# November 5 (Monday) (OIST)

TIME	Auditorium AU			
14:00 14:30	Opening Ceremony			
14:30	Plenary			
15:50	Keynote (MAO1AU)			
TIME	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 4
16:05 17:20	Regular (MAO2M1)	Regular (MAO2M2)	Special Session <sup>†</sup> (MAO2M3)	Special Session <sup>‡</sup> (MAO2M4)
17:40 19:30	Welcome Party			

# November 5 (Monday), Afternoon

# [MAO1AU] Plenary (chair: Wataru Takahashi).

(1) **R. T. Rockafellar** (p.93) Achieving economic equilibrium by a process of optimization

### Keynote

(2) **Kazimierz Goebel** (p.22) Retracting balls onto spherical caps

### [MAO2M1] Regular Talks (chair: Akiko Yoshise).

- Chang-Ming Lin, Ko-Ying Tseng and Hsin-Yu Liu\* (p.66)
   Chiller loading optimization by using two-stage differential evolution algorithm
- (2) **Hideo Yoshizato\* and Hideaki Iiduka** (p.133) Stochastic fixed point optimization algorithm for classifier ensemble with sparsity and diversity learning and its application
- (3) **Yu Kobayashi\* and Hideaki Iiduka** (p.53) Stochastic subgradient projection method for nonmonotone equilibrium problem and its application to multiclass classification

#### [MAO2M2] Regular Talks (chair: Yukio Takeuchi).

- (1) **Raweerote Suparatulatorn\* and Suthep Suantai** (p.110) New self-adaptive algorithms with inertial effects for solving split common fixed point problems and its applications
- (2) Pachara Jailoka\* and Suthep Suantai (p.33) Split null point problems and common fixed point problems for a finite family of demicontractive multivalued mappings
- (3) Preeyaporn Thongin\* and Worapong Fupinwong (p.118) The fixed point property of a Banach algebra generated by an element with infinite spectrum

#### [MAO2M3] Special Session<sup> $\dagger$ </sup> (1) (chair: Yasuko Matsui).

#### Graph Theory and Combinatorial Optimization

- (1) **Tatsuoki Kato, Tomoki Nakamigawa and Tadashi Sakuma\*** (p.99) Pebble exchange group of graphs
- (2) Shinya Fujita (p.19) How to make an edge-colored graph properly connected
  (2) Direction (p.19)
- (3) **Ringi Kim** (p.49) On tournaments with large chromatic number

# [MAO2M4] Special Session<sup>‡</sup> (1) (chair: Shuyu Sun).

### Diffuse Interface Methods for Modeling Multi-Phase Mixture

- (1) Guangpu Zhu\*, Jun Yao and Shuyu Sun (p.136)
   An energy stable scheme for a hydrodynamics coupled phase-field surfactant model
- (2) Jisheng Kou (p.57)
   Entropy stable modeling of non-isothermal multi-component diffuse-interface twophase flows

# November 6 (Tuesday)

# (ANA InterContinental Manza Beach Resort)

	Shell Beach Banquet Room		
TIME	Room A		
9:00	Plenary		
10:20	Keynote (TUA1SA)		
10:20	Conference Photo (1)		
10:50	Coffee	Coffee break	
10:50	Keynote	Keynote	
11:50	Regular	Specail Session <sup><math>\dagger</math></sup> (2)	
	(TUA2SA)	(TUA2SB)	
11:50 14:00	Lunch (Karin)		
TIME	Room A Room B		
14:00	Keynote	Keynote	
15:35	Regular (TUA3SA)	Regular (TUA3SB)	
15:35 15:55	Coffee break		
15:55	Keynote	Keynote	
17:20	Regular (TUA4SA)	Regular (TUA4SB)	
17:45 19:45	Banquet (ORCHID)		

# November 6 (Tuesday), Morning

## [TUA1SA] Plenary (chair: Christiane Tammer).

(1) **Kazuo Murota** (p.78) DC programming in discrete convex analysis

Keynote

(2) Yuzhu Wang, Akihiro Tanaka and Akiko Yoshise\* (p.132) Polyhedral approximations of the semidefinite cone and their applications

### [TUA2SA] Keynote (chair: Kok Lay Teo).

- Xiaoqi Yang (p.130)
   On error bound Moduli and their applications
   Regular Talk
- (2) Hideaki Iiduka<sup>◊</sup> (p.30)
   Decentralized optimization and its applications

### [TUA2SB] Special Talks (chair: Yasuko Matsui).

- (1) Katsuhisa Yamanaka, Yasuko Matsui\* and Shin-ichi Nakano (p.72) Enumerating all spanning subgraphs with edge-connectivity at least k
- (2) **Boram Park** (p.83) Interval edge-coloring problems

# November 6 (Tuesday), Afternoon

### [TUA3SA] Keynote (chair: Yongdo Lim).

- Min Zhang, Jie Sun\* and Honglei Xu (p.108) Two-stage quadratic games under uncertainty and their solution by progressive hedging algorithms
- (2) Q. Chai, Z. Feng, Z. Gong, V. Rehbock, J. Lee, Bin Li, Q. Lin, C. Liu, R. Loxton, Kok Lay Teo\*, C. Wu, C. Yu (p.116)
   Optimal control computation for nonlinear switched systems

### Regular Talk

(3) Syuuji Yamada<sup>◊</sup> (p.127)
 Algorithm for calculating a gradual improvement target and its applications in DEA

#### [TUA3SB] Keynote (chair: Brailey Sims).

- Anthony T. Lau (p.61)
   Fixed point properties for semigroups of nonexpensive mappings on convex sets in dual Banach space
- (2) N. Chuensupantharat, P. Kumam and S. Dhompongsa\* (p.17) A short proof of the Brouwer fixed point theorem

#### **Regular Talk**

(3) Takanori Ibaraki<sup>\$\lambda\$</sup> (p.29) A shrinking projection method for nonlinear mappings of nonexpansive type with nonsummable errors

### [TUA4SA]Keynote(chair: Shue-Chin Huang).

 In-Sook Kim (p.47) Semilinear problems with a set-valued nonlinear part

#### Regular Talks

(2) Jukrapong Tiammee\* and Withun Phuengrattana (p.119)

Proximal point algorithms for finding common fixed points of a finite family of quasi-nonexpansive multi-valued mappings in real Hilbert spaces

(3) Fumiaki Kohsaka<sup>◊</sup> (p.54)
 Fixed points of Chatterjea mappings with Bregman distances in Banach spaces

#### [TUA4SB]Keynote(chair: Koichiro Naito).

Ching-Feng Wen (p.123)
 On second-order optimality conditions for nonsmooth vector optimization problems

#### **Regular Talks**

- (2) Chia-Cheng Liu and Yung-Yih Lur\* (p.69)On simultaneously nilpotent fuzzy interval matrix in max-min operation
- (3) Chia-Cheng Liu and Yan-Kuen Wu\* (p.125) An average-based approach to finding a minimal optimal solution for min-max programming problem

# November 7 (Wednesday) (OIST)

TIME	Auditorium AU			
9:00	Plenary (WEO1AU)			
10:05	Cenference Photo $(2)$			
TIME	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 4
10:05	Special Session (WEO2M1)	Regular (WEO2M2)	Regular (WEO2M3)	Special Session <sup>†</sup> (WEO2M4)
	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
11:20	$\begin{array}{c} \text{Regular} \\ (\text{WEO2S1}) \end{array}$	$\begin{array}{c} \text{Regular} \\ (\text{WEO2S2}) \end{array}$	$\begin{array}{c} \text{Regular} \\ \text{(WEO2S3)} \end{array}$	
11:20				
11:45	Conee Break			
TIME	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
11:45 12:55	Keynote (WEO3S1)	Keynote (WEO3S2)	Keynote (WEO3S3)	
12:55				
14:30	Lunch (Grano@OIST)			
TIME	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
14:30	Keynote	Keynote	Keynote	
16:15	(WEO4S1)	(WEO4S2)	(WEO4S3)	
16:15	Coffee Break			
16:35				
TIME	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
16:35	$\begin{array}{c} \text{Regular} \\ (\text{WEO5S1}) \end{array}$	$\begin{array}{c} \text{Regular} \\ \text{(WEO5S2)} \end{array}$	Regular (WEO5S3)	
	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 4
17:50	Regular (WEO5M1)	Regular (WEO5M2)	Regular (WEO5M3)	

# November 7 (Wednesday), Morning

# [WEO1AU] Plenary (chair: R. T. Rockafellar).

(1) Wataru Takahashi (p.112)

New classes of nonlinear operators and weak and strong convergence theorems in Hilbert spaces and Banach spaces

#### [WEO2M1] Special Session (chair: Nobusumi Sagara).

### **Special Session on Mathematical Economics**

- (1) Yuhki Hosoya (p.27) Shephard's lemma and nonlinear partial differential equations
- (2) Naoki Yoshihara\* and Se Ho Kwak (p.131) Sraffian indeterminacy in general equilibrium
- (3) Mitsunori Noguchi (p.81) Essential stability of purifiable alpha-core strategies of games with incomplete information

### [WEO2M2] Regular Talks (chair: Aoi Honda).

- (1) Kazuhiro Hishinuma\* and Hideaki Iiduka (p.23) Convergence Property, Computational Performance, and Usability of Fixed Point Quasiconvex Subgradient Method
- (2) Aliyu Muhammed Awwal\* and Poom Kumam (p.4)A projection Hestenes-Stiefel-like method for monotone nonlinear equations with convex constraints
- (3) Julalak Prabseang\* and Kamsing Nonlaopon (p.88) Quantum Hermite-Hadamard inequalities for double integral and q-differentiable convex functions

## [WEO2M3] Regular Talks (chair: Masahiro Inuiguchi).

- Kosuke Togashi and Hiroaki Mohri\*<sup>◊</sup> (p.76)
   Analysis for mechanism of commitment problems of separatist conflicts by 2 level game theory and coalition cooperation degree
- (2) Hiroaki Mohri and Jun-ichi Takeshita\* (p.113) Erlang distribution damage analysis on failures immediately after shocks by two factors
- (3) **Yi Chou Chen** (p.10) A monopolist's optimal production rate

[WEO2M4] Special Session (2) (chair: Shuyu Sun).

### Diffuse Interface Methods for Modeling Multi-Phase Mixture

- (1) Shuyu Sun\*, Jisheng Kou and Zhonghua Qiao (p.109) Multi-scale simulation of two-phase flow with partial miscibility
- (2) Yuanqing Wu\*, Jisheng Kou and Maoqing Ye (p.126) A Darcy-Brinkman-Forchheimer framework meeting Newton's second law in matrix acidization simulation
- (3) Tao Zhang\* and Shuyu Sun (p.135) Lattice Boltzmann method for phase field model with Peng- Robinson equation of state

#### [WEO2S1] Regular Talks (chair: Narin Petrot).

- (1) **Yirmeyahu Jeremy Kaminski** (p.37) Equilibrium locus of the flow on circular networks of cells
- (2) Seiichi Iwamoto, Yutaka Kimura\*<sup>◊</sup> and Toshiharu Fujita (p.51) Two dualities – complementary versus shift –
- (3) Mitsuhiro Hoshino<sup>◊</sup> (p.26) Local behavior of monotonization and an index of ordering in learning processes of basic self-organizing maps

### [WEO2S2] Regular Talks (chair: Daishi Kuroiwa).

(1) C. Castaing, C. Godet-Thobie\*, P. Dinh Phung and L. Xuan Truong  $(\mathrm{p.21})$ 

On fractional differential inclusions with nonlocal boundary conditions

- (2) Panatda Boonman\* and Rabian Wangkeeree (p.6) Levitin-Polyak well-posedness for parametric quasivariational inclusion and disclusion problems
- (3) Mohammed Harunor Rashid (p.91) Convergence analysis of a restricted inexact Newton-type method for generalized equations

#### [WEO2S3] Regular Talks (chair: Yasunori Kimura).

- Prasit Cholamjiak (p.13) The modified forward-backward method with linesearches
- (2) Mayumi Hojo\* and Wataru Takahashi (p.24) Fixed point and weak convergence theorems for noncommutative two extended generalized hybrid mappings in Banach spaces
- (3) **Uamporn Witthayarat\* Poom Kumam and Prasit Cholamjiak** (p.124) On solving split equilibrium problem in real Hilbert spaces with its applications

#### [WEO3S1] Keynote (chair: Tomonari Suzuki).

- (1) Ryszard Płuciennik (p.87)
- On some modifications of *n*-th von Neumann-Jordan constant in Banach spaces (2) Kichi-Suke Saito\*, Naoto Komuro and Ryotaro Tanaka (p.96)

# [WEO3S2] Keynote (chair: Poom Kumam).

- Do Sang Kim (p.46) Strong second-order Karush–Kuhn–Tucker optimality conditions for vector optimization
- (2) **Daishi Kuroiwa** (p.60) Duality for convex set optimization

# [WEO3S3] Keynote (chair: Somyot Plubtieng).

- Yasunori Kimura (p.50) Convex minimization problems on complete geodesic spaces
   Satit Saejung (p.94)
  - On Halpern's iteration and related iterations

# November 7 (Wednesday), Afternoon

### [WEO4S1] Keynote (chair: Anthony T. Lau).

- Kenjiro Yanagi (p.128)
   Some kinds of Uncertainty relations for generalized quasi-metric adjusted skew informations and their applications
- (2) Jun Kawabe (p.40)
   A perturbation method in the study of convergence theorems of nonlinear integrals
- (3) Aoi Honda\* and Yoshiaki Okazaki (p.25) Representation of Shapley value of cooperative game

### [WEO4S2] Keynote (chair: Jein-Shan Chen).

- (1) Koichiro Naito (p.79)
   Pseudorandom number generator by *p*-adic chaos and Ramanujan expander graphs
- (2) Hidefumi Kawasaki (p.41)Completion of the proof of flat-foldability theorem for twist fold by KKM lemma
- (3) Sangho Kum (p.58) Convergence of linearized proximal algorithms for convex composite optimization on Riemannian manifolds

# [WEO4S3] Keynote (chair: Jong-Kyu Kim).

- (1) **Sehie Park** (p.84) KKM Implies Hahn-Banach
- (2) Andrzej Cegielski (p.8) On the regularity of the Landweber transformation
- (3) **Yukio Takeuchi** (p.114) On Browder–Ray type theorems

# [WEO5S1] Regular Talks (chair: Lai-Jiu Lin).

- Wei-Shih Du<sup>◊</sup> (p.18)
   New generalizations of fixed point theorems of Caristi type and Mizoguchi-Takahashi type and their applications
- (2) Kamsing Nonlaopon (p.82)
   The distributional solutions of fractional differential equations related to Cauchy-Euler equation
- (3) Jedsada Senasukh\* and Satit Saejung (p.103) Some hyperstability results of cauchy functional equations via Brzdęk's fixed point theorem

# [WEO5S2] Regular Talks (chair: Jong Soo Jung).

- (1) Habib ur Rehman<sup>\*</sup> and Poom Kumam (p.92) Fixed point theorems for  $\alpha$ - $\psi$  and  $\alpha_{\mu}$ - $\psi$  condensing operators with application to functional integral equation
- (2) Umar Yusuf Batsari\* and Poom Kumam (p.5) Importance of fixed point sets of quantum operations in information preserving structures
- (3) Sachiko Atsushiba<sup>◊</sup> (p.3)
   Convergence theorems for normally generalized hybrid sequences and hybrid-type mappings

## [WEO5S3] Regular Talks (chair: Ruey-Lin Sheu).

- (1) Nimit Nimana and Narin Petrot\* $\diamond$  (p.85)
- Splitting proximal schemes for additive convex hierarchical minimization problems (2) Shin-ya Matsushita $^{\diamond}$  (p.73)
  - On a splitting method for maximal monotone operators
- (3) Jutamas Kerdkaew\* and Rabian Wangkeeree (p.43) Approximate optimality for quasi approximate solutions in nonsmooth semi-infinite programming problems, using convexificators

## [WEO5M1] Regular Talks (chair: Yoshikazu Kobayashi).

- Gwan-Woo Jang\* and Taekyun Kim (p.34)
   Differential equations associated with degenerate Changhee numbers of the second kind
- (2) **Rui Yang\*, Inbo Sim and Yong-Hoon Lee** (p.129) Lyapunov-type inequalities for one-dimensional Minkowski-curvature problems
- (3) Basit Ali (p.1) Completeness of b-metric spaces and the existence of fixed point sets of generalized multivalued Ciric-Suzuki type quasi-contractions spectrum

### [WEO5M2] Regular Talks (chair: Syuuji Yamada).

- (1) **Chih-Sheng Chuang** (p.15) Hybrid algorithms and convergence theorems for the split DC program
- (2) Yutaka Saito\*, Shiori Kato, Yousuke Araya and Yutaka Kimura (p.97) On a robust Nash equilibrium of two-parson zero-sum game
- (3) Puchit Sariddichainunta\* and Masahiro Inuiguchi (p.102) The application of revealed preference for minimax problem in sequential decision model

# [WEO5M3] Regular Talks (chair: Gue Myung Lee).

- (1) You-Young Cho\* and Gyeong-Mi Cho (p.11) Interior-point algorithms for horizontal linear complementarity problems
- (2) Jinjie Liu\*, Weiyang Ding, Liqun Qi and Wennan Zou (p.67) Isotropic polynomial invariants of the Hall tensor
- (3) Yousuke Araya\*, Kaede Suzuki, Yutaka Saito and Yutaka Kimura (p.2) New suffiency for global optimality of multi-objective programming problems via underestimators

# November 8 (Thursday) (OIST)

TIME	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 4
9:20	Regular (THO1M1)	Regular (THO1M2)	Regular (THO1M3)	
	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
10:35	Regular (THO1S1)	$\begin{array}{c} \text{Regular} \\ \text{(THO1S2)} \end{array}$	Regular (THO1S3)	
10:35		Coffee B	rook	
11:00	Сопее Бгеак			
TIME	Room C209	Room C210	Room $B250$	Auditorium
11:00	Keynote	Keynote	Keynote	
12:45	(THO2S1)	(THO2S2)	(THO2S3)	
12:45	Lunch (Chang@OIST)			
14:15	Lunch (Grano@OIS1)			
TIME	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
14:15	Keynote	Keynote	Keynote	
15:25	(THO3S1)	(THO3S2)	(THO3S3)	
15:25	Coffee Break			
15:45				
TIME	Seminar Room C209	Seminar Room C210	Seminar Room B250	Auditorium
15:45	Regular (THO4S1)	Regular (THO4S2)		
	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 4
17:00	Regular (THO4M1)	Regular (THO4M2)	Regular (THO4M3)	

# November 8 (Thursday), Morning

[THO1M1] Regular Talks (chair: Kenjiro Yanagi).

- (1) Sumati P. Kumari, Jamnian Nantadilok\* and Muhammad Sarwar (p.80) Fixed point theorems for a class of generalized weak cyclic compatible contractions
- (2) Panisa Lohawech\*, Anchalee Kaewcharoen and Ali Farajzadeh (p.68) Algorithms for the common solution of the split variational inequality problems and fixed point problems with applications
- (3) Warut Saksirikun\* and Narin Petrot (p.98) Coincidence and common fixed point theorems for generalized cyclic multi-valued Suzuki type contraction

### [THO1M2] Regular Talks (chair: Satit Saejung).

- Mayumi Hojo, Atsumasa Kondo\* and Wataru Takahashi (p.56)
   Weak and strong convergence theorems for commutative normally 2-generalized hybrid mappings in Hilbert spaces
- (2) Hiroko Manaka (p.70) Results with respect to fixed point theorems of an elastic nonlinear mapping in Banach spaces
- (3) Somayya Komal\* and Poom Kumam (p.55)

A modified subgradient extragradient algorithm with inertial effects

### [THO1M3] Regular Talks (chair: Hidefumi Kawasaki).

- Elias Munapo (p.77) New direction to the scheduling problem – A pre-processing integer formulation approach
- (2) Julius Fergy T. Rabago\* and Hideyuki Azegami (p.89) An efficient second-order method for the numerical resolution of the exterior Bernoulli problem via "partial" gradient
- (3) Liguo Jiao\* and Jae Hyoung Lee (p.35) Finding efficient solutions in multiple objective optimization with SOS-convex polynomials under uncertain data

# [THO1S1] Regular Talks (chair: Andrzej Cegielski).

- (1) Watcharaporn Cholamjiak\*, Nattawut Pholasa and Suthep Suantai (p.14) A modified inertial shrinking projection method for solving inclusion problems and quasi-nonexpansive multivalued mappings
- (2) Damrongsak Yambangwai, Sukanya Aunruean and Tanakit Thianwan<br/>\* $(\mathrm{p.117})$

A new modified three-step iteration method for  $G\operatorname{-nonexpansive}$  mappings in Banach spaces with a graph

(3) Orawan Tripak\* and Suthep Suantai (p.120) Strong convergence theorems for G-strictly pseudocontractive mappings on Hilbert spaces with a graph

### [THO1S2] Regular Talks (chair: Rabian Wangkeeree).

- J. Martínez-Moreno (p.71)
   Convergence of an iterative procedure for monotone total asymptotically nonexpansive mappings in CAT(0) space
- (2) **Byoung Jin Choi** (p.12) Convergence of projection algorithms in  $CAT(\kappa)$  spaces
- (3) Kasamusuk Ungchittrakool\*<sup>◊</sup> and Narongrit Puturong (p.121) Existence and convergence for fixed points of a strict pseudo-contraction via an iterative projection algorithm in CAT(0) spaces

# [THO2S1] Keynote (chair: Sehie Park).

(1) **Lai-Jiu Lin** (p.65)

Optimization for the sum of finite functions and quadratic signal recovering problems over split equality fixed point for finite families of countable nonlinear mappings with applications

- (2) **Shuechin Huang** (p.28) KKM property in Riemannian manifolds
- (3) **Jinlu Li** (p.63)

Fixed point theorems (without continuity) on partially ordered Banach spaces and their applications

# [THO2S2] Keynote (chair: Charles Castaing).

- (1) **Gue Myung Lee** (p.62) On optimality theorems for robust optimization problems
- (2) Yongdo Lim\*, Rajendra Bhatia and Tanvi Jain (p.64) Strong convexity of sandwiched entropies and related optimization problems
- (3) Alexander J. Zaslavski (p.134)

Subgradient projection algorithm with computational errors

# [THO2S3] Keynote (chair: Sompong Dhompongsa).

- (1) **Somyot Plubtieng\* and Tadchai Yuying** (p.86) New algorithms for split equilibrium problems and bilevel equilibrium problems
- (2) **Tomonari Suzuki** (p.111) Recent results on contractive conditions and fixed point theory
- (3) **Parin Chaipunya and Poom Kumam\*** (p.59) Some proximal point algorithms for optimization in Hadamard spaces

# November 8 (Thursday), Afternoon

### [THO3S1] Keynote (chair: Jie Sun).

- Shinji Mizuno (p.75) The simplex method for LP and a path of the polyhedron
   Masahiro Inuiguchi (p.31)
  - Flexible treatments of robust constraints with necessity measures in fuzzy linear programming

### [THO3S2] Keynote (chair: Do Sang Kim).

- (1) **Jein-Shan Chen** (p.9) Two approaches for absolute value equation by using smoothing functions
- (2) Van-Bong Nguyen, Nguyen, Thi Ngan and Ruey-Lin Sheu\* (p.104) Strong duality in minimizing a quadratic form subject to two homogeneous quadratic inequalities over the unit sphere

### [THO3S3] Keynote (chair: Suthep Suantai).

(1) **Jong-Kyu Kim** (p.48)

New Krasnoselski-Mann iterative method for finding a common solution of hierarchical fixed point problems and split mixed equilibrium problems

 (2) Jong Soo Jung (p.36)
 Strong convergence of iterative algorithms for accretive operators and nonexpansive mappings in Banach spaces

# [THO4S1] Regular Talks (chair: Ryszard Pluciennik).

- Yoshikazu Kobayashi\*<sup>◊</sup> and Naoki Tanaka (p.52) Remarks on semigroups of Lipschitz operators in a metric space
   Kiyoko Furuya<sup>◊</sup> (p.20)
- On some idea to uniqueness of weak solutions to Navier-Stokes equation for large t(3) Nobuyuki Kato $\diamond$  (p.39)

Linearized stability for abstract age-structured population equations with delay in Banach spaces

# [THO4S2] Regular Talks (chair: Sangho Kum).

- Jutamas Kerdkaew and Rabian Wangkeeree\*
   (p.122)
   Characterizing robust weak sharp solution sets of uncertain convex optimizations
- (2) **Suparat Kesornprom\*, Nattawut Pholasa and Prasit Cholamjiak** (p.44) On the convergence analysis of the gradient-CQ algorithms for the split feasibility problems
- (3) Kunrada Kankam<sup>\*</sup>, Nattawut Pholasa and Prasit Cholamjiak (p.38) Solving the multiple-sets split feasibility problem and the equilibrium problem by a new relaxed CQ algorithm

### [THO4M1] Regular Talks (chair: Fumiaki Kohsaka).

- Phikul Sridarat\* and Suthep Suantai (p.106)
   Common fixed point theorems for multi-valued weak contractive mappings in metric spaces with graphs and its applications
- (2) **Toshiharu Kawasaki** (p.42) Fixed point and acute point theorems for new mappings in a Banach space
- (3) N. Chuensupantharat\*, P. Kumam, V. Chauhan, D. Singh and R. Menon $(\mathrm{p.16})$

Graphic contraction mappings via Graphical b-Metric spaces with applications

### [THO4M2] Regular Talks (chair: Kichi-Suke Saito).

- Hiroshi Miyashita (p.74)
   Convex functions related to graph invariants
   Edge Kilicentry (p. 45)
- (2) Eder Kikianty (p.45) Angular equivalence of normed spaces
  (2) Naccura Scheme (n. 100)
- (3) **Naeem Saleem** (p.100) Best proximity point results in fuzzy metric spaces

### [THO4M3] Regular Talks (chair: Jun Kawabe).

- (1) Amornrat Sangsuwan\* and Kamsing Nonlaopon (p.101) The generalized solutions *n*-th order Cauchy-Euler equation
  - Keynote
- (2) **Hyun-Min Kim** (p.137)

Condition numbers for some different types of nonlinear matrix equation

(3) Felicia Obiageli Isiogugu\* and Chinedu Izuchukwu (p.32) New iteration scheme for the approximation of a common element of the set of fixed points of a finite family of multi-valued mappings in real Hilbert spaces

# November 9 (Friday)

(ANA InterContinental Manza Beach Resort)

TIME	Shell Beach Banquet Room
9:00 10:45	Keynote (FRA1S)
11:05 12:15	Keynote (FRA2S)
12:15	Closing Ceremony
	Lunch (Karin)

# November 9 (Friday), Morning

# [FRA2S] Keynote (chair: Alexander J. Zaslavski).

- Christiane Tammer (p.115) Relationships between constrained and unconstrained multi-objective optimization and application in location theory
- (2) **Hyun-Min Kim** (p.137) Condition numbers for some different types of nonlinear matrix equation
- (3) M. Ali Khan and Nobusumi Sagara\* (p.95) On some recent developments on the Lyapunov convexity theorem and the integration of multifunctions in infinite dimensions

### [FRA1S] Keynote (chair: Kazimierz Goebel).

- Pachara Jailoka and Suthep Suantai\* (p.107)
   Split null point problems and fixed point problems demicontractive multivalued mappings
- (2) **Brailey Sims** (p.105) Douglas-Rachfprd; 60 years young