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## Personal Information

Dual Citizenship: US, German  
Born 1967

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## Education & Skills

### Post-doctoral Study 1996-1998

Postdoctoral studies in several international Universities pertaining to PhD topic of signal processing and speech recognition systems

- University of Karlsruhe, Germany
- Sydney University, Sydney, Australia
- Tokyo Institute of Technology, Tokyo, Japan

### Doctor of Philosophy Graduate School 1991-1996

Oregon Graduate School of Science & Technology, USA

Computer Science and Technology

Centre for Spoken Language Understanding

*Automatic Language Identification with Sequences of Language-independent Phonemes*

Advisors: Dr. Ron Cole, Dr. Etienne Barnard, Dr. Marc Zissman

### Bachelor of Sciences 1985-1991

Syracuse University, Syracuse, New York, USA

- Computer Engineering with Honours

### Bachelor of Arts and Science 1985-1991

Syracuse University, Syracuse, New York, USA

- Computer Engineering, major (with Honours)
- Mathematics, major
- German, major
- French, major
- Political Science, minor

One year study abroad at Top French University 'Institute of Political Studies' in Strasbourg, France

### Training

- Swiss Life: Project Management for Senior Personnel
- Swiss Life: Insurance Sales Agent Training
- Lincoln Laboratory: Small Teams Management
- Lincoln Laboratory: Effective Communication

### Relevant Skills through Experience

- Organisational:
  - ✓ Chairing 2 IEEE Conferences in Puerto Rico (ASRU 2005, Odyssey 2006)
- International Understanding:
  - ✓ Fluent in German and English, speaks and understands French well, understands written and spoken Spanish in structured environments, studied Japanese, Hindi, and Arabic
  - ✓ Lived in France, England, Switzerland, Germany, USA, Australia, Japan, and Puerto Rico
  - ✓ Worked in Switzerland, England, Australia, Japan and the USA, Middle America
  - ✓ Attended University in France, Germany, Australia, Japan, USA
- Financial Responsibility:
  - ✓ Led million dollar, pan-European projects in financial industry

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## Experience

### Polytechnic University

2.2004 – Present

### Department of Electrical and Computer Engineering and Computer Science

#### Full Professor

*San Juan, Puerto Rico*

- Conference Organizing Chair for IEEE Odyssey '06 on Speaker Identification to take place at the Ritz, San Juan, Puerto Rico, 2006 ([speakerodyssey.com](http://speakerodyssey.com))
- Emergency Local Chair for ASRU 2005 – relocated from Cancun to Puerto Rico in only 4 weeks! ([www.asru2005.org](http://www.asru2005.org))
- Reviewer *IEEE Transactions Acoustics, Speech and Signal Processing*
- Head of Caribbean Artificial Intelligence Group, Window to the Caribbean project on multimedia smart rooms (DoD Grant) ([ai.pupr.net](http://ai.pupr.net))
- Teaching: Software Engineering (undergraduate EE, graduate EE, graduate MBA), Programming, Pattern Recognition. Scheduled for Neural Networks, Speech Recognition, Data Mining (Grad), Software Architecture (Grad)
- Design of focus areas for first PR Master of Computer Science
- Liaison for the Puerto Rico Luis Stokes Alliance for Minority Participation; Contact person for Hispanic Association of Colleges and Universities HACU
- Organizer of Internet based support group for internships and scholarships

### Financial Industry, Switzerland

5.2000 – 1.2004

#### E-Business Consulting

##### Visiting Professional

*Churchill: London, UK*

##### Head of Technology

*Winterthur: Winterthur, Switzerland*

##### E-Business Project Manager

*Swisslife: Zürich, Switzerland*

##### Associate Director

*UBS: Zürich, Switzerland*

- Consulting for design and deployment of multilingual automatic speech recognition systems in banking applications
- Acquisition of internal customers for speech application systems
- Project proposal generation – origination of idea, task definition, subtask analysis, associated costs, time planning, return of investment analysis
- Port Automatic Speech System for funds-information via phone to German
- Build up of technology team and definition of function for partnership with business teams from Contact Centre, Extranet and Intranet projects
- Initiation, build up and heading of Insurance Application Solution Centre with off-shore developers in Spain, realising substantial reduction in IT costs
- Reduction of business costs through reduced time-to-market and increased requirements matching with prototyping methodology
- Interface and definition of processes for Business-IT communication across Market Units, Vendors, Corporate IT and the Solution Centre team.
- Responsibility for realization phase of business initiated projects; managing transformation into IT components for Contact Centre, B2B, B2C, and B2B2C projects in different Market Units (Belgium, UK, Spain, France, Switzerland)

### MIT

3.1998 – 10.1999

### Lincoln Laboratory

#### Researcher

*Boston, USA*

- Statistical analysis, design and implementation of large-scale automatic language recognition systems for telephone speech
- Project coaching for statistical linguistic analysis of spoken data
- Extension of existing software packages with additional features
- Knowledge based application design and implementation

### Tokyo Institute of Technology

7.1997 – 1.1998

### Furui Laboratory / NTT c/o Prof. Dr. Sadaoki Furui

#### Post Doctoral Position

*Tokyo, Japan*

- Software development and packaging for reuse
- Data analysis and written analysis and report (3 publications)
- Preparation and execution of short course on written and oral presentations

### University of Sydney

1.1997 – 6.1997

### Department of Electrical Engineering, c/o Dr. Julie Vonwiller

#### Post Doctoral Position

*Sydney, Australia*

- Software development based on specification formulated by linguists and revised incorporation throughout the extent of the project
- Data analysis of the structure of English pronunciation based on software
- Writing of manual corresponding to developed algorithms

### Karlsruhe University

10.1996 – 12.1997

### Institut fuer Logik, Komplexitaet und Deduktionssysteme

#### Post Doctoral Position

*Karlsruhe, Germany*

- Completion of thesis work. Final write-up of thesis document
- Software repackaging of thesis work

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## Selected Publications

Kay Berklng, SCoPE, Syllable Core and Periphery Evaluation for Foreign Accent Identification and Automatic Syllabification. *Speech Communications Journal*, special edition on multilinguality: Volume 35, Issue 1-2, January 2002, pp 125-138.

Kay Berklng and Marc Zissman, Approaches to Automatic Language Identification of Speech. *Speech Communications Journal* special edition on multilinguality: Vol 35, Issue 1-2, January 2002, pp. 115-124

Kay Berklng, Chris Cleirigh, and Julie Vonwiller, SCoPE, Syllable Core and Periphery Evaluation for Foreign Accent Identification and Automatic Syllabification, MIST: Multi-lingual Interoperability in Speech Technology, September 1999, Leusden, The Netherlands

Kay Berklng, Doug Reynolds and Marc Zissman, Evaluation of Confidence Measures for Language Identification, Eurospeech '99, September 1999, Budapest, Hungary.

Kay Berklng, Chris Cleirigh, Julie Vonwiller and Marc Zissman, Improving Accent Identification Through knowledge of English Syllable Structure, International Conference on Spoken Language Processing (IEEE, ICSLP), Sydney, Australia, November 1998.

Kay Berklng (available at <http://cslu.cse.ogi.edu/publications>) Automatic Language Identification with Sequences of Language-independent Phonemes PhD Thesis, 1996, Oregon Graduate Institute of Science & Technology

Kay Berklng and Etienne Barnard, Language Identification with Inaccurate String Matching International Conference on Spoken Language Processing (IEEE, ICSLP), Philadelphia, USA, October 1996.

Kay Berklng and Etienne Barnard, Theoretical Error Prediction for a Language Identification System using Optimal Phoneme Clustering, Proceedings of the Fourth European, Conference on Speech Communication and Technology, Madrid, Spain, September 1995. (IEEE, Eurospeech)

Kay Berklng and Etienne Barnard, Language Identification of Six Languages Based on a Common Set of Broad Phonemes, Proceedings of International Conference on Spoken Language Processing (IEEE, ICSLP), Yokohama, Japan, October 1994

Yonhong Yan, Kay Berklng, and Etienne Barnard, Bigram Models and Phoneme Clusters for Language Identification, Proceedings of Speech Research Symposium SRS, Johns Hopkins, Baltimore USA, June 1994

Kay Berklng, Takayuki Arai, Etienne Barnard and Ronald Cole, Analysis of Phoneme-Based Features for Language Identification, Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing, Adelaide, South Australia, April 1994

Yeshwant Muthusamy, Kay Berklng, Takayuki Arai, Ronald Cole and Etienne Barnard, A comparison of Approaches to Automatic Language Identification Using Telephone Speech, Proceedings 3rd European Conference on Speech Communication and Technology (IEEE, Eurospeech 93), Berlin, Germany, September 1993.

Y. K. Muthusamy and T. Arai and K. M. Berklng and R. A. Cole and E. Barnard, Two Approaches to Automatic Language Identification with Telephone Speech, Proceedings of Speech Research Symposium SRS, Johns Hopkins, Baltimore USA, June 1993