The 7th Japan-China Seminar on Number Theory, `` Plowing and starring through the high wave forms ''

sponsored by the JSPS and the NSFC (under the cooperation of Kyushu University)

Organizers: Shigeru Kanemitsu and Jianya Liu (under the auspices of Professor Masanobu Kaneko)

Conference site: Ito Guest House, Kyushu University

(Moto-oka, Fukuoka, Japan ,TEL 06-6721-2332)

Venue: October 28-November 1, 2013

Registration fee 10,000 yen applies to those who would like to receive one proceedings volume and attend the reception party.

Program (Tentative)

October 28 (Monday)

13:00-13:30　Registration, opening and photo session

13:30-13:50　Break

13:50-14:30　Professor L. Weng (Kyushu Univ.), TBA

14:30-14:50　Break

14:50-15:30　Professor Tianxin Cai (Zhejiang Univ.), Congruent numbers on the right trapezoid

October 29 (Tuesday)

10:00-10:40　Professor Yoshiyuki Kitaoka (Meijo Univ.), The distribution of roots of a polynomial modulo prime powers

10:40-11:00　Break

11:00-11:40　Professor　G. –S. Lv (Shandong Univ.), TBA

11:40-13:30　Lunch break

13:30-14:10　Professor Ryotaro Okazaki (Doshisha Univ.), Geometry for totally imaginary quartic Thue equation

14:10-14:30　Break

14:30-15:10　Professor W. –G. Zhai (China Univ. of Mining and Tech.), On the Dirichlet divisor problem in short intervals

15:10-16:10　Break and short communications

Mr. Tomoya Kyuna (Kyushu Univ.), A certain differential equation for Jacobi forms

October 30 (Wednesday)

10:00-10:40 Professor A. Schinel (PAN), On integer-valued polynomials

10:40-11:00 Break

11:00-11:40 Professor K. Miyake (emeritus professor of Tokyo Metropolitan Univ.), Complex multiplication in the sense of Abel

11:40-13:30 Lunch break

13:30- Excursion to Karatsu or rest at the hotel

18:30-21:00 Reception at Fukuoka Garden Palace

October 31 (Thursday)

10:00-10:40 Professor Kohji Matsumoto (Nagoya Univ.), A joint composite hybrid strong universality theorem

10:40-11:00 Break

11:00-11:30 Professor T. Aoki (Tokyo Univ. of Sci.), On Jacobi forms of fractional weight

11:30-13:30 Lunch break

13:30-14:10 Professor Shigeki Egami (Shibaura Inst. of Tech.), On analytic continuation of some Dirichlet series

14:10-14:30 Break

14:30-15:10 Professor W. -P. Zhang (North West Univ.),

15:10-15:30 Break

15:30-16:00 Professor X. –M. Ren, TBA

16:00-16:30 Break plus short communications

16:00-16:15 Ade Irma Suriajaya, On the zeros of the second derivative of the Riemann zeta function under the Riemann hypothesis

November 1 (Friday)

10:30-11:10 Professor Shigeki Akiyama (Tsukuba Univ.), Infiniteness of periodic orbits of discretized rotation

11:10-11:30　Break

11:30-12:10 Professor Z.-W. Sun (Nanjing Univ.),

12:10-12:30　Closing

After lunch, free time or a short tour

 Resume

Professor K. Miyake, Complex multiplication in the sense of Abel

Abstract :　Starting from the definition of the most classical complex multiplication, we launch on expounding modernized one for elliptic curves and Abelian varieties. Also included is some comments from the coming book ``A survey of elliptic functions＇＇.

Professor A. Schinel, On integer-valued polynomials

Abstract : This is a survey lecture but it contains new results of mine on fixed divisors of forms

Professor Kohji Matsumoto, A joint composite hybrid strong universality theorem

Abstract : After the discovery of the universality property of the Riemann zeta-function by Voronin (1975), the universality theory of zeta and L-functions has been studied quite extensively. Various refinements and/or generalizations, such as joint universality, composite universality, hybrid universality, and strong universality were introduced and discussed. In this talk we first survey the history of universality theory, especially explain the above four notions. Then we report a new result, obtained jointly with A. Laurincikas and J. Steuding, which combines all of these four notions.

Professor Ryotaro Okazaki

Geometry for totally imaginary quartic Thue equation

Abstract:

Let F be a binary quartic form of integer coefficients. Assume F has no real linear factors. We consider the Thue equation by equating F with unity. This is one of the so-called trivial case of Thue equations. However, the precise universal upper bound on

the number of its solution is still open.

In this talk, we try to identify those F with 3 solutions module (x, y) <-> (-x, -y).

This will eventually leads to completion of a project initiated by Nagell.

Professor Shigeki Akiyama, Infiniteness of periodic orbits of discretized rotation

Abstract :

Descretized rotation is long studied as a toy model of discretization of a given dynamics. Plainly every orbits of rotation are bounded but it is not clear for its discretized version. A fundamental but notorious conjecture is such orbits are always bounded. We addressed this classical question and showed a partial result on a certain well-studied system. We proved the existence of infinitely many periodic orbits. The main tool is a lattice point counting technique in number theory. This is a joint work with Attila Pethö.

Mr.   Tomoya Kyuna, A certain differential equation for Jacobi forms

Kaneko and Zagier introduced a certain differential equation for elliptic modular forms. The differential equation was studied by Kaneko and Koike. In this talk, we carry out a similar study for Jacobi forms.

Ms. Ade Irma Suriajaya, On the zeros of the second derivative of the Riemann zeta function under the Riemann hypothesis

Abstract:

The number of zeros and the distribution of the real part of non-real zeros of the derivatives of the Riemann zeta function have been investigated by Berndt, Levinson, Montgomery, and Akatsuka. Berndt, Levinson, and Montgomery investigated the general case, meanwhile Akatsuka gave sharper estimates for the first derivative of the Riemann zeta function under the truth of the Riemann hypothesis. In this talk, we shall introduce the extension of the result of Akatsuka to the second derivative of the Riemann zeta function.