ICMA-MU 2020 Conference Program

*** Keynote speaker, ** Plenary speaker, * invited speaker

December 18, 2020

Room A (Grand Ballroom, 3rd floor)   [virtual presentation only]

Time	Speaker/Title	Chair
07:30--08:30	Registration	
08:30--09:00	Opening ceremony: - Report by Prof. Yongwimon Lenbury, Director of Centre of Excellence in Mathematics - Welcome speech by Prof. Surapol Issaragrisil, M.D., President of the Royal Society, Thailand - Opening speech by Prof. Banchong Mahaisavariya, M.D., President of Mahidol University	
09:00--09:50	*** Agarwal, R. Texas A&M University-Kingsville Are We Prepared To Accept the Reality?	Lenbury, Y.
09:50--10:05	Refreshment	
10:05--10:35	* Stephan, F. National University of Singapore Initial Segment Complexity for Measures - Results and Open Problems	Changpetch, P.
10:35--11:05	* Pal, N. University of Louisiana at Lafayette Inferences on the Association Parameter in Farlie-Gumbel-Morgenstern Copula Based Bivariate Distribution	Changpetch, P.
11:05--11:25	Nontapa, C. Thammasat University A New Hybrid Forecasting Using Decomposition Method with SARIMAX Model and Artificial Neural Networks	Changpetch, P.
11:25--11:45	Ratchagit, M. Curtin University The Use of Differential Evolution Algorithm for Volatility Estimation of Stochastic Delay Differential Equation	Changpetch, P.
11:45--12:45	Lunch (Roberto Room, 2nd floor)	

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December 18, 2020

Room B (Crystal 3--4, 3rd floor)

Time	Speaker/Title	Chair
10:05--10:35	* Licht, C. Université de Montpellier II Some Remarks on the Assembling of Thin Linearly Elastic Plates	Baowan, D.
10:35--10:55	Thanompolkrang, S. Mahidol University Analytic Solution of Time Fractional Black-Scholes Equation by the Generalized Laplace Homotopy Perturbation Method	Baowan, D.
10:55--11:15	Saetang, J. King Mongkut's University of Technology Thonburi Post Buckling Analysis of a Cantilever Beam Subjected to a Compressive Load	Baowan, D.
11:15--11:35	Tikjha, W. Pibulsongkram Rajabhat University Equilibrium Solutions and Period 5 Solutions of a Certain Piecewise Linear System of Difference Equations	Baowan, D.
11:35--11:55	Tranthi, J. Khon Kaen University Improved Exponential Stability Criteria for Takagi-Sugeno Fuzzy of Neutral Differential Systems with Mixed Time Varying Delays	Baowan, D.
11:55--12:55	Lunch (Roberto Room, 2nd floor)	

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December 18, 2020

Room C (Crystal 1--2, 3rd floor)

Time	Speaker/Title	Chair
10:05--10:25	Momrit, P. King Mongkut's University of Technology North Bangkok The Total Coloring of the Unitary Cayley Graphs and Unitary Addition Cayley Graphs for Even Orders	Lewchalermvong, C.
10:25--10:45	Weeranukunjit, C. Mahidol University The Firefighter Problem with Subdividing Edges on Graphs of Maximum Degree Three	Lewchalermvong, C.
10:45--11:05	Rattanapaiboon, K. Mahidol University A Portfolio for Thailand Stock Market: A Graph Characteristic Approach	Lewchalermvong, C.
11:05--11:35	* Nies, A. The University of Auckland Groups and First-Order Logic	Lewchalermvong, C.
11:35--11:55	Limsurat, V. Chandrakasem Rajabhat University The Tilings on an m × n Board by Using 2 Fences	Lewchalermvong, C.
11:55--12:55	Lunch (Roberto Room, 2nd floor)	

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Room A (Grand Ballroom, 3rd floor)   [virtual presentation only]

Time	Speaker/Title	Chair
12:45--13:25	** Richards, D. Pennsylvania State University Integral Transform Methods in Goodness-of-Fit Testing for the Wishart Distributions	Moore, E.
13:25--14:05	** De Gaetano, A. BioMathematics Lab, CNR IASI Modelling Haemorrhagic Shock	Moore, E.
14:05--14:35	* Sheen, D. Seoul National University Quadrature Rules for Quadrilateral Elements	Moore, E.
14:35--14:55	Lenbury, Y. Mahidol University Modeling Diabetes Mellitus Incorporating Reduction in Beta Cells' Ability to Absorb Blood Sugar in Insulin Resistance	Moore, E.
14:55--15:10	Refreshment	
15:10--15:30	Tshewang, U. Mahidol University Cox Model Survival Analysis Based on Cervical Cancer Treatment	Satiracoo, P.

ICMA-MU 2020 Conference Program

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December 18, 2020

Room B (Crystal 3--4, 3rd floor)

Time	Speaker/Title	Chair
12:55--13:15	Sripacharasakullert, P. Mahidol University Applications of the Generalized Laplace Homotopy Perturbation Method on the Bi-Fractional Burgers Equation with Katugampola Fractional Integral Initial Condition	Baowan, D.
13:15--13:35	Konmuen, S. Mahidol University Fractional Modeling of Storage Silo with Heat Transfer and Moisture Content	Baowan, D.
13:35--13:55	Nuntaplook, U. Mahidol University Morphology-Dependent Resonances in two Concentric Spheres with Variable Refractive Index in the Outer Layer: Analytic Solutions	Baowan, D.
13:55--14:15	Berdinsky, D. Mahidol University Adaptive Mesh Refinement Techniques in Isogeometric Analysis and Its Generalization for Unbounded Domains	Baowan, D.
14:15--14:35	Sawangtong, P. King Mongkut's University of Technology North Bangkok Applications of Green Function Homotopy Perturbation Method to Fractional Heat Equations Based on the Riemann-Liouville Fractional Derivative	Baowan, D.
14:35--14:55	Kaewta, S. King Mongkut's University of Technology North Bangkok Exact Solutions of Integro-Time Fractional Partial Differential Equations Using Different Methods	Baowan, D.
14:55--15:10	Refreshment	
15:10--15:30	Sukuntee, N. Thammasat University A Projection-Based Nonlinear Model Reduction Approach Using K-Medoids and ANN for the Parametrized Burgers Equation	Orankitjaroen, S.

ICMA-MU 2020 Conference Program

*** Keynote speaker, ** Plenary speaker, * invited speaker

December 18, 2020

Room C (Crystal 1--2, 3rd floor)

Time	Speaker/Title	Chair
12:55--13:15	Bosuwan, N. Mahidol University Determining Radii of Meromorphy via Orthogonal Polynomials on the Unit Circle	Maneesawarng, C.
13:15--13:35	Wajasat, M. Mahidol University Convergence in Hausdorff Content of Hermite-Padé Approximants to Polynomial Expansions	Maneesawarng, C.
13:35--13:55	Puttirungroj, C. Thammasat University Contravariant Non-commutative Differential Calculus	Maneesawarng, C.
13:55--14:15	Aekthong, S. Mahidol University Effects of Parathyroid Hormone, Prolactin and Impulsive Estrogen Supplement on Bone Resorption and Bone Formation: A Modelling Approach	Maneesawarng, C.
14:15--14:35	Chairuang, T. King Mongkut's Institute of Technology Ladkrabang A Carbon Dioxide Concentration Measurement Model in an Outpatient Room with a Ventilation System	Maneesawarng, C.
14:35--14:55	Chantawat, C. Khon Kaen University Finite-Time Synchronization of Coronary Artery Chaos System with Input Time-Varying Delay	Maneesawarng, C.
14:55--15:10	Refreshment	
15:10--15:30	Pornprakun, W. King Mongkut's University of Technology North Bangkok A Comparison of Four Optimization Methods for Optimal Harvesting of Sugarcane in Thailand	Chayantrakom, K.

Room A (Grand Ballroom, 3rd floor)   [virtual presentation only]

Time	Speaker/Title	Chair
15:30--16:00	* Pal, M. University of Calcutta Bayesian Mixture Designs for Hypothesis Testing	Satiracoo, P.
16:00--16:30	* Peters, GW. Heriot Watt University Perspectives on Mortality Modelling	Satiracoo, P.
16:30--17:00	* Coolen, F. Durham University Statistical Reproducibility of Hypothesis Tests	Satiracoo, P.
18:30--21:30	Welcome dinner at the Grand Ballroom, 3rd floor	

Room B (Crystal 3--4, 3rd floor)

Time	Speaker/Title	Chair
15:30--15:50	Sirisubtawee, S. King Mongkut's University of Technology North Bangkok Variable Coefficient Exact Solutions of Certain Nonlinear Conformable Partial Differential Equations Using an Auxiliary Equation Method	Orankitjaroen, S.
18:30--21:30	Welcome dinner at the Grand Ballroom, 3rd floor	

Room C (Crystal 1--2, 3rd floor)

Time	Speaker/Title	Chair
15:30--15:50	Chuchard, P. Ramkhamhaeng University Transient Pressure-Driven Electro-Osmotic Flow Through Elliptic Cylindrical Microchannels	Chayantrakom, K.
15:50--16:10	Fongfoung, M. King Mongkut's University of Technology Thonburi Analysis of Equilibrium Shapes of Clamped-End Beam Subjected to a Concentrated Load	Chayantrakom, K.
18:30--21:30	Welcome dinner at the Grand Ballroom, 3rd floor	

ICMA-MU 2020 Conference Program			ICMA-MU 2020 Conference Program		
*** Keynote speaker, ** Plenary speaker, * invited speaker			*** Keynote speaker, ** Plenary speaker, * invited speaker		
December 19, 2020			**December 19, 2020**		
Room A (Grand Ballroom, 3rd floor) [virtual presentation only]			Room B (Crystal 3--4, 3rd floor)		
Time	Speaker/Title	Chair	Time	Speaker/Title	Chair
09:00--09:40	** Wake, G. Massey University at Auckland Modelling Catchment Pollution from Intensive Agricultural Practices	Licht, C.	09:00--09:20	Pijitrattana, P. Thammasat University Confidence Interval Estimation for Population Size Based on Poisson-Normal Mixture Models	Unhapipat, S.
09:40--10:10	* Wang, W. Wellesley College An Efficient Variance Estimator of AUC and Its Applications to Binary Classification	Licht, C.	09:20--09:40	Changpetch, P. Mahidol University Integrating Data Mining Techniques for Classification	Unhapipat, S.
10:10--10:40	* Liu, P. Bentley University Prediction of Time to Terminal Event (TTTE) in a Class of Joint Dynamic Models	Licht, C.	09:40--10:00	Juntarapun, K. Mahidol University Some Projection Models for Aging Population in Thailand	Unhapipat, S.
			10:00--10:20	Printechapat, T. Mahidol University Nested Markov Processes with Coupling Parameters	Unhapipat, S.
			10:20--10:40	Sae-Jie, W. Mahidol University Mendelian Randomization Study of the Effect of Coronary Artery Calcification on Cardiovascular Diseases	Unhapipat, S.
10:40--10:55	Refreshment		10:40--10:55	Refreshment	
10:55--11:25	* Wu, YH. Curtin University On Optimization of Freeway Traffic Flow Under Non-recurrent Events via Variable Speed Limit	Licht, C.	10:55--11:15	Phewchean, N. Mahidol University A Study of Weather Effect to Stock Market in Thailand	Satiracoo, P.
11:25--11:55	* Wiwatanapataphee, B. Curtin University Macroscopic Lane-Changing Model of Traffic Flow on Multi-Lane Freeway	Licht, C.	11:15--11:35	Roenganan, S. Mahidol University A Study of Life Internal Rate of Return	Satiracoo, P.
			11:35--11:55	Tipakornrojanakit, K. Mahidol University Covariance Forecasting Methods and Applications on Asset Allocation	Satiracoo, P.
11:55--12:55	Lunch (Roberto Room, 2nd floor)		11:55--12:55	Lunch (Roberto Room, 2nd floor)	
12:55--13:35	** Elder, M. University of Technology Sydney Which Groups Have Polynomial Geodesic Growth?	Kositwattanarerk, W.	12:55--13:15	Matkhao, P. Mahidol University An Impulsive Mathematical Model of a Biological Control of Brown Planthoppers by Cytorhinus Lividipennis	Rattanakul, C.
13:35--14:05	* Vu, LA. Vietnam National University of Ho Chi Minh City Some Applications of Lie Groups in Theory of Technical Progress	Kositwattanarerk, W.	13:15--13:35	Vongson, M. Mahidol University Residual Power Series Method for Solving the Nonlinear Wave Propagation in Shallow Water	Rattanakul, C.
14:05--14:35	* Hoang, N. Hue University Regularity Properties of Viscosity Solution of Nonconvex Hamilton - Jacobi Equations	Kositwattanarerk, W.	13:35--13:55	Phusanti, C. Chiang Mai University Mathematical Model Analysis on Electricity Management in Thailand-an Industrial Area Case Study	Rattanakul, C.
14:35--14:55	Mouktonglang, T. Chiang Mai University Air Pollution Detection Using Modified Particle Swarm Optimization	Kositwattanarerk, W.	13:55--14:15	Piyawatthanachot, J. Khon Kaen University New Stability Criteria for Uncertain Linear Systems with Distributed Interval Time-Varying Delays	Rattanakul, C.

ICMA-MU 2020 Conference Program

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December 19, 2020

Room A (Grand Ballroom, 3rd floor)   [virtual presentation only]

Room B (Crystal 3--4, 3rd floor)

Time	Speaker/Title	Chair	Time	Speaker/Title	Chair
			14:15--14:35	Suksamran, J. King Mongkut's University of Technology North Bangkok Traveling Wave Solutions of a Reaction Diffusion Model for Porcine Reproductive and Respiratory Syndrome with Declining Infection Rate: Tracking Susceptible, Infected and Immune Populations	Rattanakul, C.
			14:35--14:55	Unyapoti, P. King Mongkut's Institute of Technology Ladkrabang A Shoreline Evolution Model with a Groin Structure Under Nonuniform Breaking Wave Crest Impact	Rattanakul, C.
14:55--15:10	Refreshment		14:55--15:10	Refreshment	
15:10--15:40	* Sanh, NV. Mahidol University An Introduction of Radicals in Module Theory	Orankitjaroen, S.	15:10--15:30	Jaidee, N. Mahidol University A Study on Photosynthesis Related to the Stomatal Conductance in Longan (Dimocarpus Longan Lour.) Under High Temperature Condition	Khajohnsaksumeth, N.
15:40--16:10	* Tran, DQ. Hanoi Institute of Post & Telecommunication Integrating Influence Into Trust Compution with User Interests on Social Networks	Orankitjaroen, S.	15:30--15:50	Jankhonkhan, J. Mahidol University Model Predictive Control of the COVID-19 Pandemic with Respect to Social Isolation Policies	Khajohnsaksumeth, N.
16:10--16:40	* Broadbridge, P. La Trobe University Exact and Numerical Solutions of Nonlinear Fisher-KPP Reaction-Diffusion Equations: Design of Marine Protection Areas.	Orankitjaroen, S.	15:50--16:10	Janngarm, C. Mahidol University Mathematical Modeling of Tumorous Bone	Khajohnsaksumeth, N.
16:40--17:00	Prathumwan, D. Khon Kaen University Mathematical Modeling of the Streptococcus suis Infection	Orankitjaroen, S.	16:10--16:30	Jirapathomkul, W. Mahidol University A Fractional Modeling of Cell Equilibrium and Joint Cell Formation in Multiple Myeloma	Khajohnsaksumeth, N.

ICMA-MU 2020 Conference Program			ICMA-MU 2020 Conference Program		
*** Keynote speaker, ** Plenary speaker, * invited speaker			*** Keynote speaker, ** Plenary speaker, * invited speaker		
December 20, 2020			**December 20, 2020**		
Room A (Grand Ballroom, 3rd floor)			Room B (Crystal 3--4, 3rd floor)		
Time	Speaker/Title	Chair	Time	Speaker/Title	Chair

Time	Speaker/Title	Chair	Time	Speaker/Title	Chair
09:00--09:20	Hongsri, A. Khon Kaen University Improved Delay-Dependent Criteria for Synchronization of Complex Dynamical Networks with Time-Varying Coupling Delay and Sampled-Data Control via New Integral Inequality	Sawangtong, W.	09:00--09:20	Zamart, C. Khon Kaen University Finite-Time Extended Dissipative for Neural Networks with Interval Time-Varying Delays and Distributed Delays	Laesanklang, W.
09:20--09:40	Khongja, P. Khon Kaen University A New Guaranteed Cost Control for Exponential Function Projective Synchronization of Complex Dynamical Networks with Mixed Time-Varying Delay Couplings via Hybrid Feedback Control	Sawangtong, W.	09:20--09:40	Buathong, P. Mahidol University A Linear Programming Approach to the (t,r) Broadcast Domination Number	Laesanklang, W.
09:40--10:00	Luemsai, S. Khon Kaen University A Novel Extended Dissipativity Criteria for Generalized Neural Networks with Interval Discrete Time-Varying Delay	Sawangtong, W.	09:40--10:00	Limphattharachai, O. Mahidol University A Tabu Search Heuristic for Multi-Period Home Health Care Problem with Nurse-Patient Relationship	Laesanklang, W.
10:00--10:20	Phanlert, C. Khon Kaen University Stability Analysis of Neural Networks with Mixed Interval Time-Varying Delays Using the Multiple Integral Lyapunov-Krasovskii Functional	Sawangtong, W.	10:00--10:20	Padungwech, W. Mahidol University Classification of Mixed Data Types with Application to Accident Cases and Surveyor Location Planning	Laesanklang, W.
10:20--10:35	Refreshment		10:20--10:35	Refreshment	
10:35--10:55	Chumpu, R. Sirindhorn International Institute of Technology, Thammasat University Two-Way Coupling Computational Fluid Dynamics with Explicit Dynamics Modeling and Simulation of Microneedle Structures	Chayantrakom, K.	10:35--10:55	Chumworathayee, P. Mahidol University Stochastic Particle Modelling in Bangkok Traffic Flow	Krityakierne, T.
10:55--11:15	De La Fuente Ruiz, A. Mahidol University Modelling and Simulation of Surface Waves on Geodetic Datum from Scattered Time Series Data-A MATLAB Case Study for Covid-19 Wave Spread	Chayantrakom, K.	10:55--11:15	Sinpayak, P. Mahidol University Multi-Objective Optimization for Crop Allocation in Chiang Mai, Thailand	Krityakierne, T.
11:15--11:35	Arunsingkarat, S. Mahidol University Machine Learning in Modelling and Forecasting Mortality	Chayantrakom, K.	11:15--11:35	Ieosanurak, W. Khon Kaen University Traffic Simulation of Freeway Network Model with Ramp Metering and Variable Speed Limit	Krityakierne, T.
11:35--11:55	Triyasute, N. King Mongkut's Institute of Technology Ladkrabang A Naive Data Clustering Analysis for Air Quality Monitoring in Bangkok, Thailand	Chayantrakom, K.	11:35--11:55	Chuchalerm, N. Mahidol University Gas Flow in Deformable Microchannel of Arbitrary Cross Section	Krityakierne, T.
11:55--12:55	Lunch (Roberto Room, 2nd floor)		11:55--12:55	Lunch (Roberto Room, 2nd floor)	