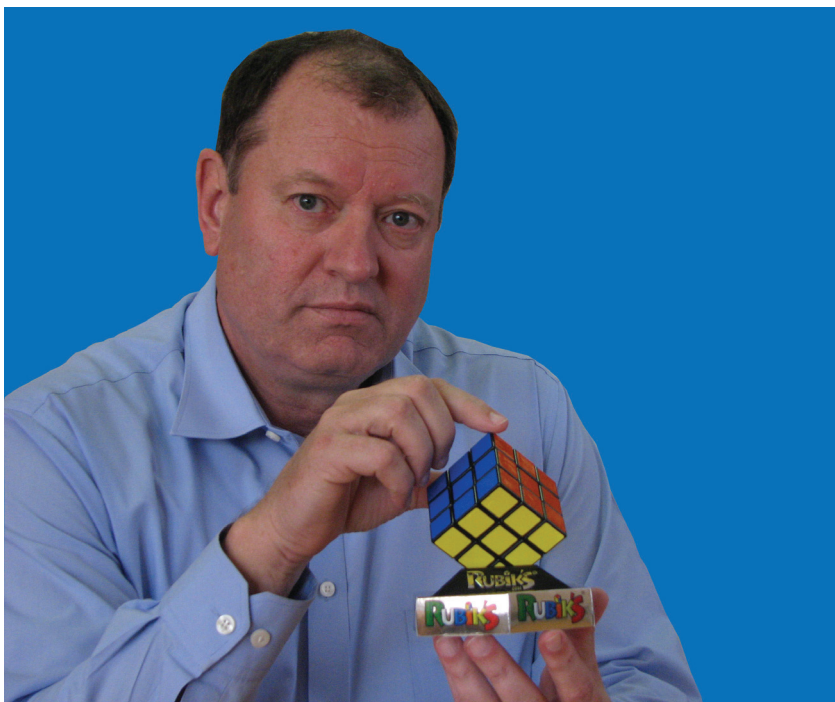


Thinking out of the “cube”



It has been 30 years since the first magic Rubik cube was exported from Hungary – its country of origin – to the rest of the world. During this period, the Rubik cube became one of the world's favourite toys, with hundreds of millions being sold and enjoyed by old and young.

There is certainly a lot to learn from this success story, for example, how creativity can “overwhelm” the market and its customers, or how to keep the market alive and customers interested.

For me, the most interesting aspect of this invention is the fact that Ernó Rubik, the creator of the Rubik cube, was an architect by profession, and not an engineer or a mathematician as would have been expected.

I am often asked whether the content of *Innovate* does not span too broad a field of academic interest. The answer to that question is that the content of this publication has to represent the creativity and innovation within the broader Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria. My personal view, however, is that it is exactly the integration of all the skills and knowledge from these different disciplines that can lead to novel ideas and innovations.

This view is perfectly illustrated by the architect who came up with the radical idea of a magic cube and who (probably with the support of skills and knowledge from engineers, marketing specialists and other colleagues) turned it into a fantastic success story.

In this edition of *Innovate*, you will once again find a variety of interesting contributions from the researchers, academics and students of the faculty.

The Department of Chemical Engineering celebrates its 50th anniversary in 2010 and shares some of its leading research. You can also read about the leading new technology that is being developed for low-cost, efficient and fast-switching silicon light-emitting devices in photonic integrated circuits.

This edition contains a special feature on the outstanding work students are doing in serving the community, while gaining valuable practical experience. Other interesting contributions include articles on energy studies, informatics and cancer research, as well as advanced computing.

This only provides a glimpse of the challenging and very interesting research and education activities in the faculty, which give an indication of why the faculty is recognised as one of the leading faculties of its kind on the continent. Perhaps the title of the contribution by Michael Neale says it all: The sky is the limit!

I trust you will enjoy this edition of *Innovate*. ☺

Editor
Tinus Pretorius