Kamil Wójcicki, Ph.D.

Contact Information

P.O. Box 46045
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Research Interests

Speech processing, speech enhancement, speech perception, hearing aids, automatic speech and speaker recognition and machine learning.

Professional Experience

Starkey Hearing Technologies, Eden Prairie, Minnesota, United States

DSP Research Engineer **November 2012 – present**

Research on signal processing algorithms for hearing aids.

Earfonics, Plano, Texas, United States

Speech Scientist **January 2012 – July 2012**

Conducted research on improving intelligibility of speech in the presence of noise, on a joint industry project between Earfonics and Starkey Hearing Technologies.

The University of Texas at Dallas, Richardson, Texas, United States

Research Associate **February 2011 – October 2012**

Postdoctoral research associate working on speech enhancement algorithms that improve intelligibility of noise corrupted speech.

Qibt Navitas, Mount Gravatt, Queensland, Australia

Lecturer and Tutor **June 2009 – June 2010**

Lecturer and tutor for undergraduate courses in mathematics and computer science.

Griffith University, Nathan, Queensland, Australia

Teaching Assistant **February 2005 – December 2009**

Teaching assistant for undergraduate courses in electrical engineering, including:

- Signals and Systems
- Digital Signal Processing
- Statistical Signal Processing
- Unix Systems
- Introduction to Programming with MATLAB

Chief Invigilator **June 2010 – November 2010**

Chief invigilator for Griffith University examinations.

Assistant Invigilator **February 2005 – November 2010**

Assistant invigilator for undergraduate and graduate examinations.

Hewlett Packard, Milton, Queensland, Australia

Server Specialist **March 2008 – February 2011**

Enterprise data center deployments, relocation and servicing for clients such as V Australia, Cement Australia, Gold Coast City Council, Optus, Queensland Health, Queensland Investment Corporation (QIC), Queensland Ombudsman's Office and Bain Gasteen Lawyers.

Field Services Engineer **June 2004 – February 2011**

Workstation deployments for clients such as AMCOR, Blake Dawson Waldron, Commonwealth Bank, Bank of Queensland, Pindara Private Hospital and others.

Fujitsu Australia, Newstead, Queensland, Australia

Field Services Engineer **April 2002 – December 2003**

Point-of-sale deployments for various clients, including Queensland Transport, Coles, Woolworths and Commonwealth Bank business centres.

Education

Griffith University, Nathan, Queensland, Australia

Doctor of Philosophy in Electrical Engineering **February 2005 – April 2011**

- Topic: Role of the short-time phase spectrum in speech processing
- Advisors: Dr. Kuldip Paliwal and Dr. Stephen So

Bachelor of Information Technology, **February 2000 – April 2005**
Bachelor of Engineering in Microelectronic Engineering (Hons)

- Majors: Computing Science, Computer Systems

Honors and Awards

Best Paper Award, Griffith School of Engineering Research Conference, Nathan, 2007

Australian Research Council (ARC) Postgraduate Research Scholarship, Nathan, 2005–2010

Scholarship for Outstanding Academic Achievement, Griffith University, Nathan, 2000

National Mathematics Summer School, The Australian National University, Canberra, 1999, 2000

Certificate of Excellence for Outstanding Academic Achievement, University of Tasmania, 1999

Award for Best Design, Electronics Competition, The Electronics Educators Association, 1998

Selected Publications

Wójcicki, K.K. and P.C. Loizou, "Channel selection in the modulation domain for improved speech intelligibility in noise", *J. Acoust. Soc. Am.*, 131(4), pp. 2904–2913, Apr 2012.

Paliwal, K.K., Schwerin, B. and K.K. Wójcicki, "Speech enhancement using a minimum mean-square error short-time spectral modulation magnitude estimator", *Speech Communication*, 54(2), pp. 282–305, Feb 2012.

Paliwal, K.K., Wójcicki, K.K. and B.J. Shannon, "The importance of phase in speech enhancement", *Speech Communication*, 53(4), pp. 465–494, Apr 2011.

Paliwal, K.K., Schwerin, B. and K.K. Wójcicki, "Role of modulation magnitude and phase spectrum towards speech intelligibility", *Speech Communication*, 53(3), pp. 327–339, Mar 2011.

Paliwal, K.K., Wójcicki, K.K. and B. Schwerin, "Single-channel speech enhancement using spectral subtraction in the short-time modulation domain", *Speech Communication*, 52(5), pp. 450–475, May 2010.

Paliwal, K.K., Shannon, B.J., Lyons, J.G. and K.K. Wójcicki, "Speech-signal-based frequency warping", *IEEE Signal Process. Lett.*, 16(4), pp. 319–322, Apr 2009.

Paliwal, K.K. and K.K. Wójcicki, "Effect of analysis window duration on speech intelligibility", *IEEE Signal Process. Lett.*, 15, pp. 785–788, 2008.

Stark, A.P., Wójcicki, K.K., Lyons, J.G. and K.K. Paliwal, "Noise driven short time phase spectrum compensation procedure for speech enhancement", In *Proc. INTERSPEECH*, Brisbane, Australia, pp. 549–552, Sep 2008.

Wójcicki, K.K., Milacic, M., Stark, A.P., Lyons, J.G. and K.K. Paliwal, "Exploiting conjugate symmetry of the short-time Fourier spectrum for speech enhancement", *IEEE Signal Process. Lett.*, 15, pp. 461–464, 2008.

Professional Memberships

Member of the Acoustical Society of America (ASA) **2012 – present**
Member of the Institute of Electrical and Electronics Engineers (IEEE) **2009 – present**
Member of the International Speech Communication Association (ISCA) **2007 – present**

Programming

MATLAB, C, C++, Linux shell scripting, LaTeX 2_ε, Perl, Java, .NET, SQL, PHP

Languages

English, Polish

Hobbies

Travel, photography, skiing, fitness

Referees

Dr. Peter Assmann
Professor
The University of Texas at Dallas
Richardson, Texas, United States
phone: *available on request*
e-mail: *available on request*

Dr. Issa Panahi
Associate Professor
The University of Texas at Dallas
Richardson, Texas, United States
phone: *available on request*
e-mail: *available on request*

Dr. Kuldip Paliwal
Professor
Griffith University
Nathan, Queensland, Australia
phone: *available on request*
e-mail: *available on request*

Dr. Stephen So
Lecturer
Griffith University
Gold Coast, Queensland, Australia
phone: *available on request*
e-mail: *available on request*

Dr. Alok Sharma
Postdoctoral Fellow
The University of Tokyo
Minato-ku, Tokyo, Japan
phone: *available on request*
e-mail: *available on request*

Mr. Sean Loye
Systems Engineer
Hewlett Packard
Milton, Queensland, Australia
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