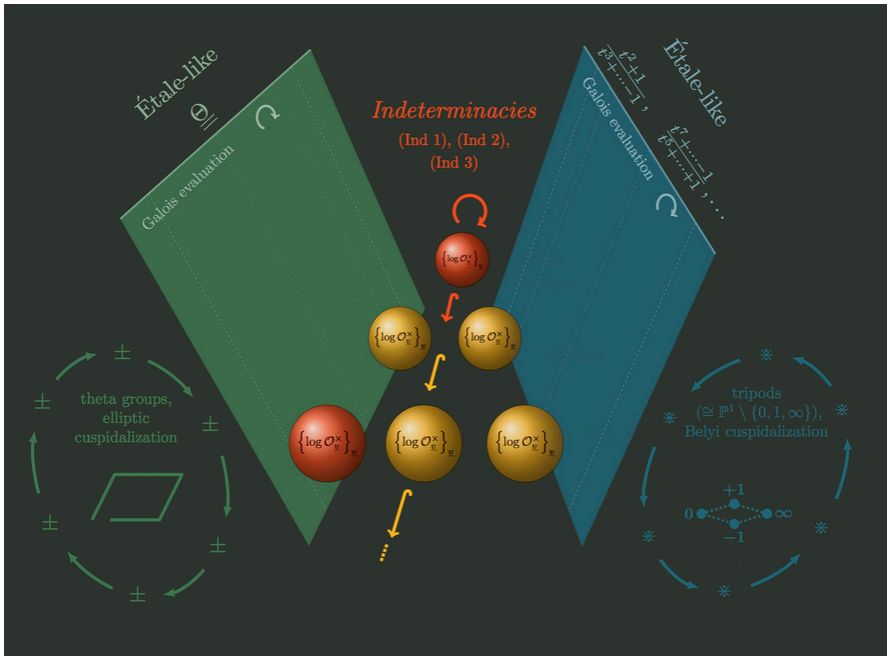
Oxford Workshop on IUT Theory of Shinichi Mochizuki, December 7-11 2015



Funded by Clay Math Institute and Symmetries and Correspondences

Online workshop proceedings, with additional information

Scientific report on the workshop

Animations illustrating IUT
The images on this page are taken from the animations

Organisers: Ivan Fesenko, Minhyong Kim, Kobi Kremnitzer
Finding the speakers, arranging talks, scientific program of the workshop: Ivan Fesenko

The work (currently being refereed) of SHINICHI MOCHIZUKI on *inter-universal Teichmüller theory*, IUT, also known as *arithmetic deformation theory*, and its application to famous conjectures in diophantine geometry became publicly available in August 2012. This theory, developed over 20 years, introduces a vast collection of novel ideas, methods and objects. Aspects of the theory extend arithmetic geometry to a non-scheme-theoretic setting and, more generally, have the potential to open new fundamental areas of mathematics.

The main objective of this first international workshop on IUT is to assist mathematicians in their study of the theory. The workshop will present, via talks of mathematicians from several countries, key principles, concepts, objects and proofs of the theory of Mochizuki and study its relations with existing theories in different areas.

Shinichi Mochizuki will answer questions during skype sessions of the workshop. He also responds directly to emailed questions.

Invited speakers:
Oren Ben-Bassat, Weronika Czerniawska, Yuichiro Hoshi, Ariyan Javanpeykar, Kiran Kedlaya, Robert Kucharczyk, Ulf Kühn, Lars Kuehne, Emmanuel Lepage, Chung Pang Mok, Jakob Stix, Tamás Szamuely, Fucheng Tan, Go Yamashita, Shou-Wu Zhang

Participants:
Julio Andrade (Univ. Oxford), Federico Bambozzi (Univ. Regensburg), Alexander Beilinson (Univ. Chicago), Oren Ben-Bassat (Univ. Haifa), Brian Birch (Univ. Oxford), Martin Bridson (Univ. Oxford), Olivia Caramello (Univ. Paris 7), Brian Conrad (Stanford Univ.), Weronika Czerniawska (Univ. Nottingham), Ishai Dan-Cohen (Univ. Duisburg-Essen), Jamshid Derakhshan (Univ. Oxford), Taylor Dupuy (Univ. California Los Angeles), Gerd Faltings (MPIM, Bonn), Ivan Fesenko (Univ. Nottingham), Gerhard Frey (Univ. Duisburg-Essen), Adam Gal (Univ. Oxford), Lena Gal (Univ. Oxford), Dorian Goldfeld (Columbia Univ.), Nigel Hitchin (Univ. Oxford), Yuichiro Hoshi (RIMS, Kyoto Univ.), Alexander Ivanov (Techn. Univ. München), Artur Jackson (Purdue Univ.), Ariyan Javanpeykar (Univ. Mainz), Kiran Kedlaya (Univ. California San Diego), Minhyong Kim (Univ. Oxford), Kobi Kremnitzer (Univ. Oxford), Robert Kucharczyk (ETH, Zurich), Ulf Kühn (Univ. Hamburg), Lars Kuehne (MPIM, Bonn), Laurent Lafforgue (IHES, Bures-sur-Yvette), Emmanuel Lepage (Univ. Paris 7), Junghwan Lim (Univ. Oxford), Angus Macintyre (Univ. Oxford), Nils Matthes (Univ. Hamburg), Chung Pang Mok (Morningside Center Mathematics Beijing and Purdue Univ.), Alexander Cruz Morales (MPIM, Bonn), Sergey Olbezin (Univ. Nottingham), Alexander G. Oldenziel (Utrecht Univ.), Thomas Oliver (Univ. Bristol), Florian Pop (Univ. Pennsylvania at Philadelphia), Damian Rossler (Univ. Oxford), Thomas Scanlon (Univ. California Berkeley), Francisco Simkievich (Univ. Oxford), Jakob Stix (Univ. Frankfurt), Tamás Szamuely (Rényi Inst. Math., Budapest), Fucheng Tan (Shanghai Cent. Math. Sc. & Shanghai Jiao Tong Univ.), Dinesh Thakur (Rochester Univ.), Ulrike Tillmann (Univ. Oxford), Wester van Urk (Univ. Nottingham), Felipe Voloch (Univ. Texas Austin), Matthew Waller (Univ. Nottingham), Andrew Wiles (Univ. Oxford), Bora Yalkinoglu (Univ. Strasbourg), Go Yamashita (RIMS, Kyoto Univ.), Fernando Garcia Yamauti (Univ. Sao Paulo), Shou-Wu Zhang (Princeton Univ.), Boris Zilber (Univ. Oxford)