An Editorial for the Workshop of thirty five years of Automath

Automath started in 1967 by N.G. de Bruijn. Automath (automating mathematics) was the first system to use computer technology to check the correctness of whole books of mathematics. During his work on Automath, N.G. de Bruijn discovered many concepts that still remain of great relevance to the theory and practice of computation. For example, de Bruijn indices still play an important role in the implementation of programming languages and theorem provers, de Bruijn's new type systems were influential in the discovery of new powerful type systems, and de Bruijn re-invented the Curry-Howard isomorphism (which should be referred to as the Curry-Howard-de Bruijn isomorphism). The Landau book on the foundations of analysis remains the only fully encoded and checked mathematical book in any theorem prover. The Landau book was encoded by Bert van Benthem-Jutting in Automath in the early seventies.

Automath was written in Algol 60 and implemented on the primitive PCs of the sixties. Thirty five years on, both technology and theory have evolved very much leading to impressive new directions in using the computer for manipulating and checking mathematics. This workshop celebrates the 35th year of Automath and some of the impressive directions in using computers for mathematics. This area is so huge now that it cannot be covered in one workshop. This workshop makes no claim that it covers all the important directions in the field.

It is beyond doubt that de Bruijn is greatly respected, deeply influential, and well liked by the leaders and researchers in the field. The evidence for this is the endless lessons and ideas that the field has adapted from his Automath. But another evidence for me is the fact that such a high profile community came together to celebrate 35 years of his Automath and at such an unbelievably short notice (The whole idea of the workshop was born from scratch at the end of January 2002). This is no surprise at all considering the man himself and his impressive Automath and ideas. It was so touching however, to see how everyone (including many people who could not attend due to other commitments[1] but who sent many messages of praise and friendship for de Bruijn and his Automath) helped make this event a success for de Bruijn.

With already an impressive list of invited speakers, the four days of the workshop would be filled with exciting and illuminating talks. Nevertheless, it seemed a good idea to have a call for papers from which half a dozen good papers will be selected for presentation. And so, despite the short period for the submission of papers for presentation at the workshop (3 weeks from the first call for papers), twelve submissions were received and twenty six reviews were written. Of those twelve submissions, six were accepted and given the half an hour slot for each accepted talk. But, it was felt that three other talks should be selected (due to their reviews and contents) for a short presentation. And hence, three short slots of fifteen minutes each were created. These submissions came from USA (2), Holland (2.5), Japan (1), UK(2.25), France (1.75), Israel (1), Algeria (0.5), Ukraine (0.5) and Spain (0.5). In my opinion, receiving 12 submissions within a total period of 3 weeks only, considering the fact that many of these submissions are of good quality, and considering the fact that many other authors expressed their sadness at the short deadline, is another sign of the influence of Automath. I am very grateful for the programme

[1] Since the workshop had less than two months period from its announcement at begin February 2002 to the closing date for participation on 25 March 2002.

committee members for their efficient and competent handling of the papers again with such a tight schedule.

I am also grateful for Professor Deepak Kapur, editor-in-chief of the Journal of Automated Reasoning (JAR) for his interest in a special issue on the themes of the workshop to be included in the journal. There is a separate call for a special issue on Mechanising and Automating Mathematics in the JAR. The call for papers for the special issue is completely independent from the call for papers for research talks at the workshop and the reviewing process will be much lengthier, more thorough and will follow the journal's high quality and high standards. The call for papers for the special issue can be found at: `http://www.cee.hw.ac.uk/~fairouz/automath2002/AR.html` and the deadline for submission is: 10 May 2002.

For the records, here are the important dates and the list of the programme committee members:

Important dates:

- 24 February 2002: submission deadline of workshop papers.
- 5 March 2002: notification of acceptance for the workshop papers.
- 15 March 2002: revision of accepted paper for inclusion in the informal workshop proceedings.
- 25 March 2002: deadline for registration for participating at the workshop.
- 10-13 April 2002: workshop on 35 years of Automath.
- 10 May 2002: submission deadline of papers for the Special Issue on Mechanising and Automating Mathematics in the Journal of Automated Reasoning. The call for papers is at: `http://www.cee.hw.ac.uk/~fairouz/automath2002/AR.html`
- 10 July 2002: submission deadline of special edited book celebrating de Bruijn's 85th anniversary.
- Early 2003: Publication of the special issue in JAR.
- Before July 2003: Publication of the special edited book celebrating de Bruijn's 85th anniversary.

Programme Committee: The programme committee responsible for the selection from the submitted workshop papers of reseach talks to be presented at the workshop (6 long and 3 short) consists of:

- Mauricio Ayala-Rincon (Brasilia University, Brasil)
- Randall Holmes (Boise State University, USA)
- Fairouz Kamareddine (chair) (Heriot-Watt University, UK)
- Rob Nederpelt (Eindhoven University of Technology, NL)
- Giovanni Sambin (University of Padova, IT)
- Joe Wells (Heriot-Watt University, UK)

This workshop owes its success to N.G. de Bruijn, his deep influential work and his impressive personality. The workshop also owes its success to the excellent speakers, to those researchers who will participate at it and to the competent work of the programme committee members. This workshop also owes its success to the commitment of all those who have supported it despite being unable to participate due to already scheduled commitments.

I will stop by quoting Robert Boyer of the University of Texas, famous for his Boyer-Moore theorem prover amongst other things:

"cheers for Automath's amazing influence on so many of us."

Fairouz Kamareddine

March 2002.