The 4ᵗʰ European Set Theory Conference

Final report

The **4th European Set Theory Conference (4ESTC)** took place in **Món Sant Benet** http://www.monstbenet.com , near Barcelona (Catalonia) on 15-18 July 2013.

The conference was organized by the *European Set Theory Society* http://ests.wordpress.com/ and the European research network *Research Networking Programme* INFTY www.inftynet.net , of the *European Science Foundation (ESF),* jointly with the Barcelona Research Group in Set Theory (BCNSETS, http://bcnsets.ub.es/), led by Joan Bagaria.

INFTY, the **Clay Mathematics Institute (CMI)** (Enhancement and Partnership program), and the University of Barcelona (Faculty of Philosophy and the Institute of Mathematics (IMUB)) provided funding for the event. Administrative support was provided by the IMUB www.imub.ub.es.

The 4ESTC scientific program consisted of:

Mostowski lecture

- Adam Krawczyk: *Andrzej Mostowski Centenary.*

Hausdorff Medal lecture:

- Hugh Woodin: *The Future Trichotomy.*

Tutorial (4 lectures):

- Moti Gitik: *Forcing and cardinal arithmetic.*

Plenary lectures:

- Laura Fontanella: *Strong combinatorial properties at small cardinals.*
- Menachem Magidor: *Reflection properties of successors of singulars.*
- Michael Rathjen: *The calculus of construction meets power Kripke-Platek set theory.*
- John Steel: *Recent results in inner model theory.*
- Simon Thomas: *An embedding problem for finitely generated simple groups.*
- Philip Welch: *A condensed history of condensation.*

Invited lectures:

- Alessandro Andretta: *The density point property.*
- Ali Enayat: *Borel models of arithmetic and set theory.*
- Marcin Sabok: *Canonical Ramsey theory on Polish spaces.*
- Wieslaw Kubis: *Homogeneous structures of arbitrarily large cardinality.*
- Yurii Khomskii: *Cichon's diagram and regularity properties.*

- Grigor Sargsyan: *Some applications of core model induction.*
- Menachem Kojman: *Splitting families in ZFC.*
- Natasha Dobrinen: *General framework for topological Ramsey spaces and ultrafilters with partition properties.*

Contributed talks:

- Andrew Brooke-Taylor: *Evasion of large cardinals.*
- Jean Larson: *Counting G-tops, preliminary report.*
- Luz María García Ávila: *A forcing notion related to Hindman's theorem.*
- Jan Stary: *Compactness of the order-sequential topology.*
- Zoltan Vidnyanszki: *Borel hull's of Haar null sets.*
- Barnabas Farkas: *Representations of ideals in Banach spaces.*
- Wojciech Stadnicki: *CPA and the Mathias model.*
- David Schrittesser: *Projective measure without projective Baire.*
- Liuzhen Wu: *P-ideal dichotomy and non-threadable coherent sequence.*
- Maciej Malicki: *Non-locally compact abelian groups and orbit equivalence relations.*
- Philip Schlicht: *Generalized Choquet spaces and groups.*
- Matteo Viale: *Generic absoluteness for strong forcing axioms.*
- Ryszard Frankiewicz: *A Hindman-like theorem with applications.*
- David Asperó: *Long reals.*
- Basil Smith: *Elemental theory of relations.*
- Adrian Mathias: *Flutters and chameleons.*
- Piotr Zakrzewski: *Remarks on invariants ccc σ-ideals on 2^N.*
- David Chodounsky: *Hausdorff towers and gaps.*
- Will Boney: *Large cardinal and abstract elementary classes.*
- Janusz Pawlikowski: *A characterization of Σ_1^2 sets.*
- Aleksander Blaszczyk: *P_{\lambda}-sets and skeletal mappings.*
- Charles Morgan: *Generalized Borel reducibility and gap cohomology.*
- Philipp Lücke: *Specializing Aronszajn trees and square sequences by forcing.*
- Vincenzo Dimonte: *Very large cardinals and the power function.*

Round table on the future of set theory: An open discussion with all the ESTC participants.

The **Scientific Committee** consisted of:

Joan Bagaria
Department of Logic, History and Philosophy of Science
Universitat de Barcelona
Mirna Dzamonja
School of Mathematics
University of East Anglia
Jouko Väänänen (Chair)
Department of Mathematics and Statistics
University of Helsinki
Sy David Friedman
Kurt Gödel Research Center for Mathematical Logic. Vienna.
Peter Koepke

Mathematisches Institut Rheinische Friedrich-Wilhelms-Universität Bonn
Benedikt Löwe
Institute for Logic, Language and Computation (ILLC)
Universiteit van Amsterdam
Erik Palmgren
Department of Mathematics
Stockholm University
Grzegorz Plebanek
Mathematical Institute
University of Wrocław
Peter Simon
Department of Theoretical Computer Science and Mathematical Logic
Charles University
Czech Republic
Andreas Weiermann
Theoretical Mathematics and Computer Algebra
Universiteit Gent
Belgium

The local **Organizing Committee** consisted of members of the Barcelona Group in Set Theory (BCNSETS): Joan Bagaria, Neus Castells, Luz María García Avila, Salvador Mancilla, David Virgili.

The 4ESTC gathered the majority of the world leaders in set theory and its applications. The total number of registered participants was **82**. About half of the participants were young researchers, coming mostly form Europe, but also from Israel, the US, Canada, and Japan. CMI travel grants for young researchers from Eastern Europe and less-developed countries, covering their lodging and meals, were awarded to 18 participants.

Highlights of the Conference were: the Award of the Hausdorff Medal to W. Hugh Woodin, followed by his lecture on "The future Trichotomy", and the Mostowski lecture, given by A. Krawczyk, commemorating Mostowski's centenary.