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# Research Outputs



Among the expected outputs of research projects are paper presentations and publications in the local and international avenues. Hence, the SLSU Office of Research Services provides financial support and monetary incentives to the group of researchers who will successfully present or publish the findings of their research.

In 2021, SLSU researchers showed enthusiasm in their research activities as manifested in the report of presentations, publications, and citations. These engagements resulted to an increased percentage of SLSU faculty members who are actively engaging in research, which is now at **38.98%** (See Table 2.8).

## 2021 Research Presentations

**Table 2.1** 2021 presentations in local fora/conference

	Presenters	College/ Campus	Research Title	Research Conference	Organizer/ Date	Awards Received
1	Victoria M. Noble, Sherrlyn U. Magdame Jofren R. Moreno	SLSU JGE Tagka- wayan	Refinement of mussel transplantation tech- niques for developing mussel farming in- dustry in Quezon	2021 Virtual Agency In- House Review or Completed Research Projects of SLSU	SLSU/ (Via Zoom) Sept. 13-14, 2021	Best Develop- ment Paper
2	Maripaz T. Lamos Reydante P. Gordula Veronica Aurea P. Rufo Nemia C. Pelayo	SLSU JGE Tagka- wayan	Promotion of mud crab fattening and crab meat processing technologies			2 <sup>nd</sup> Best Develop- ment Paper
3	Veronica Aurea A. Rufo Dorris N. Gatus Catherine R. Gonzalvo Melanie D. Salumbides	SLSU JGE Tagka- wayan	Market exploration and commercializa- tion of native pig products in selected municipalities in Quezon Province			3 <sup>rd</sup> Best Develop- ment Paper
4	Karen Anne C. Quing Jomar Saif P. Baudin	CAS	The roles of internal locus of control and grit in managing the academic stress of Senior High School students in Southern Luzon State University			Best Re- search Paper
5	Gino A. Cabrera Noreen P. Echague	CAS	Multi-site evaluation of the <i>Katatagan Kontra Droga sa Komunidad</i> as a jail- based drug rehabili- tation program in Quezon Province			2 <sup>nd</sup> Best Research Paper
6	Jed Frank S. Marqueses Charly R. Lacorte	CAS	Cities and municipali- ties competitiveness index survey			3 <sup>rd</sup> Best Research Paper
7	Dorris N. Gatus Cristina D. Nicolas Melanie D. Salumbides Nemia C. Pelayo	SLSU JGE Tagka- wayan	Improvement and commercialization of developed herbal products of SLSU JGE Tagkawayan, Quezon			

8	Aileen V. Elarco Manuel P. delos Santos Francis B. Laguardia	SLSU Cata- nauan	The SLSU Catanauan journey of develop- ment	2021 Virtual Agency In- House Review or Completed Research Projects of SLSU	SLSU/ (Via Zoom) Sept. 13-14, 2021	
9	Marissa C. Esperal Ma. Elna R. Cosejo Mari Jane A. Lee Rene P. Zubieto	CAS	Kulayan mo ang puso ko sa panahon ng pandemya: Drawing themes as indicators of socio- emotional well- being of selected children under home quarantine			
10	Helene D. Daya Gino A. Cabrera	CAS	Predictive cross- sectional analysis of mental health threats and copings of university students and personnel during Covid-19 pandemic			
11	Nicanor L. Guinto Shiela M. Manzanilla Brian D. Villaverde	CAS	Discourse error analysis of selected high school students' composition: Basis for a textbook in purposive communication			
12	Shiela M. Manzanilla Mari Jane A. Lee et al.	CAS	Development of Coffee Table Book on the lives and culture of indigenous people in the Region IVA CALABARZON			

**Table 2.2** 2021 presentations in regional fora/conference

	Presenters	College/ Campus	Research Title	Research Conference	Organizer/ Date	Awards Received
1	Pitz Gerald G. Lagrazon	CEn	Palay ( <i>Oryza sativa</i> ) Leaf Nitrogen Meter	2021 Regional Invention Contest and Exhibits (RICE)	DOST-TAPI September 27-29, 2021	LIKHA Award  (Outstanding Privately- Funded Project)
2	Cherry C. Favor	SLSU JGE Tagka- wayan	Student's learning preferences during pandemic: Input for development of learning module	6th Regional and 1st International Research Forum	CBSUA San Jose Pili, Camarines/ Via Zoom (April 28- 30, 2021)	
3	Delia R. Babilonia Sarah Joy L. Zoleta Jobert G. Lomboy Joel T. Altez Adrian C. Servando	Cag/ SLSU Alabat	Mangrove crab ( <i>Scylla serrata</i> ) production in Alabat Island, Quezon Province Using an Aquasilvi- culture System	Regional Symposium on Research, Development and Extension Highlights (RSRDEH)	STAARRDE C/ Via Zoom (April 28- 30, 2021)	

**Table 2.3** 2021 presentations in national fora/conference

	Presenters	College/ Campus	Research Title	Research Conference	Organizer/ Date	Awards Received
1	Delia R. Babilonia Sarah Joy L. Zoleta Jobert G. Lomboy Joel T. Altez Adrian C. Servando	Cag/ SLSU Alabat	Mangrove conservation cum livelihood promotion of aquasilviculture of mangrove crab in Alabat Island, Quezon Province	2021 Virtual PhilEASTNET Biennial AFFNR Extension Symposium	PhilEAST-NET/  Via Zoom (October 14-15, 2021)	Outstanding Research Paper on Extension Award
2	Jed Frank S. Marqueses Charly R. Lacorte	CAS	SULONG QUEZON: Comparative analysis of 2019 and 2020 cities and municipalities of Quezon Province	3rd Cities and Municipalities Competitive-ness Index Academic Symposium	DTI – Competitiveness Bureau/ Via Zoom (2021)	2nd Place
4	Leomar C. Miano	CABHA	Relationship of organizational culture on soft skills of faculty members of state university in the Philippines	BASC 1st National Research & Development Conference: Shaping the Future of Research and Development: Emerging from the COVID-19 Pandemic	BASC/ Via Zoom (April 8, 2021)	
5	Gino A. Cabrera	CAS	Preliminary program evaluation of a church-initiated drug reformist formation center: The Volunteer-Facilitators' perspectives	2021 Research Forum on Drug Abuse Prevention and Control Dangerous Drugs Board	Via Zoom (June 18, 2021)	
6	Marissa C. Esperal Ma. Elna R. Cosejo Mari Jane A. Lee Rene P. Zubieto	CAS	Kulayan mo ang puso ko: Mga tema ng pagguhit ng mga batang naka-Home Quarantine sa panahon ng pandemya	UP Psych Serve at Pambansang Samahan sa Sikolohiyang Pilipino kasama ang Amicus KOI Solutions	Via Zoom (July 1-3, 2021)	
7	Gino A. Cabrera	CAS	Preliminary program evaluation of a church initiated drug reformist formation center: The Reformists' perspectives	2021 Research Forum on Drug Abuse Prevention and Control Dangerous Drugs Board	Via Zoom/ (July 26, 2021)	

8	Marissa C. Esperal Ma. Elna R. Cosejo Mari Jane A. Lee Rene P. Zubieto	CAS	Drawing themes of children under home quarantine	57th PAP Convention: Recalibrating Philippine Psychology: Towards a more responsive discipline in the challenging times Psychological Association of the Philippines (PAP)	PAP/ Via Zoom (September 20 - October 2, 2021)	
9	Gino A. Cabrera	CAG/ SLSU Alabat	SMART Project: Strengthening mental health awareness and resiliency during the time of pandemic	4th Colleges and Universities Public Service Conference	UP Public Service Office/ Via Zoom (October 21-22, 2021)	

**Table 2.4** 2021 presentations in international fora/conference

	<b>Presenters</b>	<b>College/ Campus</b>	<b>Research Title</b>	<b>Research Conference</b>	<b>Organizer/ Date</b>	<b>Awards Received</b>
1	Renato R. Maaliw III Zoren P. Mabunga Frederick T. Villa	CEn	Time-series forecasting of COVID-19 cases using stacked long short-term memory networks	2021 IEEE International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT)	IEEE/ Via Zoom (October 27-30, 2021)	Best Paper
2	Renato R. Maaliw III Melvin A. Ballera Zoren P. Mabunga Aubee T. Mahusay Dhenalyn A. Dejele Mariebeth P. Seño	CEn/ CAM	An ensemble machine learning approach for time-series forecasting of COVID-19 cases	2021 IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)	IEEE/ Via Zoom (October 27-30, 2021)	Best Paper
3	Maurine C. Panergo Renato R. Maaliw, III Febus Reidj G. Cruz	CEn	A circuit design of a sensor amplifier for improving blood pressure measurement in telehealth system			Best Presentation
4	Helene D. Daya Gino A. Cabrera	CAS	Predictors of Coronavirus anxiety among State University employees during the Luzon-wide Enhanced Community Quarantine	3rd DLSA International Multidisciplinary Research Conference De La Salle Araneta	DLSU/ Via Microsoft Teams (January 22-23, 2021)	

5	Leomar C. Miano	CABHA	An initial assessment of soft skills integration in emergency remote learning during COVID-19 pandemic: A learners' perspective	8th Technium Conference	Technium/ Via Zoom (March 27, 2021)	
6	Gino A. Cabrera	CAS	Fear of missing out and social media as predictors of problematic internet use among students	SEAMEO Congress 2021	SEAMEO/ Via Zoom (April 28-29, 2021)	
7	Cherry C. Favor	SLSU JGE Tagka- wayan	Student's learning preferences during pandemic: Input for development of learning module	6th Regional and 1st International Research Forum	CBSUA San Jose Pili, Camarines/ Via Zoom (April 28-30, 2021)	
8	Myra T. Querijero	CABHA	Disruption in human resource during pandemic: Managing changes and addressing challenges	1st International Research Summit: PACSB 48th Annual National Conference Globally Positioning Business Education in the New Digital Era	PACSB/ Via Zoom (May 1, 2021)	
9	Cherry C. Favor Dorris N. Gatus Veronica Aurea A. Rufo Cynthia U. Nataño Bangelita C. Balanay Rebecca O. Rufo	SLSU JGE Tagka- wayan	Indigenous knowledge on kalumpit ( <i>Terminalia microcarpa</i> Decne) uses: Input toward sustainable use of product developed from its fruits	9th Annual International Conference on Environmental Science (ACES)	PSUA/ Via Zoom (May 3-4, 2021)	
10	Renato R. Maaliw, III	CEn	Early prediction of electronics engineering licensure examination performance using random forest	2021 IEEE World AI IoT Conference	IEE/ Via Zoom (May 10-13, 2021)	

11	Loretta P. Arroyo	CABHA	Organizational commitment and workplace challenges of elderly faculty among State Universities in Region IV-A, Philippines	1st International Virtual Conference on Multi-disciplinary Research and Innovation	SDSSU/ Via Zoom (June 30, 2021)	
12	Resty P. Umali	CABHA	Determinants of financial performance of banks in the Philippines	1st International Virtual Conference on Multi-disciplinary Research and Innovation	SDSSU/ Via Zoom (June 30, 2021)	
13	Reydante P. Gordula Felix B. Lampos, Jr. Cherry D. Favor	SLSU JGE Tagkawayan	Socio-ecological assessment of slipper lobster ( <i>Thenus orientalis</i> , Lund 1973) fishery in Ragay Gulf	PAMS 16th National Symposium in Marine Science	PAMS/ Online (July 22-24, 2021)	
14	Wilfredo B. Barrera, Jr.	CAS	Relative gene expression of OsHMA2 and OsHMA3 genes in select rice genotypes at the seedling stage	1st International Agriculture, Bio-systems, and Technology Conference	TAU/ Via Zoom (July 22-23, 2021)	
15	Zoren P. Mabunga Renato R. Maaliw, III Jennifer C. dela Cruz Angelica C. Samortin	CEn	Utilization of different wireless technologies' RSSI for indoor environment classification using support vector machine	2021 IEEE 12th Control and System Graduate Research Colloquium (ICSGRC 2021)	IEEE/ Via Zoom (August 7, 2021)	
16	Zoren P. Mabunga Angelica Cordero-Samortin Jennifer Dela Cruz	CEn	The optimization of a 5G inset-fed patch antenna using the machine learning algorithm surrogate model assisted differential evolution for antenna synthesis	2021 IEEE 4th International Conference on Computer and Communication Engineering Technology (CCET)	IEEE/ Via Zoom (August 13-15, 2021)	
17	Victoria M. Noble Cherry C. Favor Erlinda O. Panganiban	SLSU JGE Tagkawayan	Level of toxicity in hypoglycemic activity of <i>Andrographis paniculate</i> crude extract	2nd International Conference on Education Environment and Agriculture (ICEEA 2021)	ICEEA/ Via Zoom (August 24 -25, 2021)	
18	Gino A. Cabrera Noreen P. Echague	CAS	Life Experiences of Visual and Literary Artists: Influences and Challenges Bantula	International Conference on Culture-base Education	NCCA/ Via Zoom (October 14 -15, 2021)	
19	Leomar C. Miano	CABHA	Relationship of organizational culture and citizenship behavior on soft skills as mediated by transformational leadership: The case of Philippine State Universities	8th International Scholars Conference	Universitas Klabat, Airmadidi, Indonesia (October 26 -27, 2021)	

20	Victoria M. Noble Sherrlyn U. Magdame Jofren R. Moreno Maria Johanna L. Segarra Manirose S. Lucban	SLSU JGE Tagkawayan	Refinement of mussel transplantation techniques for developing mussel farming industry in Quezon	6th International Conference for Fisheries and Aquatic Sciences (ICFAS 6) and Asian Fisheries Social Science Research Network Forum One (AFSSRN F1)	UP Visayas / Via Zoom (November 24-26, 2021)	
21	Jofren R. Moreno	SLSU JGE Tagkawayan	Growth performance of transplanted green mussel ( <i>Perna viridis</i> ) using modified long line method			
22	Cherry C. Favor	SLSU JGE Tagkawayan	A review on the nutritive value of <i>dilis</i> ( <i>Encrasicholina oligobranchus</i> , Wongratana, 1983) powder and Malungga ( <i>Moringa oleifera</i> Lam.) leaves powder, as potential food supplement			
23	Jofren R. Moreno Reynalyn C. Bacay Edmar A. Driz	SLSU JGE Tagkawayan	Gleaning of macrobenthic invertebrate fishery in Kabibihan River System			
24	Felix B. Lamos, Jr Cherry C. Favor Reydante P. Gordula	SLSU JGE Tagkawayan	Economic significance of slipper lobster ( <i>Thenus orientales</i> , Lund, 1793) among fisherfolks in selected municipalities of Ragay Gulf			
25	Jofren R. Moreno Benedick I. Lim	SLSU JGE Tagkawayan	Tilapia ( <i>Oreochromis niloticus</i> ) Fish Nuggets with Partial Replacement of Soy (Glycine Max) Flour			
26	Jennifer Edytha E. Japor Glemechille D. Maestro Jed Frank S. Marqueses	CABHA, CAg.& CAS	Greener and healthier sustainable food solution: A market survey of organic <i>pinakbet</i> vegetables in Quezon Province	5th International Research, Development, and Extension (RDE) Management Congress	PHILARM (December 9-10, 2021)	
27	Prof. Esmeraldo G. Arat Dr. Imelda A. Tangalin Dr. Cherry C. Favor Dr. Jay-ar C. Recto Ms. Rebecca D. Jason Ms. Agnes P. Valenzuela	SLSU JGE Tagkawayan	#TK sa Bakuna: TAGkawayan Societal Acceptance and Baseline Assessment of Knowledge in COVID-19 Vaccination towards National Immunization Advocacy	International Research Conference in Higher Education 2021	IRCHE 2021 (December 13-16, 2021)	
28	Dr. Imelda A. Tangalin Dr. Victoria M. Noble Dr. Melanie D. Salumbides	SLSU JGE Tagkawayan	Marketing Strategy for Daranghita Nectar			



## 2021 Research Publications

**Table 2.6** Published research in 2021

	Title of Research	Author(s)	Book/Journal Publication	Type of Publication
1	Roles of internal locus of control and grit in managing the academic stress of Senior High School Students in a State University in the Philippines	Karen Anne C. Quing Jomar Saif Baudin	Journal of Education, Management, and Development Studies, Vol 1, 1-9 (June 1, 2021)	Local
2	I am a Survivor: Experiences, impacts and coping mechanisms of Filipino victims	Karen Anne C. Quing	Sexual Violence Journal of Education, Management and Development Studies, Vol 1, 50-65 (June 1, 2021)	Local
3	Exploring the teacher's utilization of ICT resources in schools and their student's competence in basic computer applications	Richard E. Nepomuceno Imelda A. Tangalin	IOP Publishing	Local
4	Organizational career growth: Literature review and future agenda	Jennifer Edytha E. Japor	International Journal of Business and Administrative Studies, Vol. 7, Issue 1, 12 (pp.12-24) (February 26, 2021)	International
5	Prevalence and host specificity of bat flies ( <i>Streblidae</i> ) from selected caves in Unisan, Quezon, Philippines	Maria Camila N. Obdianela Ma. Patricia Venice V. Guanlao Essex Vladimer E. Samaniego Kathleen O. Pornobi	Acta Parasitologica, Vol 66 (3), 983-988 . (March 26, 2021)	International
6	Development of sanitary landfill's carbon dioxide concentration models using machine learning algorithm	Zoren P. Mabunga Jennifer Dela Cruz Glenn Magwili Angelica Samortin	IEEE, DOI: 10.1109/HNICEM51456. 2020. 9400030 ISBN: 978-1-6654-2997-9 (April 26, 2021)	International
7	Development of sanitary landfill's groundwater contamination detection model based on machine learning algorithm	Zoren P. Mabunga Jennifer Dela Cruz Glenn Magwili Angelica Samortin	IEEE, DOI: 10.1109/HNICEM51456. 2020. 9400030 ISBN: 978-1-6654-2997-9 (April 26, 2021)	International
8	Research and Extension Completed and On-going Registered Programs Data Base System (RECORDS)	Frederick T. Villa Arvin P. Natividad	Linguistics and Culture Review, 5(S1), 214-222 (July 2021)	International
9	Early prediction of electronics engineering licensure examination performance using random forest	Renato R. Maaliw III	Proceeding of the 2021 IEEE World AI IoT Conference, ISBN: 978-1-6654-3568-0 (June 2021)	International
10	Looking through the arts: Examining children's feelings expressed in drawings made while under Home Quarantine	Marissa C. Esperal	Journal of Psychology & Psychotherapy: Open Access, Vol 11, Issue 6, No. 1000411	International

11	Utilization of different wireless technologies' RSSI for indoor environment classification using support vector machine	Zoren P. Mabunga Renato R. Maaliw III Jennifer C. dela Cruz Angelica C. Samartin	2021 IEEE 12th Control and System Graduate Research Colloquium (ICSGRC 2021, 5 (2021)	International
12	Time-series forecasting of Covid-19 cases using stacked long short-term memory networks	Renato R. Maaliw III Zoren P. Mabunga Frederick T. Villa	2021 IEEE International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT), 8 (2021)	International
13	The optimization of a 5G inset-fed patch antenna using the machine learning algorithm surrogate model assisted differential evolution for antenna synthesis	Zoren P. Mabunga Renato R. Maaliw III Jennifer C. dela Cruz Angelica C. Samartin	2021 IEEE 4th International Conference on Computer and Communication Engineering Technology (CCET), 6 (2021)	International

**Table 2.6** 2021 Research citation report

	Title of Research	Researcher(s)	Author(s) Who Cited the Research	Article Where the Research Was Cited	Journal Where the Article Was Published
1	Ethnobotany of Plants in Tagkawayan: Input for information communication media on medicinal uses of plants	Cherry C Favor	Nafisah M. Abdulrachman Aisha M. Ali Hanifa M. Maurac Annabella G. Villarino	Ethnomedicinal Knowledge among the M'ranaos in Baloi, Lanao Del Norte, Philippines	International Journal of Science and Management Studies, Volume 2 Issue No. 4, pgs. 38-44 (August 2019). Science Research Publication
2	A culture review of unique traditional uses of plants in Quezon Province, Philippines	Cherry C. Favor	Lyn Dela Rosa Paraguison Danilo Niern Tandang Grecebio Jonathan Duran Alejandro	Medicinal Plants used by the Manobo Tribe of Prosperidad, Agusan Del Sur, Philippinesan Ethnobotanical Survey	Asian Journal of Biological and Life Sciences, Volume 9 Issue No. 3, pgs. 326-333 (Sept-Dec, 2020). Pharmaceutical and Biological Society
3	A review on the nutritive value of dilis ( <i>Encrasicholina oligobranchus</i> , Wongratana, 1983) powder and Malungay ( <i>Moringa oleifera</i> Lam.) leaves powder, as potential food supplement	Cherry C. Favor	Hjm Alsammarraie Nak Khan R. Mahmud	Formulation, Evaluation and in Vivo Anti-Inflammatory and Anti-Athritic Activities of Moringa Granules	International Journal of Applied Pharmaceutics, Volume 13 Issue No. 3, pgs 112-120 (February, 2021). Innovare Academic Sciences Pvt Ltd
4	Biodiversity Assessment of Mt. Banahaw de Dolores	Cecilia N. Gascon Ronald C. Garcia Francisco N. Beltran Wilfredo C. Faller Mary Ann R. Agudilla	Jason Parlucha Janine Kaycee Soriano Milbrenne Del-amen Yabes Edwin R. Tadiosa	Species and functional diversity of macrofungi from protected areas in mountain forest ecosystems of Southern Luzon, Philippines	Tropical Ecology, 62 (5): 1-9 DOI: 10.1007/s42965-021-00152-7 (March 2021)

5			Melanie S. Subilla Zenaida Baoanan	<i>Lithocarpus jordanae</i> (Laguna) Rehder Fagaceae	Book: Ethnobotany of the Mountain Regions of Southeast Asia, 619-623 DOI: 10.1007/978-3-030-38389-3_198 (January 2021)
6	Land Use/Land Cover Change Detection and Urban Sprawl Analysis in the Mount Makiling Forest Reserve Watersheds and Buffer Zone, Philippines	Merlyn Soriano Noba Hilvano Ronald Garcia Aldin Alegre Cristino Tiburan, Jr.	Nova D. Doyog Ian C. Roscinto, Lumbres Zenaida Baonan	Monitoring of Land Use and Land cover changes in Mt. Pulag National Park using Landsat and Sentinel Imageries	Philippine Journal of Science, 150 (4): 723-734 (September 2021)
7			Gihen Rym Abdaoui, Tabet Ahmed Amine, Bouaicha Foued, Salah Bouchemal	Sprawl, Specificity and Dynamics of Inter-Municipal Urban Agglomerations of the Spuf Valley (South East Algeria): Using GIS Techniques	International Journal of Innovation and Applied Studies, 29:991-1014 (July 2020)
8			Ailene Alcala, Marjorie Delos Angeles, Inocencio E. Buot, Jr.	Fern Species diversity across various land use types of Mt. Makiling, Luzon Island, Philippines	Biodiversitas Journal of Biological Diversity, 20(9): 2437-2445 (September 2019)
9			Ailene Alcala, Marjorie Delos Angeles, Inocencio E. Buot, Jr.	Fern Species diversity across various land use types of Mt. Makiling, Luzon Island, Philippines	Biodiversitas Journal of Biological Diversity, 20(9): 2437-2445 (September 2019)

## 2021 Inventions

**Table 2.7** 2021 Report on patenting of inventions from conducted research projects

	Invention	Patent Number
1	Multi-Functional Agricultural Robot for Cucurbits Growing	1 /2021/ 050338 'July 22, 2021 (filling date)
2	Soil Nutrient Detector Powered by Solar Energy	2 /2021/ 051091 (application no.)
3	Movable Lemongrass Essential Oil Extraction System	2 /2020/ 050869 (application no.)

## Active SLSU Researchers

Among the 295 Plantilla Faculty Members of SLSU, **115** or **38.98%** are actively engaging in research in 2021. A faculty

member was considered active when s/he submitted a proposal, have an ongoing research, or recently completed a research.