

Workshop “Arithmetic Galois Theory and Related Moduli Spaces”

October 23-27 & 30-31, 2006
Room 420 & 115, RIMS, Kyoto University

Program Organizers

P.Dèbes, M.Fried, J.Koenigsmann, H.Nakamura and K.Ribet

October 23 (Monday) Room 420

- 9:50 – 10:00 Hiroaki Nakamura (Okayama Univ.)
Opening Words and Facilities Information
- 10:00 – 11:00 Pierre Dèbes (Univ. Lille 1)
 l -adic aspects of the modular tower program
- 11:15 – 12:15 Michel Emsalem (Univ. Lille 1)
 l -adic points on a modular tower
- 14:00 – 15:00 Jakob Stix (IAS, Princeton)
Exploration of anabelian varieties in higher dimension
- 15:00 – 15:45 *Tea*
- 15:45 – 16:45 Makoto Matsumoto (Hiroshima Univ.)
Malcev completions of arithmetic mapping class groups
- 17:00 – 18:00 Michael Dettweiler (Heidelberg Univ.)
Motives with Galois group G_2

October 24 (Tuesday) Room 420

- 10:00 – 11:00 Jan Mináč (Univ. of Western Ontario)
Galois cohomology, quotients of absolute Galois groups,
and a little modular representation theory
- 11:15 – 12:15 Yuri Zarhin (Pennsylvania State Univ.)
Abelian varieties without homotheties
- 14:00 – 15:00 Gerhard Frey (Univ. Duisburg-Essen)
Curves of genus 2 with elliptic differentials and associated Hurwitz spaces
(joint work with E. Kani)
- 15:00 – 15:45 *Tea*
- 15:45 – 16:45 Tamás Szamuely (Alfréd Rényi Inst. Math., Hungarian Acad. Sci.)
Local-global principles for semiabelian varieties
- 17:00 – 18:00 Florian Pop (Univ. of Pennsylvania)
Meta-abelian anabelian geometry over algebraically closed base fields

October 25 (Wednesday) Room 420

- 10:00 – 11:00 Shreeram S. Abhyankar (Purdue Univ.)
Simultaneous surface resolution
- 11:15 – 12:15 David Harbater (Univ. of Pennsylvania)
On function fields with free absolute Galois groups
- Free afternoon*

October 26 (Thursday) Room 420

- 10:00 – 11:00 Mike Fried (UC, Irvine emeriti / MSU-Billings)
How pure-cycle Nielsen classes test the Main Modular Tower Conjecture
- 11:15 – 12:15 Ki-ichiro Hashimoto (Waseda Univ.), Hiroshi Tsunogai (Sophia Univ.)
Some recent results on Noether’s problem

- 14:00 – 15:00 Anna Cadoret (Univ. Bordeaux 1/RIMS, Kyoto Univ.)
Arithmetic properties of moduli spaces for p etale G covers
and torsion on abelian varieties
- 15:00 – 15:45 *Tea*
- 15:45 – 16:45 Yasutaka Ihara (Chuo Univ. COE)
On Euler-Kronecker invariants of global fields
- 17:00 – 18:00 Michael Tsfasman (Indep. Univ. of Moscow / Univ. de Luminy)
Infinite global fields and their zeta functions
Banquet and a tribute to the Conference

October 27 (Friday) Room 420

- 10:00 – 11:00 Darren Semmen (Univ. Southern California)
Duality groups and modular towers
- 11:15 – 12:15 Thomas Weigel (Univ. di Milano - Bicocca)
Class field theory and modular towers
- 14:00 – 15:00 Stefan Wewers (Bonn Univ.)
Indigenous bundles, deformation data and Hurwitz curves
with bad reduction
- 15:00 – 15:45 *Tea*
- 15:45 – 16:45 Yuichiro Hoshi (RIMS, Kyoto Univ.)
Cuspidalizations of fundamental groups of configuration spaces
- 17:00 – 18:00 Akio Tamagawa (RIMS, Kyoto Univ.)
The algebraic and anabelian geometry of configuration spaces
(joint work with Shinichi Mochizuki)

October 30 (Monday) Room 115

- 10:00 – 11:00 Jochen Koenigsmann (MPIM, Bonn)
On birational anabelian geometry over almost arbitrary fields
- 11:15 – 12:15 Mohamed Saidi (Exeter Univ./RIMS, Kyoto Univ.)
A prime to p version of the Grothendieck anabelian conjecture
in characteristic p (joint work with A.Tamagawa)
- 14:00 – 15:00 Jared Weinstein (UC, Berkeley)
Galois representations with prescribed ramification
- 15:00 – 15:45 *Tea*
- 15:45 – 16:45 Kinya Kimura (RIMS, Kyoto Univ.)
Modular towers of moduli stacks
- 17:00 – 18:00 *Discussion on themes presented at this RIMS conference
and possibilities for a 3rd Profinite Geometry Conference*

October 31 (Tuesday) Room 115

- 10:00 – 11:00 Hidekazu Furusho (Nagoya Univ.)
Survey of Drinfel'd's work on GT and its associated quantum groups
- 11:15 – 12:15 Hiroaki Nakamura (Okayama Univ.)
Profinite Grothendieck-Teichmüller parameters and a family
of Mordell elliptic curves (joint work with H.Tsunogai)
- 14:00 – 15:00 *Discussions: repository creation, exposition of braid software etc.*
- 15:00 – 16:00 *Tea*

*Special thanks to RIMS-International Project Research 2006
“Arithmetic Algebraic Geometry” at Kyoto University
by Kazuya Kato, Hiroyuki Yoshida, Atsushi Moriwaki,
Akio Tamagawa and Shinichi Mochizuki*