Tanja Schultz

Language Technologies Institute (LTI)
Carnegie Mellon University
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Pittsburgh, PA 15213-3890

Professional Preparation:

Karlsruhe University, Germany	Computer Science	PhD 06/2000
Karlsruhe University, Germany	Computer Science	MS 05/1995
Heidelberg University, Germany	Mathematics	MS 07/1989
Heidelberg University, Germany	Sport, Physical Education	MS 11/1989

Appointments:

07/2002-present	Research Scientist (Faculty), Carnegie Mellon University, LTI
01/2001-06/2001	Research Associate, Carnegie Mellon University, LTI
10/2000-12/2000	Post-doctoral Fellow, Carnegie Mellon University, LTI
05/1995-09/2000	Research Associate, PhD Student, Karlsruhe University Germany
06/1996-07/1996	Visiting Researcher, Advanced Technologies Research (ATR) in Kyoto, Japan

Selected Publications:

See also `http://www.cs.cmu.edu/~tanja` (where copyrights permit)

[1] T. Schultz and A. Waibel, *Language Independent and Language Adaptive Acoustic Modeling for Speech Recognition*, Speech Communication, Volume 35, Issue 1-2, pp 31-51, August 2001.

[2] T. Schultz, *GlobalPhone: A Multilingual Speech and Text Database developed at Karlsruhe University*, ICSLP, Denver, CO, 2002.

[3] T. Schultz and A. Waibel: *Polyphone Decision Tree Specialization for Language Adaptation*, ICASSP, Istanbul, Turkey, 2000.

[4] T. Schultz, Q. Jin, K. Laskowski, A. Tribble, and A. Waibel, *Improvements in Nonverbal Cue Identification using Multilingual Phone Strings*, NAACL/ACL, Philadelphia, PA, 2002.

[5] S. Stüker, T. Schultz, F. Metze and A. Waibel, *Multilingual Articulatory Features*, ICASSP, Hong Kong, China, 2003.

[6] M. Killer, S. Stüker, and Tanja Schultz, *Grapheme based Speech Recognition*, Eurospeech, Geneva, Switzerland, 2003.

[7] A. Waibel, P. Geutner, L. Mayfield-Tomokiyo, T. Schultz, and M. Woszczyna: *Multilinguality in Speech and Spoken Language Systems.* Proceedings of the IEEE, Special Issue on Spoken Language Processing, Volume 88(8), pp. 1297–1313, 2000.

[8] T. Schultz and A. Waibel: *Language Independent and Language Adaptive Large Vocabulary Speech Recognition*, ICSLP, pp. 1819–1822, Sydney, Australia, 1998.

[9] Q. Jin, T. Schultz, and A. Waibel: *Speaker Identification using Multilingual Phone Strings*, ICASSP, Orlando, FL, 2002.

[10] T. Schultz, I. Rogina, and A. Waibel: *LVCSR-based Language Identification*, ICASSP, pp 781-784, Atlanta, GI, 1996.

[11] T. Schultz and I. Rogina: *Acoustic and Language Modeling of Human and Nonhuman Noises for Human-to-Human Spontaneous Speech Recognition*, ICASSP, pp. 293–296, Detroit, MI, 1995.

Synergistic Activities:

Dr. Schultz is the developer of GlobalPhone, a multilingual text and speech data collection in 15 languages of the world. Based on this database she designed and created speech recognizers in 10 languages, using Janus, the speech recognition toolkit which was developed at the Interactive Systems Labs, the joint laboratory at Carnegie Mellon University and Karlsruhe University. Her work on language independent and language adaptive speech recognition was awarded with the FZI price for an outstanding Ph.D. thesis in 2001 and with the ISCA best paper award in 2002. Dr. Schultz serves as Associate Editor on the IEEE Transactions on Speech and Audio Processing, and reviews for other speech journals and major speech conferences. She is also the chair for the upcoming special session on Multilingual Speech Processing at ICASSP 2004 in Montreal.

Collaborators:

Alan Black (CMU), Kenan Çarkı (Fraunhofer Gesellschaft), Petra Geutner (Bosch), Christian Fügen (Karlsruhe), Thomas Kemp (Sony), Daniel Kiecza (BBN), Detlef Koll (Multimodal Technologies), Akira Kurematsu (UEC, Tokyo), Susanne Jekat (University of Hamburg), Alon Lavie (Carnegie Mellon), Gianni Lazzari (ITC-Irst, Trento, Italy) Lori Levin (Carnegie Mellon), Laura Mayfield-Tomokiyo (Cepstral) Florian Metze (Karlsruhe University) Jiang Minghu (Tshinghua University, Beijing, China) Fabio Pianesi (ITC-Irst, Trento, Italy) Hagen Soltau (Karlsruhe University) Alex Waibel (Carnegie Mellon/Karlsruhe), Martin Westphal (IBM), Monika Woszczyna (Multimodal Technologies).

Graduate and Postdoctoral Advisors:

Alex Waibel, Carnegie Mellon University, Karlsruhe University (Diploma advisor 1995, PhD advisor 1995-2000) Ivica Rogina, University Karlsruhe (Diploma Co-advisor 1995) Hermann Rieder, Heidelberg University (Advisor Staatsexamen 1989)

Thesis Advisor and Postgraduate-Scholar Sponsor:

Current: Qin Jin, CMU PhD; Szu-Chen Jou, CMU PhD; Kornel Laskowski, CMU PhD; Yung-Hui Li, CMU PhD; Michael Katzenmaier, University Karlsruhe Diploma; Shirin Saleem, CMU MLT; Sinaporn Subvisai, CMU MLT; Yik Cheung Tam, CMU MLT.

Graduated: Jamal Abu-Alwan, Diploma 2001, University Karlsruhe; Kenan Çarkı Diploma 1998, University Karlsruhe; Matthias Honal, Diploma 2003, University Karlsruhe; Mirjam Killer, Diploma 2003, ETH Zürich, Switzerland; Daniel Kiecza, Diploma 1999, University Karlsruhe; Stefan Raschke, Diploma 2000, University Karlsruhe; Jürgen Reichert, Diploma 1998, University Karlsruhe; Hagen Soltau, Diploma 1997, University Karlsruhe. Sebastian Stüker, Diploma 2003, University Karlsruhe.