

## Workshop “Arithmetic Galois Theory and Related Moduli Spaces”

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

Program Organizers

*P. Debes, M. Fried, J. Koenigsmann, H. Nakamura and Ken Ribet*

### October 23 (Monday)

- 9:50 – 10:00 Hiroaki Nakamura (Okayama Univ.)  
Opening Words and Facilities Informations
- 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 Jacob 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)

- 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 Tamas 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)

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

### October 26 (Thursday)

- 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)

- 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)

- 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)

- 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 softwares 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*