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CS-Colloquium

Evaluating Speech and Language Technology: From Analyzing Speaker Characteristics to Humans In-the-loop

mit **Prof. Sebastian Möller** (TU Berlin)

Wann?	3. Oktober 2018, ab 15:00 Uhr
Wo?	Hörsaal 3 (HS3), Fakultät für Informatik
	Währinger Straße 29
	1090 Wien

Abstract

Speech and language technology is increasingly popular for personal assistants and smart environments. In order to fulfill the expectations of their users, these systems have to be personal, behave reasonably, and provide a pleasurable experience. A key for reaching this aim is consequent evaluation and optimization of the underlying technology.

In the talk, novel evaluation paradigms will be discussed for two exemplary services. The first one is a **spoken dialogue service** where (synthetic) speech perception, dialogue management, and overall quality evaluation paradigms will be illustrated. The second is a **language translation service**, in which a crowdsourcing paradigm is used in order to reach best possible outcome. The described paradigms open possibilities towards an optimized quality engineering for speech and language services.

Bio

Sebastian Möller studied electrical engineering at the universities of Bochum (Germany), Orléans (France) and Bologna (Italy). From 1994 to 2005, he held the position of a scientific researcher at the Institute of Communication Acoustics (IKA), Ruhr-University Bochum, and worked on speech signal processing, speech technology, communication acoustics, as well as on speech communication quality aspects. From 2005 to 2015, he worked at Telekom Innovation Laboratories, an An-Institut of TU Berlin. He was appointed Full Professor for the subject "Quality and Usability" at TU Berlin in April 2007. From 2015 to 2017, he was Vice Dean for Research of the Faculty for Electrical Engineering and Computer Science at TU Berlin, and since April 2017, he serves as the Dean of this faculty. He also leads the research department "Language Technology" at the German Research Center for Artificial Intelligence, DFKI.

He received a Doctor-of-Engineering degree at Ruhr-University Bochum in 1999 for his work on the assessment and prediction of speech quality in telecommunications. In 2000, he was a guest scientist at the IDIAP in Martigny (Switzerland) where he worked on the quality of speech recognition systems. He gained the qualification needed to be a professor (venia legendi) at the Faculty of Electrical Engineering and Information Technology at Ruhr-University Bochum in 2004, with a book on the quality of telephone-based spoken dialogue systems.

He worked as a Visiting Fellow/Visiting Professor at MARCS Auditory Laboratories, University of Western Sydney, at the Universidad de Granada (Spain), at the Ben Gurion University of the Negev in Be'er Sheva (Israel), and at NTNU in Trondheim (Norway). From 2012-2018, he was Adjunct Professor at the University of Canberra, and since 2018, he is Adjunct Professor at the University of Technology Sydney (Australia). His most recent book on "Quality Engineering" was published in 2010, and his co-edited book on "Quality of Experience: Advanced Concepts, Applications and Methods" in 2014. Sebastian Möller was awarded the GEERS prize in 1998 for his interdisciplinary work on the analysis of infant cries for early hearing-impairment detection, the ITG prize of the German Association for Electrical, Electronic & Information Technologies (VDE) in 2001, the Lothar-Cremer prize of the German Acoustical Association (DEGA) in 2003,
a Heisenberg fellowship of the German Research Foundation (DFG) in 2005, and the Johann Philipp Reis prize in 2009. Since 1997, he has taken part in the standardisation activities of the International Telecommunication Union (ITU-T) on transmission performance of telephone networks and terminals. He was acting as a Rapporteur for question Q.8/12 from 2001-2016. He headed the special interest group on speech acoustics of DEGA from 2009 to 2015, is board member of the ITG since 2015, and of the International Speech Communication Association (ISCA) since 2016. He served as General Chair for Interspeech 2015 in Dresden.