

# 2011 Joint Seminar and Research Camp between PKNU and NU 平成 22 年度釜慶大学校・新潟大学ジョイントセミナー・リサーチキャンプ

韓国釜慶大学校自然科学部と新潟大学理学部及び自然科学研究科の部局間国際交流協定に基づき、グローバルサーカスのジョイントセミナー・リサーチキャンプを催しますので、ご案内申し上げます。

代表者 谷本盛光 (Tanimoto, Morimitsu)  
世話人 田中環 (Tanaka, Tamaki)

## 記

Date (期間): January 27(Thu)–28(Fri), 2011 平成 23 年 1 月 27 日 (木)・28 日 (金)  
Place (場所): Faculty of Science Building and Material and Industrial Science Building  
in Niigata University (新潟大学理学部棟及び物質生産棟)  
Sponsors: Global Circus Project of Niigata University (NU) and  
College of Natural Sciences of Pukyong National University (PKNU)

## Program (プログラム)

### 1 Plenary Session

#### Jan.27 (Thu)

- 9:15 – 9:40 Opening Ceremony and Signing Ceremony for Agreement on the Double Degree Program (DDP) for Master's and Doctoral Degrees between the Graduate School of PKNU and the Graduate School of Science and Technology of NU
- 9:45 – 10:45 Tanimoto, Morimitsu and Kim, Tae Hwa  
Brief introduction of Faculty of Science and College of Natural Sciences

#### Jan.28 (Fri)

- 9:15 – 10:30 Brief introduction of each department

### 2 Parallel Session

#### 2.1 Agenda of Mathematics Department (数学科, 理学部棟 A523)

Place: Faculty of Science Building 5th Floor, rm. A523

PKNU: Department of Applied Mathematics, Department of Statistics

Coordinator: Tanaka, Tamaki (田中環)

#### Jan.27 (Thu)

- 13:00 – 13:30 Kim, Do Sang  
Duality for nondifferentiable fractional multiobjective programming problems
- 13:30 – 14:00 Kim, Moon Hee  
On vector optimization problem and vector matrix game equivalence
- 14:00 – 14:15 Break (休憩時間)
- 14:15 – 14:40 Kobayashi, Takayuki  
Image analysis on payoff functions for vector matrix games
- 14:40 – 15:05 Choi, Bo Kyung  
Complexity analysis of the primal-dual interior-point methods for linear optimization problem based on a new class of proximity functions

- 15:05 – 15:30 Tokushige, Yusuke  
A successive approximation method for solving a fractional programming problem based on dc optimization
- 15:30 – 15:55 Bae, Kwan Deok  
Duality without constraint qualification in nonsmooth multiobjective programs
- 15:55 – 16:10 Break (休憩時間)
- 16:10 – 16:35 Ju, Eun Young  
Controllability of functional integrodifferential control systems with nonlinear perturbations
- 16:35 – 17:00 Watanabe, Toshikazu  
On Lusin's theorem for non-additive measure in the case where the range space is an ordered topological vector space
- 17:00 – 17:25 Lee, Hyo Jung  
Higher order duality in nondifferentiable multiobjective fractional programming involving cones
- 17:40 – 19:30 Welcome party (歓迎会)

**Jan.28 (Fri)**

- 10:40 – 11:10 Lee, Gue Myung  
Some recent results on robust optimization problems
- 11:10 – 11:40 Jang, Dae Heung  
Fraction of design space plots for evaluating ridge estimators in mixture experiments
- 11:40 – 13:00 Lunch (昼食)
- 13:00 – 13:30 Kim, Tae Hwa  
Demirclosedness principle for continuous TAN mappings
- 13:30 – 13:55 Huang, Tone-Yau  
Optimality conditions for a fractional minimax programming in complex spaces
- 13:55 – 14:20 Kim, Ho Jung  
Nonsmooth composite multiobjective fractional programming
- 14:20 – 14:45 Hojo, Mayumi  
Study of vector-valued d.c. function
- 14:45 – 15:00 Break (休憩時間)
- 15:00 – 15:25 Lee, Jae Hyoung  
On Strong duality for robust convex optimization problems with geometric constraints
- 15:25 – 15:50 Mizuguchi, Hiroyasu  
Geometric constants on Banach spaces
- 15:50 – 16:15 Han, Sung Won  
Strong convergence of modified Ishikawa iteration processes for uniformly Lipschitzan mappings
- 16:15 – 16:40 Ando, Keita  
An inner approximation method for optimization over the weakly efficient set with respect to a closed convex cone
- 16:40 – 16:50 Break (休憩時間)
- 16:50 – 17:15 Sonda, Yuya  
Cone-semicontinuity of set-valued maps by analogy with real-valued semicontinuity
- 17:15 – 17:40 Kuwano, Issei  
Some minimax theorems for set-valued maps

## 2.2 Agenda of Physics Department ( 物理学科, 物質生産棟 751 )

Place: Material and Industrial Science Building 7th Floor, rm. 751

Coordinator: Iyetomi, Hiroshi (家富 洋)

### Jan.27 (Thu)

- 13:30 – 13:55 Choi, Byung Chun  
The fabrications and physical properties of Li doped ZnO ceramics and thin films
- 13:55 – 14:20 Goto, Terutaka  
Ultrasonic physics on strongly correlated systems
- 14:20 – 14:45 Yang, Hyun Kyoung  
Synthesis, crystal growth, phase transformation and photoluminescence properties of GdVO<sub>4</sub>:Eu<sup>3+</sup> nano-rods by high-energy ball milling
- 14:45 – 15:10 Baba, Shotaro  
Electric quadrupole effects for  $\Gamma_8$  ground state of vacancy orbital in boron-doped silicon
- 15:10 – 16:00 Break (休憩時間)
- 16:00 – 16:25 Hong, Ji Sang  
Magnetic Boron Nitride Monolayer
- 16:25 – 16:50 Yamada, Takemi  
Electronic state in a silicon vacancy by using the Green's function method
- 16:50 – 17:15 Park, Jin Young  
Fabrication of spheres with hollow and mesoporous structures
- 17:40 – 19:30 Welcome party (歓迎会)

### Jan.28 (Fri)

- 10:40 – 11:40 Laboratory Tour (low-temperature experimental apparatuses)
- 11:40 – 13:30 Lunch (昼食)
- 13:30 – 14:30 Ishikawa, Fumihiro  
Superconductivity in BaFe<sub>2</sub>As<sub>2</sub> at high pressure, including demonstration of high-T superconductivity
- 14:30 – 14:55 Noh, Hyeon Mi  
The properties of upconversion luminescence on ZrO<sub>2</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup> phosphores with different Yb<sup>3+</sup> concentrations
- 14:55 – 15:20 Einaga, Mari  
Pressure-induced phase transition and superconductivity in Bi<sub>2</sub>Te<sub>3</sub>
- 15:20 – 16:00 Break (休憩時間)
- 16:00 – 16:25 Kim, Dong Yoo  
Magnetic Properties of d0 nanomaterials; A First Principle Study
- 16:25 – 16:50 Okunishi, Koichi  
Introduction to condensed matter theory group in Niigata university
- 16:50 – 17:15 Moon, Byung Kee  
New aluminum garnet yellow phosphors and translucent ceramic for white LED applications

## 2.3 Agenda of Chemistry Department ( 化学科, 理学部棟 A312 )

Place: Faculty of Science Building 3rd Floor, rm. A312

Coordinator: Ohtori, Norikazu (大鳥 範和)

### Jan.27 (Thu)

13:30 – 15:05 Chair: Ohtori, Norikazu

- (1) Sawada, Kiyoshi and Kim, Ju Chang  
Brief introduction of the Department of Chemistry of both Universities
- (2) Gene Frederick Gagabe  
Stabilities and structures of ternary complexes of rare earth ions with beta-diketone and polyether
- (3) Kim, Tae Hyung  
The Studies of Nickel(II) and Copper(II) Complex containing Hexaazamacrocycles and Carboxylate Ligands
- (4) Kim, Ju Chang  
Structures and properties of transition metal azamacrocyclic complexes with carboxylate ligands

15:20 – 16:10 Chair: Ikoma, Tadaaki

- (5) Chang, Byoung-Yong  
Development of Fourier transform-electrochemical impedance spectroscopy (FT-EIS): theory, verification and applications
- (6) Park, Sun Joo  
Regulation of cell migration and inhibition of tumor metastasis

16:25 – 17:30 Chair: Maruyama, Kenji

- (7) Wakikawa, Yusuke  
Electron acceptor effect on the carrier dynamics in one-dimensional photoconductive hexabenzocoronene self-assemblies
- (8) Nakada, Masaru  
The Effect of Hydrophobic Hydration on Water Molecules in Lower Alcohol Aqueous Solutions
- (9) Ohtori, Norikazu  
Orientational correlation in liquid structure of carbontetrachloride

17:40 – 19:30 Welcome party (歓迎会)

### Jan.28 (Fri)

10:40 – 11:40 Horigome, Tsuneyoshi  
Laboratory Tour: Biochemistry

11:40 – 13:30 Lunch (昼食)

13:30 – 17:30 Maruyama, Kenji, Iwamoto, Hajime, and Kudo, Hisaaki  
Laboratory Tour: Physical Chemistry, Organic Chemistry, Inorganic Chemistry, and Analytical Chemistry