

**Program of Activities**  
(One-Page View)

	May 21, 2022 (Saturday)	May 28, 2022 (Saturday)	June 4, 2022 (Saturday)	
08:00-08:30	<b>Registration / Video Viewing</b>			
08:30-09:00	<p align="center"><b>Opening Ceremony</b></p> <p align="center"><b>National Anthem</b></p> <p align="center"><b>Invocation</b></p> <p align="center"><b>Welcoming Remarks</b> <b>Br. Bernard S. Oca, FSC</b> <i>President, De La Salle University</i></p> <p align="center"><b>Opening Remarks</b> <b>Dr. Jose Ernie C. Lope</b> <i>President, MSP</i></p> <p align="center"><b>Keynote Speech</b></p> <p align="center"><b>Mathematical Sciences</b> – Today and Tomorrow</p> <p align="center"><b>Dr. Ling San</b> <i>Deputy President and Provost</i> <i>Nanyang Technological University</i></p> <p align="center">Moderator: <b>Dr. Fidel Nemenzo</b></p>	<b>Registration / Video Viewing</b>	<b>Registration / Video Viewing</b>	
09:00-09:30		<p align="center"><b>Plenary Talk 3</b></p> <p align="center"><b>Suspensions of Rigid Particles in a Newtonian Fluid in the Presence of Interfacial Discontinuities</b></p> <p align="center"><b>Dr. Bogdan Vernescu</b> <i>Professor, Department of Mathematical Sciences</i> <i>Vice Provost for Research</i> <i>Worcester Polytechnic Institute</i></p> <p align="center">Moderator: <b>Dr. Marian P. Roque</b></p>	<p align="center"><b>Plenary Talk 5</b></p> <p align="center"><b>Model-Based Framework: A Zoom Lens for Biological Systems</b></p> <p align="center"><b>Dr. Aurelio A. de los Reyes V</b> <i>Associate Professor</i> <i>University of the Philippines Diliman</i></p> <p align="center">Moderator: <b>Dr. Carlene P. Arceo</b></p>	
09:30-10:00		<b>COFFEE BREAK/ GROUP PICTURE</b>		
10:00-10:30	<b>Plenary Talk 1</b>	<b>COFFEE BREAK/GROUP PICTURE</b>	<b>COFFEE BREAK/GROUP PICTURE</b>	
10:30-11:00	<p align="center"><b>Algebraic Geometry Tools in Systems Biology</b></p> <p align="center"><b>Dr. Alicia Dickstein</b> <i>Professor, Universidad de Buenos Aires</i> <i>Senior Researcher, CONICET</i> <i>(National Research Council of Argentina)</i></p> <p align="center">Moderator: <b>Dr. Angelyn Lao</b></p>	<p align="center"><b>Plenary Talk 4</b></p> <p align="center"><b>Asymptotic Approximations of the Apostol-Tangent Polynomials and Genocchi Polynomials of Complex Order</b></p> <p align="center"><b>Dr. Cristina B. Corcino</b> <i>Professor, Cebu Normal University</i></p> <p align="center">Moderator: <b>Dr. Jose Ernie Lope</b></p>	<p align="center"><b>Industry Talk</b></p> <p align="center"><b>Mr. Luis Gonzales</b> <i>Chief Data Officer, Aboitiz Power</i> <i>&amp; General Manager for the Power Industry,</i> <i>Aboitiz Data Innovation</i></p>	
11:00-11:15	<b>Plenary Talk 2</b>	<b>Educational Talk</b>	<b>Awarding and Presentation of the 2022 Outstanding PhD Graduate Awardee</b>	
11:15-11:30	<p align="center"><b>Sequential Estimation of Functions of the Exponential Scale Parameter</b></p> <p align="center"><b>Dr. Daisy Lou Lim-Polestico</b> <i>Professor, Mindanao State University - Iligan Institute of Technology</i></p> <p align="center">Moderator: <b>Dr. Kristine Joy Carpio</b></p>			
11:30-12:00				
12:00-13:30	<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>	<b>LUNCH BREAK</b>	
13:30-14:30	<p align="center"><b>Parallel Session 1</b></p> <p align="center"><b>Graph Theory</b> <b>Analysis/DE/Topology</b> <b>Applied Mathematics</b></p>	<p align="center"><b>Parallel Session 3</b></p> <p align="center"><b>Graph Theory</b> <b>Algebra</b> <b>Applied Mathematics</b></p>	<p align="center"><b>Parallel Session 5</b></p> <p align="center"><b>Graph Theory</b> <b>Mathematics Education</b> <b>Statistics</b></p>	
14:30-14:45				<b>COFFEE BREAK</b>
14:45-15:15				
15:15-15:30	<b>COFFEE BREAK</b>	<b>COFFEE BREAK</b>	<b>MSP Business Meeting</b>  <b>Closing Remarks</b>	
15:30-15:45	<p align="center"><b>Parallel Session 2</b></p> <p align="center"><b>Graph Theory</b> <b>Algebra</b> <b>Applied Mathematics</b></p>	<b>COFFEE BREAK</b>		
15:45-16:45		<p align="center"><b>Parallel Session 4</b></p> <p align="center"><b>Graph Theory</b> <b>Analysis</b> <b>Computing/Number Theory</b></p>		
16:45-17:00				

<b>21 May 2022, Saturday (DAY 1)</b>	
08:00-08:30	<b>Registration / Video Viewing</b>
08:30-09:00	<b>Opening Ceremony</b>  <b>National Anthem</b>  <b>Invocation</b>  <b>Welcoming Remarks</b> <b>Br. Bernard S. Oca, FSC</b> <i>President, De La Salle University</i>  <b>Opening Remarks</b> <b>Dr. Jose Ernie C. Lope</b> <i>President, MSP</i>
09:00-09:30	<b>Keynote Speech</b>  <b>Mathematical Sciences – Today and Tomorrow</b>  <b>Dr. Ling San</b> <i>Deputy President and Provost, Nanyang Technological University</i>  Moderator: <b>Dr. Fidel Nemenzo</b>
09:30-10:00	<b>COFFEE BREAK/GROUP PICTURE</b> <b>INTERMISSION NUMBER</b>
10:00-11:00	<b>Plenary Talk 1</b>  <b>Algebraic Geometry Tools in Systems Biology</b>  <b>Dr. Alicia Dickenstein</b> <i>Professor, Universidad de Buenos Aires</i> <i>Senior Researcher, CONICET (National Research Council of Argentina)</i>  Moderator: <b>Dr. Angelyn Lao</b>
11:00-12:00	<b>Plenary Talk 2</b>  <b>Sequential Estimation of Functions of the Exponential Scale Parameter</b>  <b>Dr. Daisy Lou Lim-Polestico</b> <i>Professor, Mindanao State University - Iligan Institute of Technology</i>  Moderator: <b>Dr. Kristine Joy Carpio</b>
12:00-13:30	<b>LUNCH BREAK</b>
13:30-15:15	<b>Parallel Session 1</b>  <b>Graph Theory</b> <b>Analysis/DE/Topology</b> <b>Applied Mathematics</b>
15:15-15:30	<b>COFFEE BREAK</b>
15:30-16:45	<b>Parallel Session 2</b>  <b>Graph Theory</b> <b>Algebra</b> <b>Applied Mathematics</b>

<b>28 May 2022, Saturday (DAY 2)</b>	
08:30-09:00	<b>Registration / Video Viewing</b>
09:00-10:00	<p><b>Plenary Talk 3</b></p> <p><b>Suspensions of Rigid Particles in a Newtonian Fluid in the Presence of Interfacial Discontinuities</b></p> <p><b>Dr. Bogdan Vernescu</b>  <i>Professor, Department of Mathematical Sciences</i>  <i>Vice Provost for Research, Worcester Polytechnic Institute</i></p> <p>Moderator: <b>Dr. Marian P. Roque</b></p>
10:00-10:30	<b>COFFEE BREAK/GROUP PICTURE</b>
10:30-11:30	<p><b>Plenary Talk 4</b></p> <p><b>Asymptotic Approximations of the Apostol-Tangent Polynomials and Genocchi Polynomials of Complex Order</b></p> <p><b>Dr. Cristina B. Corcino</b>  <i>Professor, Cebu Normal University</i></p> <p>Moderator: <b>Dr. Jose Ernie Lope</b></p>
11:30-12:00	<b>Educational Talk</b>
12:00-13:30	<b>LUNCH BREAK</b>
13:30-15:30	<p><b>Parallel Session 3</b></p> <p><b>Graph Theory</b>  <b>Algebra</b>  <b>Applied Mathematics</b></p>
15:30-15:45	<b>COFFEE BREAK</b>
15:45-16:45	<p><b>Parallel Session 4</b></p> <p><b>Graph Theory</b>  <b>Analysis</b>  <b>Computing/Number Theory</b></p>

<b>4 June 2022, Saturday (DAY 3)</b>	
08:30-09:00	<b>Registration / Video Viewing</b>
09:00-10:00	<b>Plenary Talk 5</b>  <b>Model-Based Framework: A Zoom Lens for Biological Systems</b>  <b>Dr. Aurelio A. de los Reyes V</b> <i>Associate Professor, University of the Philippines Diliman</i>  Moderator: <b>Dr. Carlene P. Arceo</b>
10:00-10:30	<b>COFFEE BREAK/GROUP PICTURE</b>
10:30-11:15	<b>Industry Talk</b>  <b>Mr. Luis Gonzales</b> <i>Chief Data Officer, Aboitiz Power &amp; General Manager for the Power Industry, Aboitiz Data Innovation</i>
11:15-12:00	<b>Awarding and Presentation of the 2022 Outstanding PhD Graduate Awardee</b>
12:00-13:30	<b>LUNCH BREAK</b>
13:30-14:30	<b>Parallel Session 5</b>  <b>Graph Theory</b> <b>Mathematics Education</b> <b>Statistics</b>
14:30-14:45	<b>GROUP PICTURE/ COFFEE BREAK</b>
14:45-17:00	<b>MSP Business Meeting</b> <b>Closing Remarks</b>

**PARALLEL SESSION 1 (May 21, 2022 – DAY 1)**

Time	Graph Theory	Analysis/DE/Topology	Applied Mathematics
	Moderators: Yvette Lim & Imelda Aniversario	Moderators: Gino Angelo Velasco & Mhelmar Labendia	Moderators: Maica Krizna Gavina & Orcene Cancino
13:30-13:45	On Square Graphs Lim, Yvette F.	Asymptotic Convergence of Shape Design Solutions for the Navier–Stokes Equations Simon, John Sebastian H.	A Location Analysis of Fire Stations in Cagayan De Oro City using the Minimum Impedance (P-Median) and Maximal Coverage (MCLP) Location Models with Q - Coverage Requirement Labita, Altea S.
13:45-14:00	On The Wiener Index of the Vertex Corona of any Two Simple Graphs Aguilor, Alfred Mark T.	Sampling and Approximation Inequalities of Bandlimited and Essentially Time-Limited Functions via Prolate Spheroidal Wave Functions Heyrosa, Israel B.	P-Graph Approach to Modeling Sustainable Ecological Networks Merlin, Marvin B.
14:00-14:15	Bipartite Domination Numbers of Graphs Beceril, Maria Remedios Consorcia P.	Controlling EM Waves using Debye Potentials Egarguin, Neil Jerome A.	Mathematical Modelling for COVID-19 Dynamics with Vaccination Class Lagura, Maria Czarina T.
14:15-14:30	2-Outer-Independent Semitotal Domination in Graphs Aradais, Alkajim A.	Absolute Stability and Patterns Oscillations in Queues with Delayed Information Collera, Juancho A.	A Variational Level Set Approach to Serrin-Type Overdetermined Boundary Problem Cantal, Marian, T.
14:30-14:45	Forcing Subsets for Connected Co-Independent Hop Domination in Graphs Calanza, Yves Dave L.	On n-Minimal Structure Spaces Bahian, Carl Billdjel P.	Analyzing Genetic Admixture in Marmoset Haplotype Data using Persistent Homology Aculan, Al Bien Christian R.
14:45-15:00	Path-Induced Closed Geodetic Domination in Graphs Anoche, Jesica M.	A Topology on a Hyper BCI-Algebra via Left Application of a Hyper Order Panganduyon, Michelle T.	Approximation Spaces of ReLU Squared Neural Networks Cabanilla, Kurt Izak M.
15:00-15:15	On Double Roman Dominating Functions in Graphs Cariaga, Jerry Boy G.	$\Theta$ -Somewhat-Open Sets on Topological Spaces Bilao, Mohamidin S.	Power Spectrum and Graph Theory Analysis in Biological Diseases and Disorders Cruz, Madelyn Esther C.

**PARALLEL SESSION 2 (May 21, 2022 – DAY 1)**

Time	Graph Theory	Algebra	Applied Mathematics
	Moderators: Reginald Marcelo & Ariel Babierra	Moderators: Edna Gueco & Karen Taclay	Moderators: Rommel Real & Juancho Collera
15:30-15:45	Restrained Strong Resolving Hop Domination in Graphs Abrogan, Armalene H.	Simplicity, Solvability, Solvability: A Talented Monoid View on Lie Bracket Algebras over Leavitt Path Algebras Sebandal, Alfilgen N.	Elliptical T'nalak Analysis (ETA) : Determining Symmetric or Non-Symmetric Geometric Patterns of Some Ikat Weaving in Southern Philippines Arciosa, Ramil M.
15:45-16:00	Linear Time Algorithms for Hamiltonian Paths in Graphs with Forbidden Pair Conditions Babierra, Ariel L.	An Example of A Rank Two Analogue of Leonard Pair Morales, John Vincent S.	Inter-Regional Study of Consumer Price Index in the Philippines and Its Relation to Gross Regional Domestic Expenditure and Employment using Generalized Linear Model Marasigan, Angelo E.
16:00-16:15	Clustering Coefficient of the Tensor Product of Graphs Damalero, Remarl Joseph M.	Lorentz Matrices in $M_2(\mathbb{Z}_n)$ Taclay, Karen T.	Nesterov Acceleration for Landweber Method for Linear Ill-Posed Problems Using Hanke-Raus Rule Real, Rommel R.
16:15-16:30	On the Nullity of Some Families of R-Partite Graphs Marcelino, Lyca DC.	Duality of the Matrix Transpose and Matrix Conjugate Inverse Maps Granario, Daryl Q.	Matrix Representation of Martingale Measures over Quantized Logistic Marginals Laag, Jemar E.

**PARALLEL SESSION 3 (May 28, 2022 – DAY 2)**

Time	Graph Theory	Algebra	Applied Mathematics
	Moderator: Isagani Jos & Francis Joseph Campeña	Moderators: Arlene Pascasio & Herbert Palines	Moderators: Ederlina Nocon & Renier Mendoza
13:30-13:45	Edge-Intersection Graph of Induced Paths of Length 2 Jos, Isagani B.	Some Results on Intuitionistic Fuzzy Implicative Hyper GR-ideals of Hyper GR-algebras Dorig, Archie G.	Estimation of Credit Rating Migration using Proportions Data Tito, Clyd Marvin S.
13:45-14:00	Stability of the Independence Polynomials Some Graphs Teologia, Rolex B.	Association Schemes on Triples from Projective General Linear Groups Briones, Dom Vito A.	Philippine Eagle Optimization Algorithm Enriquez, Erika Antonette T.
14:00-14:15	Chicken Emperor in Complete Acyclic Digraph and Acyclic Split Digraph Judaya, Charfel C.	$\Sigma$ -Unitary Lie Algebras for $\Sigma$ Nilpotent of Maximum Rank Chua, Gari Lincoln C.	Comparative Study of Heuristic Algorithms for Electrical Impedance Tomography Velasco, Arriane Crystal T.
14:15-14:30	Score sequences: Characterization and Tournament Construction Gervacio, Severino V.	$\Sigma$ -Orthogonal Groups and $\Sigma$ -Orthogonal Lie Algebras over the Integers Angeles, Clint Harry G.	Covid-19 Risk-level Classification of Cities and Provinces in the Philippines using Local Data Topology Viernes, Jhunus Paul T.
14:30-14:45	Distance k-Cost Effective Domination in Path and Cycle Caadan, Julius G.	Projective Limit of Inverse System of Topological BE-algebras Albaracin, Jimboy R.	Mathematical Modeling of COVID-19 Dynamics with Information-Dependent Vaccination in the Philippines Tongol, Christine Ann L.
14:45-15:00	The Weakly Connected Closed Geodetic Domination in the Corona of Graphs Hamja, Jamil J.	The Parity of Andrews' $(4k, k)$ -Singular Overpartitions Shi, Hazel Joy G.	Multi-City Mathematical Modeling of the Early Months of COVID-19 Transmission and Mitigation in Metro Manila, Philippines Escosio, Rey Audie S.
15:00-15:15	Hop Independent Sets in Graphs Hassan, Javier A.	Prime-free Regions in Imaginary Quadratic Fields of Class Number One Tuason, Shawn Christian P.	Optimal Control Applied to Age-Dependent Vaccine Prioritization in the National Capital Region of the Philippines Cawiding, Olive R.
15:15-15:30		Quark Color Confinement and Liang's Potential Energy Function on a GUT based on $SU(5)$ Julian, Marc Aaron F.	Accelerated Failure Time (AFT) Model: Determining the Factors Associated in the Recovery of Patients Diagnosed with COVID-19 Jal-Usman, Ebni A.

**PARALLEL SESSION 4 (May 28, 2022 – DAY 2)**

Time	Graph Theory	Analysis	Computing/Number Theory
	Moderator: Rolito Eballe & Anthony Cueno	Moderator: Rafael Reno Cantuba & Rolando III Perez	Moderator: Jerico Bacani & Julius Fergy Rabago
15:45-16:00	A Generalized Topology on the Edge Set of Maximal Paths of Directed Graphs Laping, Darlene Dale L.	The Phase Retrieval Problem in the Hardy Space of the Unit Disc Perez, Rolando III	Stock Data has Shape: Managing Stock Portfolio via Topology-informed Machine Learning Pajarillo, Romsto R.
16:00-16:15	Forcing Inverse Domination in the Join of the Graphs Armada, Cris L.	Lifespan of Solutions of a Second Order Nonlinear Cauchy Problem with Small Analytic Data Soto, John Paolo, O.	Comoving Mesh Method: A Finite Element Scheme for Solving Classes of Free and Moving Boundary Problems Rabago, Julius Fergy T.
16:15-16:30	On Some Variations of 2-Resolving Hop Domination in Graphs Mahistrado, Angelica Mae L.	Discrete-Time Fourier Transform of Functions over Lattices Cruz, Anjelo Gabriel R.	On the Diophantine Equation $x^2 + 2^a \cdot 7^b = y^{2r}$ Taclay, Richard J.
16:30-16:45	Cycles in 3-Letter Graphs Cueno, Anthony L.	Continuous Dependence of the Unique Solution of a Functional Integral Equation Tresfuentes, Francis Adam S.	On Estimating Number of Prime Pairs of the Form $(p, 4p + 3)$ Bacani, Jerico B.

**PARALLEL SESSION 5 (June 4, 2022 – DAY 3)**

Time	Graph Theory	Mathematics Education	Statistics
	Moderator: Mark Tolentino & Shiela Demegillo	Moderator: Catherine Vistro-Yu & Lynie Dimasauy	Moderator: Rizavel Addawe & Cherrylyn Alota
13:30-13:45	Local Super Antimagic Total Chromatic Number via Graph Operations Picar, Celestino Jerome B.	Phenomenological Study on the Multicultural Skills of the Mathematics Teachers with Indigenous People Students Lasco, Maris T.	Two-Stage Sequential Line Transect Sampling Malines, Analyn C.
13:45-14:00	Harmonic Centrality in Some Graph Families Ortega, Jose Mari E.	Mediating Effect of Parental Involvement on the Attitude Towards Mathematics and Performance of the Students Habungan, Gerome	On Some Feature Ranking Procedures Applied to High-Dimensional Binary Classification Problem Valeriano, Aries P.
14:00-14:15	On the Metric Dimension of Truncated Prism Graphs Fernandez, Mar Joseph Q.	Vertical Reorganization of Mathematical Constructs in using Direct Comparison Test: A Preliminary Analysis Vera, Guinever G.	Modelling the Daily Average Temperature in Selected Agricultural and Aquatic Producers in the Philippines using Auto-regressive Integrated Moving Average Model Malaguit, Jacob C.
14:15-14:30	Isolate Semitotal Domination in Graphs Aradais, Anuarisa A.		Large Graph Limit of a Stochastic Edge-Based SEIR Dynamics Alota, Cherrylyn P.