<td>77</td>
<td>A Cyberbullying Text-based Analysis with Risk Assessment Leveraging Machine Learning Algorithms

Authors: Nikhael Nosa (Saint Michael's College of Laguna), Anna Liza Ramos (Saint Michael's College of Laguna), Edison Contante* (Saint Michael's College of Laguna), Aliza Lyca Gonzales (Saint Michael's College of Laguna) and Dave Jarmin Balingbing (Saint Michael's College of Laguna).</td>
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<tr>
<td>9:15 - 9:30</td>
<td>85</td>
<td>Prevalence, Devices Used, Reasons for Use, Trust, Barriers, and Challenges in Utilizing Generative AI among Tertiary Students

Authors: John Paul Miranda* (Don Honorio Ventura State University), Joseph Alexander Bansil (Don Honorio Ventura State University), Emerson Fernando (Don Honorio Ventura State University), Almer Gamboa (Don Honorio Ventura State University), Hilene Hernandez (Don Honorio Ventura State University), Myka Cruz (Don Honorio Ventura State University), Roque Francis Dianelo (Don Honorio Ventura State University) and Dina Gonzales (Don Honorio Ventura State University).</td>
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<tr>
<td>9:30 - 9:45</td>
<td>100</td>
<td>MindCare: A Mobile and Web Application for Synergy Nursing Homecare Center Using Exponential Smoothing for Forecasting Mental Illness

Author/s: Gabriel Luis Sabater (National University), Christian Joelo Mondoñedo* (National University), Johnrod Francis Jardeleza (National University), Riv Joshua Avila (National University), Roben Juanatas (National University) and Emeliza Yabut (National University).</td>
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<tr>
<td>9:45 - 10:00</td>
<td>63</td>
<td>An Integrated Management System with Descriptive Analytics for National University Research Department

Authors: Gabrille David (National University (Manila, Metro Manila)), Jhon Louie De Leon (National University (Manila, Metro Manila)), Cassandra Maria Heyu Dumpit (National University (Manila, Metro Manila)), Frank Vincent Gesmundo* (National University (Manila, Metro Manila)), Aries John Teves (National University (Manila, Metro Manila)) and Emeliza Yabut (National University (Manila, Metro Manila)).</td>
</tr>
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<td>10:00 - 10:15</td>
<td>31</td>
<td>Alertrash: A Web-based Reporting System for Waste Disposal Violations

Authors: Stefany Mae Caliao (University of the Cordilleras), Aldith Faith Mirador (University of the Cordilleras), Melinda Beninsig (University of the Cordilleras) and Lovely Jenn Reformado (University of the Cordilleras).</td>
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Day 2 – July 20, 2024, 9:00 AM – 12:15 PM
Track 1 - Sustainability and Social Good
Session Chair: Prof. Bernie Fabito
Session Co-Chair - Jean V. Malolos
Usher - Nick C. Zuidema

10:15 - 10:30	103	*Waste Wise: A Mobile and Web Application for Waste Management of the City Environment Management Office in Marikina City* Authors: Kevin Paul Sta Maria (National Univerity - Manila), Venedic Bello (National Univerity - Manila), Racel Jude Marahay* (National Univerity - Manila) and Reynier Querijero (National Univerity - Manila).
10:30 – 10:45	95	*Factors Influencing the Intention of Green Travel under the Carbon Generalized System of Preference (CGSP)* Authors: Chunmei Liu* (Shandong Jiaotong University, National University (the Philippines)), Mideth Abisado (National University (the Philippines)) and Avonn Nova (National University (the Philippines)).

Day 2 – July 20, 2024, 9:00 AM – 12:15 PM
Track 2 - AI and Machine Learning
Session Chair: Dr. Davood Pour Yousefan Barfeh
Session Tech /Co Chair - Mico C. Magtira
Usher - Ren Joseph E. Ayangco

Time	Paper ID	Title/Presenter
9:00 - 9:15 AM	74	*Navigating the Threat Landscape: A Comprehensive Review of Adversarial Attacks in Computer Vision Systems* Authors: Tian Jie* (National University) and Vladimir Y Mariano (National University).
9:15 - 9:30	75	*Study on the Profile Model of Rumor Users in the Scenario of a Social Platform* Authors: Yong Xu* (Anhui University of Finance & Economics), Xue'Er Wang (Anhui University of Finance & Economics) and Hengna Wang (Anhui University of Finance & Economics).
9:30 - 9:45	84	*Depression Detection in Tweets Using Ensemble Neural Networks* Authors: Jacob Balane (University of San Carlos), Sebastian Villanueva* (University of San Carlos) and Angie Ceniza-Canillo (University of San Carlos).
9:45 - 10:00	97	*Segmentation of MRI Brain Tumor Images Based on Deep Learning* Authors: Fangliang Huang* (National University) and Mariano Vladimir (National University).

Day 2 – July 20, 2024, 9:00 AM – 12:15 PM
Track 2 - AI and Machine Learning
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10:00 - 10:15	57	*Research on Dish Recognition Based on Deep Learning* Authors: Yi Yu* (University of San Carlos), Archival Sebial (University of San Carlos) and Angie Ceniza (University of San Carlos).
10:15 - 10:30	18	*Analysis of the Application Effect of Neural Networks in the Classification of Tomato Disease and Pest Images* Authors: Bingjie Liu* (National University,Philippines) and Vladimir Mariano (National Universit, Philippines).
10:30 - 10: 45	25	*Classification of Pneumonia in Radiology Images Using Neural Networks* Authors: Jianlan Ren* (National University,Philippines) and Vladimir Mariano (National Universit, Philippines).
10:45 - 11:00	83	*Analysis of Students' Performance Using Data Mining Technique* Authors: Londabee Margarse* (National University) and Rodolfo Raga (National University).

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Track 4 - Emerging Technologies
Session Chair: Prof. Ramon Rodriguez
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Time	Paper ID	Title/Presenter
9:00 - 9:15 AM	66	*Application of I3D Networks in Speed Climbing： A Study on Single Climber Training Videos* Author/s: Yufei Xie (National University) and Vladimir Mariano (National University).
9:15 - 9:30	80	*An Empirical Analysis of the Application of Blockchain Technology in the Circulation Module of Library Management Systems* Authors: Ray Louis Arcilla* (University of San Carlos - Talamban Campus), Shinji Ishikawa (University of San Carlos - Talamban Campus) and Angie Ceniza-Canillo (University of San Carlos - Talamban Campus).
9:30 - 9:45	89	*Risk Analysis of Urban Traffic Accident Impact Based on Association Rules* Authors: Ruofan Wang* (National University Manila,Philippines) and Rodolfo Raga Jr. (National University Manila,Philippines).
9:45 - 10:00	93	*Identification of Construction Safety Behavior Based on YOLOv8*

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Time	Paper ID	Title/Presenter
		Authors: Huang Kan* (National University Jiangxi Vocational and Technical College of Communications) and Mideth B Abisado (National University).
10:00 - 10:15	98	*Hybrid Retrieval-Augmented Generation and Fine-tuned LLMs for Enhanced Port Industry Question-Answering Systems* Authors: Xinqiang Hu* (College of Computing and Information Technologies, National University Manila, Philippines) and Mideth Abisado (College of Computing and Information Technologies, National University Manila, Philippines).
10:15 - 10:30	105	*TRAIN TRACKER PH: A Mobile and Web Application for the Commuters of the Philippine National Railways* Authors: Matthew Haeven Bautista (National University - Manila), Jose Iii Mallari (National University - Manila), Rexeth Macalalad (National University - Manila) and Lord Edgardian Tavu* (National University - Dasmarinas).