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In Memoriam

Professor Krzysztof Marasek

Photo: OPI PIB

1958 – 2019

Krzysztof Marasek, well established as an inspirational lecturer and researcher at the Polish-Japanese Academy of Information Technology (PJAIT) and an expert at the National Information Processing Institute (OPI PIB) died on November 13 at the age of 61 after suffering a long illness. He was an outstanding scientist, an internationally acclaimed authority in the field of speech technology, an outstanding academic teacher and mentor to many scientists at home and abroad. Professor Krzysztof Marasek headed the PJAIT Multimedia Department created by him in 2002.

After completing his study at the Warsaw University of Technology, he graduated in computer science and joined the Institute of Fundamental Technological Research of the Polish Academy of Sciences, the Faculty of Cybernetic Acoustics, in 1982. He was involved in the research on speech signal analysis and recognition, machine condition monitoring systems based on advanced signal processing, photoacoustic and ultrasonic measurements. In 1992, he defended his doctoral dissertation on the instantaneous Doppler frequency estimation in blood flow velocity meters. The following year, he was invited by professor Grzegorz Dogil, director of the faculty of experimental phonetics at the University of Stuttgart, to join the teaching and research staff.

From the very beginning Professor Marasek helped to create in Suttgart an advanced versatile platform for phonetic and speech technology studies. He was also responsible for teaching graduate courses on speech signal processing and recognition, voice quality evaluation methods and statistical methods in linguistics. During six years he worked there on phonetic studies based on electroglottographic waveform analysis which resulted in development of a new method of voice quality evaluation. This method was described in his post-doctoral thesis (Habilitationsschrift) "Electroglottographic description of voice quality" presented in 1997 to obtain DSc degree (Privatdozent). In 1998, he took a position as a Senior Scientist with Sony Stuttgart Technology Center, where the project he run, was speech data collection for European languages and he actively participated in EC Project Speecon (IST-1999-2003). He contributed there to 25 patents (including 8 US patents) as a co-inventor.

In 2002, he joined as an associate professor the newly created Multimedia Department at the Polish-Japanese Academy of Information Technology. He led its formation and worked on the development of research in many fields, such as speech technology, including automatic speech recognition, synthesis and understanding, machine learning, pathological speech, human-computer interaction, multimedia content, ma-

chine translation, and long-term archiving of digital data.

A significant part of his research focused on algorithms and methods of speech technology, including statistical and artificial neural network-based approaches, speech understanding systems, implementation of user-oriented dialogue systems, taking into account the difficulties arising from the specificity of the Polish language. His research results were most often published as chapters in Springer monographs in series such as Studies in Computational Intelligence, Foundations of Intelligence Systems, Human-Computer Interaction Series, Computational Imaging and Vision, Human Language Technology, Computational Imaging and Vision, Lecture Notes in Computer Science, as well in many important post-conference materials such as IEEE, LREC, or Interspeech.

He participated in numerous European research projects as the leader of their Polish parts or an expert in such projects as BABEL (Copernicus1304), SpeeCon (IST-1999-10003), LUNA (033549), CLARIN (ERIC), UE-Bridge. Since 2013, he managed CLARIN-PL – national scientific projects of the Ministry of Science and Higher Education and NCBiR. He was a reviewer and expert in 5th and 6th EU Framework programs (advanced signal processing). He represented Poland in U-STAR consortium, was the member of the Association of Computing Machinery and Special Interest Group on Computer Human Interaction. Often invited to be on advisory committees of international conferences on topics related to speech technology, human-computer interaction, intelligent information systems. In 2005, he held an appointment as Visiting Professor at the University of North Carolina at Charlotte and after that he became the faculty member at this university.

He was very active in the Polish-Japanese Academy of Information Technology affairs as a lecturer and also as the member of Senate and Scientific Council. In addition, he served also on scientific councils of the Institute of Fundamental Technology Research and the Information Processing Institute. He combined this with teaching and the personal supervision of many research students and, in addition to this, with his last activity as an associate editor of *Archives of Acoustics*.

Professor Krzysztof Marasek was an outstanding man, who had a broad knowledge of modern developments in speech technology. National and international authorities often benefited from his advice and assistance, from the European Commission to the National Center for Research and Development and the National CEEPUS Office in Poland. His achievements in the academic field were accompanied by the quality and appeal of his personality. His integrity was unquestioned and his kindness was reliable. He was greatly liked by all who knew him well, and particularly by the very many research students he supervised, as well as by his associates with whom he worked closely in the Polish-Japanese Academy of Information Technology. He will be very much missed and remembered.

The field of speech technology that he so graced is very much the poorer for his loss.

Ryszard Gubrynowicz
Polish-Japanese Academy of Information Technology