Report on ICE-TCS tenth anniversary

Running a research centre in TCS in Iceland for ten years

Luca Aceto
School of Computer Science, Reykjavik University

ICE-TCS, our small research centre in theoretical computer science at Reykjavik University, is ten years old. Magnús M. Halldórsson, Anna Ingólfsdóttir and I, together with some other kindred spirits, decided to found the centre in the spring of 2005 to exploit the available scientific strengths, whatever those might be, in theoretical computer science and discrete mathematics in order to

- focus the research efforts, and establish synergies amongst the active researchers in Iceland,

- attract outstanding researchers in Theoretical Computer Science to Iceland for short- or long-term visits leading to collaborations with local researchers and to improvements in the Icelandic research environment,

- organize international conferences and workshops in Theoretical Computer Science in Iceland to put the country firmly on the map as a recognized conference location for high quality events in the field, and

- attract young, outstanding students from Iceland to this research area.

The research centre was started as a collaboration between the Department of Computer Science, Faculty of Engineering, University of Iceland, and the School of Computer Science, Reykjavik University. However, all the activities of the centre have taken place at Reykjavik University since Magnús, who has been the director of ICE-TCS since its inception, took up a professorship at the School of Computer Science at Reykjavik University in August 2007.

The inspiration for starting the centre derived from the experience that Anna and I had with BRICS (the Basic Research in Computer Science centre of the Danish National Research Foundation), which ran, with generous funding, in Aarhus and Aalborg from 1994 till 2006.

It is not up to me to say whether we have achieved any of the above-mentioned objectives over the last ten years. I encourage our scientific advisory board and you to have a look at the ICE-TCS web site to get an idea of the main events that we have organized over the last decade and to form your own opinions. Here I will simply limit myself to saying that I do believe that starting the centre was *necessary* at that time and that without ICE-TCS the academic environment in

computer science in Iceland would have been much less attractive and interesting for those amongst us who try to carry out research in TCS and discrete mathematics. The Icelandic research community in (T)CS is simply too small to consist of islands of isolated individuals. In my humble opinion, one *needs* centre-like structures to sustain a community that is capable of organizing events such as a weekly seminar series that one takes for granted in larger CS departments.

A former colleague from Aalborg University used to say that 'lone rangers die'. The brightest and most motivated researchers amongst us would be able to keep producing top-class work even alone on Mars, but I do believe that, for the common mortals amongst us, the existence of a research ecosystem, no matter how small, does help us stay 'alive', in the sense of Paul Erdős, a little longer. I hope that my colleagues at ICE-TCS over the years feel that the centre has played a positive role in their careers and in their daily work.

Despite our chronic lack of centre-specific funding, we have made the most of the lure of Iceland and have succeeded in attracting guests to ICE-TCS. To do so, we have had to use every available source of ad hoc funding, not to mention the fact that many of our guests often paid for their own travel and accommodation. (This is where being located in a hip place like Iceland does help.) On behalf of ICE-TCS, I thank all the colleagues who have graced our centre with their visits, which have often led to joint papers and long-term collaborations.

I like to think that we have done our share for the TCS by hosting the best attended ICALP ever in 2008, DisCoTec 2011, 6th International Federated Conferences on Distributed Computing Techniques, and the 19th International Colloquium on Structural Information and Communication Complexity (SIROCCO 2012) amongst other events. If you are interested in visiting us, combining business and pleasure, you might consider submitting to the 15th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2016) or to LICS 2017. In addition, we have organized an annual theory day since 2005, with the goal of preaching the gospel of TCS to the local CS community and to our students. We have taken part in the Alan Turing Year and we followed it up with a seminar series on Pearls of Computation, which, despite our best intentions, is not attracting as many participants as we had hoped.

In summary, these have been ten very exciting years and we do not plan to close the centre yet. Starting the centre is a decision I personally do not regret, despite the work needed to keep it ticking. Whether my colleagues and I will have the energy and the drive to keep going for a few years more is something I do not know. I just hope that some of our young and enthusiastic members will step up to the challenge of making the centre thrive in its second decade of existence. Time will tell whether ICE-TCS will become a teenager.

By the way, in case you are wondering, we celebrated the tenth anniversary of ICE-TCS by hosting Gérard Berry, who received the CNRS Gold Medal in

2014, and by holding our annual Theory Day for 2015 on Friday, 21 August 2015. During his stay at ICE-TCS, Gérard delivered a public lecture entitled *The algorithmic revolution in the sciences*, which we organized jointly with the Icelandic Academy of Sciences, and a slightly more technical talk on *The informatics of time and events* during the Theory Day. The Theory Day was also graced by a keynote address by Roger Wattenhofer entitled *Is Bitcoin Stable, Secure, and Scalable?*, which, as you can easily imagine, attracted a lot of attention, and by a short talk on *Bootstrap Percolation with Inhibition* by Hafsteinn Einarsson, a young Icelandic researcher who is working on his PhD at ETH Zürich.

I can imagine no better way of celebrating the tenth birthday of ICE-TCS.