

Curriculum Vitae

Prof. Dr.-Ing. Reinhold Häb-Umbach
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Personal Data

Name	Reinhold Häb-Umbach
Date, Place of birth	Sept. 25, 1959, Daun, Germany
Marital status	married, 3 children
Nationality	German

Current Research Interests

Statistical signal processing and pattern recognition with applications to speech enhancement and speech recognition, but also to digital communications

Employment History

04/2001 - current	Full professor of Communications Engineering at Paderborn University, Germany
1990 - 2001	Research Staff Member at Philips Research Laboratories, Aachen, Germany
02/2000 - 01/ 2001	Sabbatical at Philips Natuurkundig Laboratorium, Eindhoven, The Netherlands
1997	Appointment to Senior Scientist
08/1988 - 11/1989	Postdoctoral Fellow at IBM Almaden Research Center, San Jose, CA, USA
1983 - 1988	Research Staff Member at Department of Control Systems, RWTH Aachen University, Germany

Education

1988	Ph.D. in Electrical Engineering, RWTH Aachen University Dissertation: Carrier Phase Synchronization on Fading Channels
1983	Dipl.-Ing. RWTH Aachen University Thesis: Open-Loop Phase Synchronization in a Digital Receiver
1977 – 1983	Study of Electrical Engineering, RWTH Aachen University

Honors and Awards

2020	Fellow of the Institute of Electrical and Electronics Engineers (IEEE)
2017	"Top 10% Paper Award" at IEEE Multimedia Signal Processing Workshop, Luton, U.K. Paper title: Multi-Stage Coherence Drift Based Sampling Rate Synchronization for Acoustic Beamforming, by. J. Schmalenstroeer, J. Heymann, L. Drude, C. Boeddeker, and R. Haeb-Umbach
2017	Co-author of paper winning best student paper award at Interspeech 2017, Stockholm. Paper Title: Paper title: Hidden Markov Model Variational Autoencoder for Acoustic Unit Discovery, by J. Ebbers, J. Heymann, L. Drude, T. Glarner, R. Haeb-Umbach, and B. Raj
2016	Co-author of paper winning best student paper award at ITG Conference on Speech Communication, Paderborn. Paper title: <i>Noise-Presence-Probability-Based Noise PSD Estimation by Using DNNs</i> , by A. Chinaev, J. Heymann, L. Drude, R. Haeb-Umbach
2015	Fellow of the International Speech Communication Association (ISCA)
2013	Co-author of paper winning the best student paper award at IEEE Automatic Speech Recognition and Understanding Workshop (ASRU), Olomouc, Czech Republic. Paper title: <i>A Hierarchical System for Word Discovery Exploiting DTW-Based Initialization</i> , by O.Walter, T. Korthals, R. Haeb-Umbach, B. Raj
2012	Co-author of paper winning the best student paper award at International Workshop on Acoustic Signal Enhancement (IWAENC), Aachen, Germany. Paper title: <i>Exploiting Temporal Correlations in Joint Multichannel Speech Separation and Noise Suppression Using Hidden Markov Models</i> , by D.H. Tran Vu and R. Haeb-Umbach
2011	Co-author of publication nominated for best student paper Award at Interspeech 2011, Florence, Italy. Paper title: <i>A Versatile Gaussian Splitting Approach to Non-Linear State Estimation and its Application to Noise-Robust ASR</i> , by V. Leutnant, A. Krueger and R. Haeb-Umbach

2011	Weierstraß-Prize of the University of Paderborn for excellence in teaching
2010	Co-author of Paper winning the best student paper award at International Workshop on Acoustic Echo and Noise Control (IWAENC), Tel Aviv. Paper title: <i>An EM Approach to Multichannel Speech Separation and Noise Suppression</i> , by D.H. Tran Vu and R. Haeb-Umbach
2009	Senior Member, IEEE
1997	Innovation Prize of Philips Research for managing a project, which brought the first name dialing function to Philips mobile phones
1994	Innovation Prize of Philips Research for contributions to Philips' Large Vocabulary Continuous Speech Recognition System
1988	„Borchers Plague“ of RWTH Aachen University for dissertation with honors
1983	„Springorum Plague“ of RWTH Aachen University for Dipl.-Ing. degree with distinction
1980 – 1983	Fellowship, Studienstiftung des Deutschen Volkes (German National Merit Foundation)

Service to the Scientific Community

- IEEE Speech and Language Processing Technical Committee Member, 2015 – 2017, 2018-2020
- Member of organizing committees of Interspeech 2021, IEEE Workshop on Spoken Language Technology (SLT) 2018, 2016; IEEE Automatic Speech Recognition and Understanding Workshop (ASRU) 2017, Exhibition Chair Interspeech 2015, Dresden
- General chair of ITG Conference on Speech Communication, Paderborn, 2016
- Chairman of ITG (German Engineering Society) Technical Committee AT 4 (on Speech Processing (since 2016)
- Technical Reviewer for journals and conferences, including IEEE Transactions on Audio, Speech and Language Processing, IEEE Signal Processing Letters, Elsevier Speech Communication, Journal of the Acoustical Society of America, Computer Speech and Language, ICASSP, Interspeech, ASRU
- Reviewer of grant applications to EU, DFG (German Research Foundation), and various countries
- Guest editor IEEE Selected Topics in Signal Processing, special issue on „Natural Interaction with Intelligent Environments“ (published in October 2010) and „Far-Field Speech Processing in the Era of Deep Learning: Speech Enhancement, Separation and Recognition“ (published in 2019)

Administrative Responsibilities

2011 - 2015 Vice Dean (Chairman of Institute of Electrical Engineering) within Faculty of Electrical Engineering, Computer Science and Mathematics of the University of Paderborn

Professional Highlights

- Co-Author of *Robust Speech Recognition – A Bridge to Practical Applications*, Elsevier, 2016
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- Published more than 250 papers in peer reviewed journals and conferences
- One of the two editors of the book *Robust Speech Recognition of Uncertain or Missing Data: Theory and Applications*, Springer, 2011
- 15 competitive research grants by DFG (German Research Foundation) in last 15 years
- Currently supervising 8 Ph.D. students