REPORT ON ICTCS 2015

The 16th Italian Conference on Theoretical Computer Science

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The 16th Italian Conference on Theoretical Computer Science (ICTCS 2015) was held in Florence, Italy, in the period 9–11 September 2015. The event, which is the annual meeting of the Italian theoretical computer science community and hosts the yearly meeting of the Italian Chapter of the EATCS, gave a bird's eye view of some of the research in TCS in Italy and was well organized by Pierluigi Crescenzi, Michele Loreti and Betti Venneri.

ICTCS 2015 had 50 registered participants and was also attended by some colleagues from the University of Florence. Nearly all the participants were based in Italy; as far as I could tell, the foreign contingent consisted of three participants from Reykjavik University and one from the University of Luxembourg.

As part of the event, the Italian Chapter of the EATCS handed out three prizes. The Young TCS Researcher Award went to Ugo Dal Lago (University of Bologna), who delivered an inspiring one-hour talk on 'Higher-Order Probabilistic Computation: Calculi, Observational Equivalence, and Implicit Complexity'. In his talk, Ugo argued that probabilistic models are increasingly pervasive in computer science, and randomized algorithms are the ones offering the best performance in many domains. Higher-order probabilistic computation, in which a probabilistic function may be passed as a parameter to a function and/or returned as a result, is on the other hand a relatively underdeveloped field. In his talk, Ugo presented a survey of the state of the art in the study of probabilistic lambda-calculi, focusing on some of his recent results on inductive and coinductive techniques for reasoning about program equivalence. Ugo concluded his talk describing how his work might be useful in proofs of security for cryptographic primitives.

The Doctoral Research Award was presented to Ornela Dardha (University of Glasgow) for her doctoral dissertation 'Type Systems for Distributed Programs: Components and Sessions', which she completed at the University of Bologna under the supervision of Davide Sangiorgi. In her talk, Ornela offered an accessible overview of the main contributions of her thesis, in which she developed techniques based on types and type systems for the verification of correctness, consistency and safety properties related to dynamic reconfiguration and communication in complex distributed systems.

Ornela and Ugo agreed to contribute articles based on their award-winning research to the Bulletin of the EATCS.

For the first time, the Italian Chapter of the EATCS also gave prizes to two master theses in TCS.

The conference programme was varied and I found many of the presentations interesting. One of the contributed papers, 'Bounds and Fixed-Parameter Algorithms for Weighted Improper Coloring', was authored by Bjarki Ágúst Gudmundsson, Tómas Ken Magnússon, and Björn Orri Sæmundsson, who just finished their bachelor studies at Reykjavik University. I can't think of a better advertisement for my department of computer science and hope that the authors will have a great career, whatever they decide to do in the future.

You can access all the contributed papers from the conference web site.

As an interested observer, I also attended the annual meeting of the Italian Chapter of the EATCS, which was chaired by its president Tiziana Calamoneri. From what I could see at the meeting, the Italian TCS community is scientifically thriving, but is facing an uphill task in having its publications in high-quality conferences recognized in national accreditation exercises. I wish my Italian colleagues the best of luck. I hope that their achievements will be recognized by the Italian scientific community at large and that young Italian TCS researchers will be given the opportunity to work in an environment in which they can thrive and do the best work they can.

Thanks to Betti, Michele and Pierluigi for having organized a scientifically interesting and socially pleasant conference. The next edition of ICTCS will be held in Lecce, a lovely town in Apulia that is sometimes fittingly nicknamed the 'The Florence of the South'.