

# Real Analysis

September 20th (Thu)      Session Room II

## 10:00–11:45

- 1 Yuichi Kanjin (Kanazawa Univ.)<sup>#</sup> Hardy-type inequalities for the generalized Mehler transform ..... 15  
Kunio Sato (Yamagata Univ.)
- 2 Yutaka Terasawa (Univ. of Tokyo)<sup>#</sup> Positive operators and maximal operators in a filtered measure space ..... 15  
Hitoshi Tanaka (Univ. of Tokyo)
- 3 Yoshihiro Mizuta (Hiroshima Inst. of Tech.)<sup>#</sup> Gagliardo–Nirenberg inequality for generalized Riesz potentials of functions in Musielak–Orlicz spaces ..... 15  
Eiichi Nakai (Ibaraki Univ.)  
Yoshihiro Sawano (Tokyo Metro. Univ.)  
Tetsu Shimomura (Hiroshima Univ.)
- 4 Yohei Tsutsui (Waseda Univ.) Weighted inequalities for convolution operators with smooth functions on Hardy spaces and an application to decay property of solutions to Navier–Stokes equations ..... 15
- 5 Takanori Yamamoto (Hokkai-Gakuen Univ.)<sup>\*</sup> An argument of a function in  $H^{1/2}$  ..... 15  
Takahiko Nakazi (Hokusei Gakuen Univ.)
- 6 Shinya Moritoh (Nara Women's Univ.)<sup>\*</sup> Mulholland's inequality revisited ..... 10

## 14:15–15:40

- 7 Aoi Honda (Kyushu Inst. of Tech.)<sup>#</sup> On the linearity and metrics of a new sequence space  $\Lambda_2(f)$  ..... 15  
Yoshiaki Okazaki (Kyushu Inst. of Tech.)  
Hiroschi Sato (Kyushu Univ.)
- 8 Mikio Kato (Shinshu Univ.)<sup>\*</sup> Weak nearly uniform smoothness of direct sums of Banach spaces ..... 15  
Takayuki Tamura (Chiba Univ.)
- 9 Mikio Kato (Shinshu Univ.)<sup>\*</sup> On relations between  $C_{NJ}(X)$  and  $J(X)$  and a new geometric constant  $A(X)$  ..... 15  
Yasuji Takahashi (Okayama Pref. Univ.)
- 10 Koji Aoyama (Chiba Univ.)<sup>#</sup> Strong convergence of an iterative sequence for maximal monotone operators in a Hilbert space ..... 15
- 11 Sachiko Atsushiba (Univ. of Yamanashi)<sup>#</sup> Nonlinear mean convergence theorems for nonlinear mappings ..... 15

## 15:50–16:50 Invited Talk by Research Section

Jürgen Appell (Univ. Würzburg)<sup>#</sup> Condensing operators and applications: old and new

September 21st (Fri)      Session Room II

## 9:40–12:00

- 12 Toshikazu Watanabe (Niigata Univ.)<sup>#</sup> On non-additive measures which take values in an ordered topological vector space ..... 15

- 13 Yasunori Kimura (Toho Univ.)<sup>#</sup> Kenzi Satô (Tamagawa Univ.) Convergence of subsets of a complete geodesic space with curvature bounded above and its applications . . . . . 15
- 14 Yoichi Miyazaki (Nihon Univ.)<sup>\*</sup> A Method to evaluate resolvent kernels of elliptic operators . . . . . 12
- 15 Noriaki Yamazaki (Kanagawa Univ.)<sup>#</sup> Lingling Zhang (Taiyuan Univ. of Tech.) Chengbo Zhai (Shanxi Univ.) Optimal control of positive solutions to second order impulsive differential equations . . . . . 15
- 16 Makoto Nakamura (Tohoku Univ.)<sup>\*</sup> Remarks on global solutions for nonlinear wave equations under the standard null conditions . . . . . 10
- 17 Makoto Nakamura (Tohoku Univ.)<sup>\*</sup> Hidemitsu Wadade (Gifu Univ.) The Cauchy problem for dissipative wave equations with weighted nonlinear terms . . . . . 10
- 18 Yukino Tomizawa (Chuo Univ.)<sup>#</sup> Yoshikazu Kobayashi (Chuo Univ.) Naoki Tanaka (Shizuoka Univ.) Unique solutions to nonautonomous differential equations in Banach spaces . . . . . 20
- 19 Motohiro Sobajima (Tokyo Univ. of Sci.)<sup>#</sup> Generalized Hardy–Rellich inequalities in  $\mathbb{R}^N$  for operators with singular first order terms . . . . . 15
- 20 Risei Kano (Kochi Univ.)<sup>#</sup> Akio Ito (Kinki Univ.) Asymptotic behavior of solutions for the tumor invasion models . . . . . 15
- 14:15–16:00**
- 21 Hiroshi Watanabe (Salasian Polytecnic)<sup>#</sup> Entropy solutions to initial value problems for strongly degenerate parabolic equations with discontinuous coefficients . . . . . 15
- 22 Naoki Sato (Nagaoka Nat. Coll. of Tech.)<sup>#</sup> Toyohiko Aiki (Japan Women’s Univ.) Yusuke Murase (Meijo Univ.) On a one dimensional free boundary problem for adsorption phenomena . . . . . 20
- 23 Yusuke Murase (Meijo Univ.)<sup>#</sup> Akio Ito (Kinki Univ.) Existence results for a mathematical modeling for brewing process of Japanese Sake . . . . . 15
- 24 Shun Uchida (Waseda Univ.)<sup>\*</sup> Mitsuharu Ôtani (Waseda Univ.) The solvability of double-diffusive convection system with Soret’s coefficient depending on the concentration of solute . . . . . 15
- 25 Goro Akagi (Kobe Univ.)<sup>#</sup> Doubly nonlinear parabolic equations involving variable exponents . . . 15
- 26 Kota Kumazaki (Tomakomai Nat. Coll. of Tech.)<sup>#</sup> On a mathematical model of moisture transport with a time-dependent porosity in concrete carbonation process . . . . . 15
- 16:10–17:10 Invited Talk by Research Section**
- Okihiro Sawada (Gifu Univ.)<sup>#</sup> The ill-posedness theory of the Navier–Stokes equations in the critical space
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