

Obituary for Ralf Kötter

The Technical Committee 5.1 of the Information Technology Society (ITG), Association for Electrical, Electronic & Information Technologies and the conference organizers would like to dedicate this ITG Conference on Source and Channel Coding 2010 to its highly esteemed member and colleague Prof. Dr. Ralf Kötter who died after a serious illness at the early age of 45.

Professor Kötter studied electrical engineering at the Technische Universität Darmstadt where he earned his Diplomingenieur degree in 1990. He then moved to Linköping University in Sweden where he earned his doctorate in 1996. By then he had already discovered the topic that fascinated him: the many facets of coding theory. Starting in 1996, Ralf Kötter travelled for many years, spending time at renowned institutions in the United States: at the IBM Almaden Research Center in San Jose, as visiting assistant professor at the University of Illinois at Urbana-Champaign as well as at the CNRS (Centre national de la recherche scientifique) in Sophia Antipolis near Nizza. In 1999 he was promoted to Assistant Professor at the University of Illinois at Urbana-Champaign where he worked in the Department of Electrical and Computer Engineering as well as in the Coordinated Sciences Laboratory. In 2003 he was promoted to Associate Professor. Prof. Kötter returned to Germany in October 2006 after accepting the position of Full Professor at the Institute for Communications Engineering at the Technische Universität München.

Ralf Kötter's field of research was communications engineering, with emphasis on information and coding theory. From his many excellent publications, there were three that were particularly outstanding and are noted here. The first is the well-known work that he wrote with Alex Vardy which has been cited numerous times: a list-decoding algorithm for Reed-Solomon codes using the so-called Guruswami-Sudan algorithm. Not only are algorithms very clearly explained in this paper, but also described is the relationship of reliability information to decoding. Secondly, his work on joint equalization and decoding for channels with multipath propagation was not only unique, but was described in so an efficient manner, that it delivered a virtually optimal result. In the last few years, with his work on coding in networks, he co-founded a new area of research - Network Coding. With a variety of co-authors, he developed many new ideas, ideas that are still being worked on today in research groups around the world. As a substitute for naming numerous scientific awards, it will have to suffice here to mention the Innovations Prize from the Vodafone Foundation for Research that Ralf Kötter received in 2008 before his illness.

Ralf Kötter, despite his all-too-short life, left behind a wealth of scientific work that makes him immortal. And Ralf Kötter was not only an exceptional scientist and engineer. Those who were lucky enough to have known him, will remember not only an exceptional intellect, but a subtly humorous and warm-hearted man.

We have lost a brilliant and exceptionally successful researcher, a very committed teacher and mentor as well as a much-admired, friendly and ever-cooperative colleague. Many of us have also lost a friend. And we know as well, that this loss lies even more heavily on the hearts of his family.

Martin Bossert and Wolfgang Utschick