

- Collaborative works are presented by the underlined authors. The talks with \* mark are presented through document camera, while  $\flat$  marks denote presentations on whiteboards. The speakers with  $\star$  marks are professors emeriti.

## Functional Analysis

September 25th (Thu) Conference Room IV

### 14:15–16:35

- 07-01-0004  
1 Hiroaki Niikuni (Maebashi Inst. of Tech.) \* Spectral band structure of periodic Schrödinger operators on generalized degenerate zigzag nanotubes ..... 15
- 07-01-0015  
2 Hironobu Sasaki (Chiba Univ.) Spectral analysis for mean-field Schrödinger operators ..... 10  
Shoji Shimizu (Tokyo Tech)  
Akito Suzuki (Shinshu Univ.)
- 07-01-0033  
3 Shougo Ito (Shinshu Univ.) The spectrum of a discrete Schrödinger operator with a non-decaying potential ..... 15  
Akito Suzuki (Shinshu Univ.)
- 07-01-0030  
4 Hiroshi Ito (Ehime Univ.) The nonrelativistic limit for Dirac operators with a potential diverging at infinity ..... 15
- 07-01-0028  
5 Mitsuteru Kadowaki (Ehime Univ.) Asymptotic behavior in far field of the resolvent for wave propagation in two-layered media ..... 15  
Hiroshi Isozaki (Univ. of Tsukuba)  
Michiyuki Watanabe (Niigata Univ.)
- 07-01-0017  
6 Shinichiro Futakuchi (Hokkaido Univ.) Time-ordered exponential on the complex plane for unbounded operators and Gell-Mann–Low formula ..... 10  
Kouta Usui (Hokkaido Univ.)
- 07-01-0020  
7 Daiju Funakawa (Hokkaido Univ.) Existence of ground states for a Wess–Zumino model ..... 10
- 07-01-0029  
8 Takahiro Hasebe (Hokkaido Univ.) Cumulants for free Lie algebras and Campbell–Hausdorff formula ..... 15  
Franz Lehner  
(Graz Univ. of Technology)
- 07-01-0008  
9 Kenjiro Yanagi (Yamaguchi Univ.) Uncertainty relations for non-hermitian type ..... 15

### 17:00–18:00 Talk invited by Functional Analysis Section

- 07-02-0003  
Tetsu Mizumachi (Kyushu Univ.) Stability of line solitons for the KP-II equation

September 26th (Fri) Conference Room IV

### 10:00–11:50

- 07-01-0026  
10 Ryo Tabata (Hiroshima Univ.) The behavior of  $n \times n$  Immanants as  $n \rightarrow \infty$  ..... 15
- 07-01-0003  
11 Hideto Nakashima (Kyushu Univ.) Explicit formula of the basic relative invariants of homogeneous cones ..... 15
- 07-01-0005  
12 Toshihiko Matsuki (Ryukoku Univ.) Classification of orthogonal multiple flag varieties of finite type ..... 15
- 07-01-0006  
13 Toshihiko Matsuki (Ryukoku Univ.) Orbits on orthogonal triple flag varieties ..... 15
- 07-01-0022  
14 Atsumu Sasaki (Tokai Univ.) A Cartan decomposition for Cayley type homogeneous spaces ..... 15
- 07-01-0032  
15 Hideyuki Ishi (Nagoya Univ.)\* Siegel type integral on a regular convex cone ..... 15

**13:10–14:10 Talk invited by Functional Analysis Section**

07-02-0001

Hiroshi Oda (Takushoku Univ.) Connections between representation theories for real reductive Lie groups and graded Hecke algebras

September 27th (Sat) Conference Room IV

**9:00–12:00**

07-01-0002

16 Hiromichi Miyake On compactness in  $L^1$  ..... 15

07-01-0007

17 Kazuyuki Wada (Hokkaido Univ.) Existence of a ground state for a self-interaction model of a complex scalar field with spacial cut-off ..... 15

07-01-0010

18 Kei Ji Izuchi (Niigata Univ.)\* Topological structure of the space of weighted composition operators between different Hardy spaces ..... 15

Shūichi Ohno (Nippon Inst. of Tech.)

07-01-0011

19 Shūichi Ohno (Nippon Inst. of Tech.)\* Composition operators related to the Dirichlet space ..... 10

07-01-0034

20 Kouhei Izuchi (Yamaguchi Univ.) Ranks of backward shift invariant subspaces of Hardy space over the bidisk ..... 15

07-01-0035

21 Yasuyuki Oka A characterization of the tempered distributions supported by a regular closed set on the Heisenberg group ..... 15

(Kushiro Nat. Coll. of Tech.)

07-01-0013

22 Shigeru Furuichi (Nihon Univ.) On bounds for relative operator entropies ..... 10

07-01-0014

23 Junichi Fujii (Osaka Kyoiku Univ.) On basic operator entropies ..... 15

07-01-0016

24 Yuki Seo (Osaka Kyoiku Univ.) Matrix power means due to Lawson–Lim–Pálfi for  $1 < t < 2$  ..... 10

07-01-0019

25 Hiroaki Tohyama Operator valued  $\alpha$ -divergence and noncommutative ratio ..... 15

(Maebashi Inst. of Tech.)

Hiroshi Isa (Maebashi Inst. of Tech.)

Masatoshi Ito (Maebashi Inst. of Tech.)

Eizaburo Kamei

Masayuki Watanabe

(Maebashi Inst. of Tech.)

07-01-0025

26 Masaru Nagisa (Chiba Univ.) Characterization of diagonality of operators ..... 10

Albania Nugraha Imam (Chiba Univ.)

**14:15–16:45**

07-01-0001

27 Kengo Matsumoto \* Continuous orbit equivalence of topological Markov shifts and dynamical zeta functions ..... 15

(Joetsu Univ. of Edu.)

Hiroki Matui (Chiba Univ.)

07-01-0023

28 Yasushi Nagai (Keio Univ.) Distribution of patches in tilings and properties of spectrum of the corresponding dynamical systems ..... 15

07-01-0031

29 Takuya Takeishi (Univ. of Tokyo)<sup>b</sup> Bost–Connes system for local fields of characteristic zero ..... 15

07-01-0024

30 Yuhei Suzuki (Univ. of Tokyo) Amenable minimal Cantor systems of free groups arising from diagonal actions ..... 15

07-01-0021

31 Hiroyuki Osaka (Ritsumeikan Univ.) The Jiang–Su absorption for inclusions of unital  $C^*$ -algebras ..... 15

Tamotsu Teruya (Gunma Univ.)

07-01-0012

32 Yasuo Watatani (Kyushu Univ.) Maximal abelian subalgebras of  $C^*$ -algebras generated by complex dynamical systems and continuous orbit equivalence ..... 15

Tsuayoshi Kajiwara (Okayama Univ.)

[07-01-0018](#)

33 [Yasuo Watatani](#) (Kyushu Univ.) Relative position of three subspaces in a Hilbert space and Brenner type decomposition ..... 15  
 Masatoshi Enomoto

[07-01-0009](#)

34 [Rui Okayasu](#) (Osaka Kyoiku Univ.) Haagerup approximation property and positive cones associated with a von Neumann algebra ..... 15  
 Reiji Tomatsu (Hokkaido Univ.)

**17:00–18:00 Talk invited by Functional Analysis Section**[07-02-0002](#)

[Yasuhiko Sato](#) (Kyoto Univ.)<sup>b</sup> Classification theorem of  $C^*$ -algebras and the Toms–Winter conjecture