

## **Prof. Tamás Roska has died**

**Tamás Roska**, electrical engineer, Professor of Pázmány Péter Catholic University, Member of the Hungarian Academy of Sciences, holder of the Bolyai and Széchenyi Prizes as well as of the Prize of the Great Saint Gregory Order, Doctor Honoris Causa of the University of Leuven and of the University of Pannonia, member of the Academia Europaea, died at the age of 73 on June 17, 2014, after suffering of a severe illness abided with great patience.

Tamás Roska, as the founding Dean of the Faculty of Information Technology and Bionics of Pázmány Péter Catholic University, the creator of the architecture of the cellular wave computer, and the initiator of the bionics education in Hungary has dispatched generations of students towards world standard research. His scientific accomplishment has been recognized by several Hungarian as well as international awards.

*He has left behind the legacy of his human generosity and modesty, his enthusiasm for a good cause and his unceasing concern for students.*

- **The funeral service will be held in Fiumei Cemetery (1086 Budapest, Fiumei út 16.) on Saturday, July 12, 2014 at 1:00 PM.**
- **The funeral Mass will be celebrated in St. Stephen's Basilica at 10:30 am on Saturday July 12, 2014.**



***„The world of research is a wonderful world. The higher levels of abstraction help us to understand the deeper secrets of nature, which can be used to create new principles and constructions in the service of our lives, to cure illnesses and improve the living conditions of more and more people. However, we must never cease to remember why we do all this, for mankind.***

***The question can also be heard today; who is man, who is the Man? We cannot join Pilate in saying: „I wash my hands“.***

***We should be at home in the world, in our physical and spiritual world. Those with a more fortunate fate have more responsibility. We cannot question this by asking, „Am I my brother's keeper?“ Yes, we are each other's keepers, of those we meet and of those placed in our care by Providence.” Tamás Roska***

### **Tamás Roska (1940-2014)**

Tamás Roska, founding Dean of Pázmány Péter Catholic University Faculty of Information Technology and Bionics, developer of the architecture of the cellular wave computer, and initiator of the education of bionics in Hungary has dispatched generations of students towards world-class research. His scientific accomplishment has been recognized by several Hungarian as well as international awards.

He was born in 1940 in Budapest and has obtained a Summa cum laude degree at the Faculty of Electrical Engineering of Budapest Technical University. He became Candidate of Technical Sciences in 1973 and Doctor of Technical Sciences at the Hungarian Academy of Sciences in 1982.

Between 1964 and 1970 he worked at the Instrumentation Research Institute of the Hungarian Academy of Sciences, followed by the Telecommunication Research Institute of HAS between 1970 and the beginning of 1982, and from then on at the Institute for Computer Science and Control of HAS, where between 1985 and 2011 he was Head of the Research Laboratory for Analogic and Neural Computers, as well as President of the Scientific Committee of the Institute. He was engaged in research concerning nonlinear dynamics, artificial neural circuits and analogic cellular wave computers, and lately had been working on the problems of multi-thousand processor cellular wave computers.

From 1989 onwards, every year he spent several months at the University of California at Berkeley as a guest researcher. Tamás Roska is the co-inventor of the first programmable analogic cellular supercomputer, as well as of the camera computer based on the latter one. He and his colleagues at the Institute for Computer Science and Control of HAS have developed a state-of-the-art infrastructure for this computer.

At the beginning of 1993, together with Professor József Hámori he developed an interdisciplinary doctoral program of Neuromorphic Information Technology. Working together with the nanotechnology doctoral sub-program led by Professor Árpád Csurgyay as well as the language technology doctoral sub-program headed by Professor Gábor Prószték, supplemented by other programs, this initiative was developed into the independent Doctoral School of the Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, the Multidisciplinary Doctoral School of Sciences and Technology.

In the leading journal of his field, he has been the most cited author in the last 15 years. There have been almost three thousand references to over one hundred international scientific papers of his, among them more than two thousand references to the most cited four works.

In 1989-1990 he developed the Information engineering Masters program at the University of Pannonia, followed by the foundation of the Faculty of Information Technology of Pázmány Péter Catholic University. Until 2006 he had been Dean and Head of the Doctoral School of the Faculty. In 2006 in cooperation with Semmelweis University he has founded a new, multidisciplinary major program called Molecular bionics, as first in Europe, of which he has been in charge from the beginning.

He has received several awards for his accomplishments. In 1992 he was elected an IEEE Fellow (Institute of Electrical and Electronic Engineers), in 1993 he received Gábor Dénes Prize and Kalmár László Prize. In the same year he was elected member of the Academia Europaea (London) and correspondent member of the Hungarian Academy of Sciences. In 1994 he became member of the European Academy for Science and Arts (Salzburg). In 1994 he was awarded Szent-Györgyi Albert Prize and Széchenyi Prize. In 1998 he became Member of the Hungarian Academy of Sciences. In 1999 he was awarded the Great Prize of Pro Renovanda Cultura Hungariae, in 2000 he received the Institute of Electrical and Electronic Engineers (IEEE) Third Millennium Medal and the IEEE Circuits and Systems Society Golden Jubilee Medal.

In 2001 he was awarded the title Doctor Honoris Causa at the University of Pannonia, and in 2002 he received the Bolyai Prize. In the same year he was elected Honorary Citizen in the city of Ózd. In 2008 he was elected Civitate Honoris Causa at the Óbuda University. In 2010 he was awarded the Order of Merit of the Hungarian Republic (Civilian) for his "internationally renowned scientific research and educational accomplishments in the field of neural networks, nonlinear systems and networks, visual information processing as well as of cellular supercomputers". In the same year he received the Order of St. Gregory the Great, the highest recognition given to civilians by the Holy See. In 2013 he was awarded the title Doctor Honoris Causa at the University of Leuven, and at the annual conference of IEEE (Institute of Electrical and Electronic Engineers) in Beijing he was awarded the Mac Van Valkenburg Prize, the technical scientific prize of the Association awarded to only one or two researchers in the world annually.

Tamás Roska had conceived and initiated the Bionics Innovation Center (BIC), realized as a joint project of the Pázmány Péter Catholic University and Semmelweis University. The Hungarian government made a decision about the establishment of the Bionics Innovation Center in 2012. The main aim of this center set up by Tamás Roska, is the establishment, control, catalysis and successful operation of the domestic innovation network of the new branch of science being developed on the edge of informatics and biology, that is bionics.

Tamás Roska has left behind the legacy of his human generosity and modesty, his enthusiasm for a good cause and his unceasing concern for students.