LAUDATIO GUIDO VANDEN BERGHE

Willy Govaerts

Professor Guido Vanden Berghe (born at Bruges, Belgium in 1945) graduated from Ghent University where he obtained both the Master of Science degree and a Ph. D in Physics. He also obtained the teacher's license for teaching at secondary schools and later the habilitation for teaching at Universities, with a thesis on low energy nuclear physics.

Nuclear Physics was a hot topic in these days and Guido Vanden Berghe contributed to it from 1968 to 1971 as a researcher at the Interuniversity Institute for Nuclear Physics.

His scientific career took a new direction in 1971 when he became an assistant at Ghent University in the Institute (then called "Seminarie") of Mathematical Physics whose director was Professor C.C. Grosjean. Computer Science was a rapidly developing field in these days and was closely connected to numerical mathematics. Most present day developments in numerical mathematics can be traced back to these days though computer science developed in many other directions so that nowadays the link is less obvious.

In the Faculty of Sciences of Ghent University Guido Vanden Berghe had a decisive influence in directing research to computer science and numerical mathematics. As a consequence he became in 1989 the first chairman of the new department of Applied Mathematics and Computer Science, a position that he held to 1996 and later again from 2003 on.

Guido Vanden Berghe in a sense constructed the new department by bringing together several people from different institutes whose common interest was in computer science and applied mathematics. Without his enthusiasm and leadership the department would simply not exist.

In general, Guido Vanden Berghe has a great capacity for organization and for constructive collaboration with others. It is therefore not surprising that

he is active in many decision-making committees in the university as well as in external social, cultural and political organizations.

Since 1981 Guido Vanden Berghe taught various courses in the domains quantum mechanics, computer science, programming and numerical mathematics.

His extensive scientific work has led to more than one hundred and fifty publications in international scientific journals, usually on either physical or numerical topics and often on the crossroads of both fields, called computational physics. A large part of his work deals with numerical solution methods for ordinary differential equations, a research field in which he is an internationally recognized expert. Applications to physical problems are never far away.

Guido Vanden Berghe became a professor ("hoogleraar") in 1989 and a full professor ("gewoon hoogleraar") in 1996.

Since 1998 he became interested in the history of science, with a particular emphasis (not surprisingly) in applied mathematics. He is an excellent teacher both at university level and for a general audience. Since 1998 he gave more than fifty lectures on the history of science for social, cultural and scientific organizations in Flanders. In the same spirit he published several papers in Dutch for Flemish socio-cultural journals and in English for international journals. Still in the same spirit he co-organized several exhibitions, for example in the University Library in Ghent and in the Royal Library in Brussels.

The name of Guido Vanden Berghe became widely known in the Dutch language region through the book that he published in 2003 in collaboration with Jozef Devreese of Antwerp University. The title "Wonder en is gheen wonder, De geniale wereld van Simon Stevin" refers to a saying of Simon Stevin (1548-1620) who is generally considered as the most important mathematician born in Flanders. It means that a miracle is not a miracle if you understand what is really going on.

Guido Vanden Berghe indeed was interested in particular in the life and lifetime of Simon Stevin, a man who nowadays might be called a mathematical engineer. This was also the time of two other famous Flemish

scientists, namely Vesalius (medicine) and Mercator (geography and map-making). It was also a politically important period when the Low Countries were separated into a southern and northern part. To many people this was (and to some it still is) a disaster. The separation has decisively influenced the life of Simon Stevin.

As a consequence of a long collaboration with K. Srinivasa Rao (India) Guido Vanden Berghe also published several papers on the life and work of the Indian mathematical prodigy child Ramanujan.

At first sight, Simon Stevin and Srinivasa Ramanujan do not have much in common except that they were both eminent mathematicians. Stevin was an applied mathematician with a clear interest in real applications while Ramanujan was equally clearly a pure mathematician. But they have in common that they both lived in politically difficult times and that they did their major work outside the country where they were born and spent their youth. Maybe this explains Guido's interest in scientific migration?