

Diophantine Analysis and Related Fields 2006

in honor of Prof. Iekata SHIOKAWA

- Dates: 7–10 March, 2006
- Place: Large Conference Room on the 2nd floor, *Raio-sha* Building (indicated as No.10; a route from Hiyoshi Station), Hiyoshi Campus, Keio University, Yokohama, JAPAN
- Accommodation: Hotel Aurora (attached to Kawasaki International Center)
- Organizers: M. Katsurada (Keio Univ.); T. Komatsu (Hirosaki Univ.)
- Contact: `katsurad@hc.cc.keio.ac.jp`; `komatsu@cc.hirosaki-u.ac.jp`

Conference background and scope:

The conference on *Diophantine Analysis and Related Fields 2006* will take place, which is sponsored by Japan Society for the Promotion of Science (Grant-in-Aid for Scientific Research, Nos. 1554021; 16540038), by Keio University (Academic Research Promotion Funds and Economics Faculty Fund), as well as by Fund for the Promotion of International Scientific Research (Grant B-1, 2005). The conference aims to report recent progress and developments of diophantine aspects of analytic number theory, especially focusing upon the topics in diophantine analysis and related fields; its simultaneous objectives are to promote interactions between analytic number theorists and mathematicians from other fields, and further to create opportunities for opening up new individual/collaborative research projects. The conference will be held in honor of Professor Iekata Shiokawa on the occasion of his retirement from Keio University.

Program:

Tuesday 7 March

- 12:55–13:00 Opening
- 13:00–14:00 Igor Shparlinski (Macquarie Univ.),
William Banks (Univ. Missouri)
Character sums with Beatty sequences
- 14:30–15:10 Florian Luca (Inst. de Mat. UNAM),
On the irrationality of a certain series
- 15:30–16:10 Takaaki Tanaka (Keio Univ.)
Algebraic independence of a certain series and its
subseries with subscripts in a geometric progression
- 16:40–17:10 Carsten Elsner (Univ. Hannover)
New series transformations for Euler's constant
- 17:30–18:00 Isao Wakabayashi (Seikei Univ.)
Cubic Thue equations with automorphisms

Wednesday 8 March

- 10:00–11:00 Matthias Beck (San Francisco State Univ.)
Dedekind sums: a geometric viewpoint
- 11:30–12:30 Michel Waldschmidt (Univ. Pierre et Marie Curie)
Diophantine analysis and words
- 14:00–15:00 Carsten Elsner (Univ. Hannover),
Shun Shimomura and Iekata Shiokawa (Keio Univ.)
Explicit algebraic relations for reciprocal sums of even
powers of Fibonacci numbers
- 15:30–16:30 Ryotaro Okazaki (Doshisha Univ.)
Numbers of solutions to simultaneous Pell equations of
indefinite signature
- 17:00–17:30 Yuzen Tanaka (Chiba Univ.)
Rational approximation of $(1+x)^a$ and applications to
Thue inequalities
- 18:00–20:00 Reception Party at Faculty Lounge

Thursday 9 March

- 10:00–11:00 Douglas Bowman (Northern Illinois Univ.)
James McLaughlin (West Chester Univ.)
Limit sets for infinite matrix products and continued
fractions
- 11:30–12:30 Yuri Nesterenko (Moscow State Univ.)
Algebraic independence in the p -adic domain
- 14:00–15:00 Hitoshi Nakada (Keio Univ.)
On the metric theory of continued fractions
- 15:30–16:30 Takao Komatsu (Hirosaki Univ.)
More on Hurwitz and Tasoiev continued fractions
- 17:00–18:00 Khrystyna Kuchmins'ka (Lviv Polytechnic National Univ.)
Multidimensional generalization of continued fractions:
history, main results, new senture problems

Friday 10 March

- 10:00–11:00 Yohei Tachiya (Keio Univ.)
Equivalent conditions for the algebraicity of the values of
certain infinite products
- 11:15–11:45 Zenji Kobayashi (Tohoku Gakuin Univ.),
Tatsuya Okada (Fukushima Pref. Med. Univ.),
Takeshi Sekiguchi and Yasunobu Shioda (Tohoku Gakuin Univ.)
Applications of measure theory to digital sum problems
- 11:55–12:25 David Adam (Univ. Amiens and Nihon Univ.)
On integer-valued functions in positive characteristic
- 12:25–12:30 Closing

Time table

Mar. 7 (Tue.)	Mar. 8 (Wed.)	Mar. 9 (Th.)	Mar. 10. (Fri.)
	10:00–11:00 M. Beck	10:00–11:00 D. Bowman	10:00–11:00 Y. Tachiya
12:55–13:00 Opening	11:30–12:30 M. Waldschmidt	11:30–12:30 Y. Nesterenko	11:15–11:45 Z. Kobayashi
13:00–14:00 I. Shparlinski	12:30–14:00 Lunch break	12:30–14:00 Lunch break	11:55–12:25 D. Adam
14:30–15:10 F. Luca	14:00–15:00 I. Shiokawa	14:00–15:00 H. Nakada	12:25–12:30 Closing
15:30–16:10 Ta. Tanaka	15:30–16:30 R. Okazaki	15:30–16:30 T. Komatsu	
16:30–17:10 C. Elsner	17:00–17:30 Yu. Tanaka	17:00–18:00 K. Kuchmins'ka	
17:30–18:00 I. Wakabayashi	18:00–20:00 Reception party		