Perspectives on an integrated computer learning environment

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Curriculum Vitae

André Heck was born in Roosendaal, the Netherlands, on September 3, 1957. There he attended secondary school at the Norbertus Lyceum and obtained his Gymnasium B diploma in 1975. In 1983, the Catholic University of Nijmegen awarded him a Master's Degree in Mathematics (cum laude) with specialization in Group Theory and Computer Science as a minor. In 1984, the same university awarded him a Master's Degree in Chemistry (cum laude) with specialization in Theoretical Chemistry and Computer Science as a minor.

From 1984 until 1989 André was lecturer at the Mathematics Department of the Catholic University of Nijmegen. In 1988 he obtained his teaching qualification in secondary school mathematics. He began developing and teaching computer algebra courses at the Faculty of Science in 1987. In 1989 he was appointed managing director of the CAN Expertise Center in Amsterdam. CAN, Computer Algebra in the Netherlands, stimulated and coordinated the use of computer algebra in education and research. One of the highlights of the work of André for the CAN Foundation was the publication of his book *Introduction to Maple*, the third revised edition of which was published by Springer Verlag in 2003.

In 1996 the CAN Expertise Center was integrated into the Faculty of Science at the University of Amsterdam, into what became AMSTEL (Amsterdam Mathematics Science and Technology Education Laboratory) in 1997. The program of AMSTEL focussed on the innovation and improvement of computer-based activities in mathematics, science and technology education on all levels of education. André was as project manager involved in many innovation projects in bachelor education at the Faculty of Science and in many outreach projects. He developed all kinds of instructional materials such as manuals and tutorials in the field of computer algebra and mathematics education, several modules for Mathematics D at secondary education, and various master courses for mathematics and physics teachers

André belongs to the core team of teachers in the Master of Mathematics and Science Education. He supervised research projects of thirteen international students in mathematics education.

During the life cycle of AMSTEL, André was one of the main participants in the research and development aimed at an integrated computer learning environment for mathematics and science education at secondary school level. Outcomes of his work have been discussed in this dissertation, which was completed after his appointment in 2010 as lecturer at the Korteweg-de Vries Institute for Mathematics.

André presented his work at numerous conferences and workshops. His publication list covers 22 research papers in refereed scientific journals, 46 refereed research papers in conference proceedings, 44 papers in refereed journals for mathematics and science teachers, 5 books, and 20 tutorials, manuals, and advisory reports. In 2009, he was listed in UvA-Dare (http://dare.uva.nl) as one of the three top suppliers at the UvA of publications that are freely available. He continues his work aimed at innovation and improvement of mathematics and science education at the Mathematics Department of the University of Amsterdam.