

Mathematics session

Abstract No.	Time	Presented by	Affiliation	Title	Authors	page No.
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Plenary Lecture: September 26 at the University Library Hall

MO-P1	10:40-11:15	Suthep Suantai	Chiang Mai University	Fixed point and optimization methods for machine learning with applications to data prediction and classification	Suthep Suantai	
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Student Oral presentations (Parallel-A): September 27 at Science Building , Room B301

Chair person: Tamaki Tanaka (Niigata University)						
MO-SA1	08:55-09:10	Bin-Tse Ong	National Cheng Kung University	Non-homogeneous Finsler-Carathéodory theorem and non-homogeneous strict Finsler lemma with their applications	Ong Bin-tsé, Sheu Ruey-Lin	
MO-SA2	09:10-09:25	Le Thi Trang	National Sun Yat sen University	Angle preserves of Hilbert spaces	Ngai-Ching Wong, Le Thi Trang	
MO-SA3	09:25-09:40	Shazia Parveen	Chung Yuan Christian University	Sparse k -means clustering algorithms	Shazia Parveen and Miin-Shen Yang	
MO-SA4	09:40-09:55	Shu-Min Tan	National Tsing Hua University	Support vector machines and feature extraction in the classification of green coffee beans	Shu-Min Tan, Shih-Hsun Hung, Je-Chiang Tsai	
MO-SA5	09:55-10:10	Chun-Cheng Li	Feng Chia University	Analysis of ice melting and air conditioning status in smart building HVAC systems	Chun-Cheng Li	
MO-SA6	10:10-10:25	Doan Nhat Minh Thuy	National Taiwan Normal University	Optimization approaches for the Euclidean k -centrum location problem	Doan Nhat Minh Thuy, Jein-Shan Chen	
MO-SA7	10:25-10:40	Bo-Yi Tao	National Kaohsiung Normal University	Some proofs of Caristi's fixed point theorem: A survey	Bo-Yi Tao, Wei-Shih Du	
MO-SA8	10:40-10:55	Shunsuke Kajiba	Yokohama National University	A strong convergence theorem for common fixed points of two nonlinear mappings in a Hilbert space	Takanori Ibaraki, Shunsuke Kajiba, Yukio Takeuchi	
MO-SA9	10:55-11:10	Ryota Iwamoto	Niigata University	Set-valued Fan-Takahashi inequalities via scalarization	Ryota Iwamoto, Tamaki Tanaka	

Student Oral presentations (Parallel-B): September 27 at Science Building , Room B304

Chair person: Takeshi Miura (Niigata University)						
MO-SB1	08:55-09:10	Tanupat Petpanwong	Chiang Mai University	Properties of k -Narayana hybrid numbers	Tanupat Petpanwong, Narawadee Phudolsitthiphat	
MO-SB2	09:10-09:25	Jirayut Butwang	Chiang Mai University	Enhanced fixed point algorithms using inertial techniques for convex optimization and applications	Jirayut Butwang, Suthep Suantai	
MO-SB3	09:25-09:40	Puntita Sae-jia	Chiang Mai University	Accelerated common fixed point algorithms using viscosity approximation and double inertial techniques for convex bilevel optimization and data classification with ELM models	Puntita Sae-jia, Suthep Suantai	
MO-SB4	09:40-09:55	Wiparat Worapitpong	King Mongkut's University of Technology Thonburi	A delta-convergence theorem for a product of strongly quasicontractive mappings in Hadamard spaces	Wiparat Worapitpong, Parin Chaipunya, Sakan Termkaew	
MO-SB5	09:55-10:10	Lyle Leon L. Butanas	Mindanao State University, Iligan Institute of Technology	Integer nonlinear programming formulation for some variations of paired domination in multigraphs without loops	Lyle Leon L. Butanas, Mhelmar A. Labendia, Karlo S. Orge	
MO-SB6	10:10-10:25	Yu-Ru Pai	National Cheng Kung University	Some result about solving a fractional differential equation	Yu-Ru Pai, Yu-Chen Shu	
MO-SB7	10:25-10:40	Chou Kao	National Cheng Kung University	Runge-Kutta discontinuous Galerkin methods with the weighted least-squares WENO limiter	Chou Kao, Min-Hung Chen, San-Yih Lin	
MO-SB8	10:40-10:55	QiaoYi Lin	National Central University	Enhancing annealing performance on solving QUBO with one way one hot constant	QiaoYi Lin, Yu-Chen Shu	
MO-SB9	10:55-11:10	Ryoki Endo	Niigata University	Verified computation method for difference quotients of Laplacian eigenvalues	Ryoki Endo, Xuefeng Liu	

(Break 11:10-11:20)

Keynote Lecture (Parallel-A): September 27 at Science Building , Room B301

Chair person: Tamaki Tanaka (Niigata University)						
MO-KA1	11:20-11:50	Jein-Shan Chen	National Taiwan Normal University	On constructions of new NCP functions	Jein-Shan Chen	

Keynote Lecture (Parallel-B): September 27 at Science Building , Room B304

Chair person: Yusuke Suzuki (Niigata University)						
MO-KB1	11:20-11:50	Shin-Shin Kao	Chung Yuan Christian University	Various cycle embeddings on dual cube extensive networks	Shin-Shin Kao	

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Keynote Lectures (Parallel-A): September 27 at Science Building , Room B301

Chair person: Syuuji Yamada (Niigata University)						
MO-KA2	12:50-13:20	Gue Myung Lee	Pukyong National University	On solving fractional SOS convex polynomial optimization problems with even degrees	Gwi Soo Kim, Moon Hee Kim, Gue Myung Lee	
MO-KA3	13:20-13:50	Narin Petrot	Naresuan University	Lexicographic method for uncertain multi-objective optimization of problems	Pornpimon Boriwan, Matthias Ehrgott, Daishi Kuroiwa, Narin Petrot	
(Break 13:50-14:00)						
MO-KA4	14:00-14:30	Ruey-Lin Sheu	National Cheng Kung University	A QP1QC approach for deciding whether or not two quadratic surfaces intersect	Huu-Quang Nguyen, Ting-Tsen Lin, Ruey-Lin Sheu, Yong Xia	
MO-KA5	14:30-15:00	Yu-Chen Shu	National Cheng Kung University	Numerical investigations to time-fractional Allen-Cahn equation	Bing-Ze Lu, Yu-Chen Shu	

Keynote Lectures (Parallel-B): September 27 at Science Building , Room B304

Chair person: Akinari Hoshi (Niigata University)						
MO-KB2	12:50-13:20	Tzyy-Leng Horng	Feng Chia University	Pattern formation in the bulk region of ionic liquid	Tzyy-Leng Horng	
MO-KB3	13:20-13:50	Tone-Yau Huang	Feng Chia University	Second-ordered duality model for the complex multi-objective fractional programming	Tone-Yau Huang	
(Break 13:50-14:00)						
MO-KB4	14:00-14:30	Daisy Lou Polestico	Mindanao State University, Iligan Institute of Technology	Advancing modeling techniques for count time series and lifetime data	Michael C. Ayala, Daisy Lou L. Polestico	

Regular Lectures (Parallel-A): September 28 at Science Building , Room B301

Chair person: Syuuji Yamada (Niigata University)						
MO-RA1	09:00-09:20	Suparat Kesornprom	Chiang Mai University	Algorithm with two inertial schemes and linesearch techniques for split variational inclusion problems and applications	Suthep Suantai, Prasit Cholamjiak, Papatsara Inkrong, Suparat Kesornprom	
MO-RA2	09:20-09:40	Kobkoon Janngam	Chiang Mai University	A novel two-step inertial algorithm for bilevel optimization problems applied to data classification	Kobkoon Janngam, Rattanakorn Wattanatawekul, Suthep Suantai	
MO-RA3	09:40-10:00	Wei-Shih Du	National Kaohsiung Normal University	New existence theorems for vector-valued functions with essential vectorial semicontinuity and adjustability convexity	Wei-Shih Du	
MO-RA4	10:00-10:20	Yosuke Araya	Akita Prefectural University	Nonlinear scalarizations in set optimization: progress over the past 20 years and recent results	Yosuke Araya	
(Break 10:20-10:30)						

Chair person: Tamaki Tanaka (Niigata University)

MO-RA5	10:30-10:50	Longrio C. Platil	Central Mindanao University	Multi-criteria evaluation of Pythagorean fuzzy sets from the viewpoint of set optimization	Longrio C. Platil, Tamaki Tanaka	
MO-RA6	10:50-11:10	Yuto Ogata	Kanazawa Gakuin University	Sublinear dual expression for set relations and its application	Yuto Ogata	
MO-RA7	11:10-11:30	Tamaki Tanaka	Niigata University	Generalized cone-continuity of set-valued maps with scalarization	Premyuda Dechboon, Tamaki Tanaka	
MO-RA8	11:30-11:50	MD Ziaul Huq	Niigata University	Characterization of set-relations in set optimization by twofold scalar optimization	MD Ziaul Huq, Tamaki Tanaka	

Regular Lectures (Parallel-B): September 28 at Science Building , Room B304

Chair person: Yusuke Suzuki (Niigata University)						
MO-RB1	09:00-09:20	Analen Malnegro	Ateneo de Davao University	An H -coloring of the line graph of cubic graphs and its related properties	Analen Malnegro, Kenta Ozeki	
MO-RB2	09:20-09:40	Maria Andrea O. Bonsocan	Ateneo de Davao University	Transversal hop domination in graphs	Maria Andrea O. Bonsocan, Ferdinand P. Jamil	
MO-RB3	09:40-10:00	Angelica Mae L. Mahistrado	Ateneo de Davao University	Restrained 2-resolving hop domination in graphs	Angelica Mae L. Mahistrado, Helen M. Rara	
MO-RB4	10:00-10:20	Cheng-Shu You	Feng Chia University	Modeling fluid-solid interactions with the direct-forcing immersed boundary method	Cheng-Shu You	
(Break 10:20-10:30)						

Chair person: Takeshi Miura (Niigata University)

MO-RB5	10:30-10:50	Koji Aoyama	Chiba University	Parallel methods for strongly quasiconvex mappings in a Hilbert space	Koji Aoyama, Shigeru Iemoto	
MO-RB6	10:50-11:10	Matthew Lin	National Cheng Kung University	Gradient flow approach for quantifying quantum entanglement	Matthew M. Lin	
MO-RB7	11:10-11:30	Chien-Hong Cho	National Sun Yat sen University	On the numerical computation of blow-up problems	Chien-Hong Cho	
MO-RB8	11:30-11:50	Xuefeng Liu	Tokyo Woman's Christian University	Can one hear the shape of a drum? – Computer-assisted proof in geometric spectral problems	Xuefeng Liu, Ryoki Endo	