

Petr Motlicek

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Nationality: Czech, **Civil status:** married, 2 children

Languages: actively Czech, Slovak, English, French, passively German, Spanish, Russian

Education

- 1999-2003** **PhD, Computer Science;** Brno University of Technology, Czech Republic
Thesis title: Modeling of Spectra and Temporal Trajectories in Speech Processing
- 1994-1999** **MSc, Electrical Engineering;** Brno University of Technology, Czech Republic

Professional Experience

- 2005-now** **Idiap Research Institute,** Martigny Switzerland
Description: Swiss research center devoted for speech and visual processing, multimodal interactions, and machine learning
Position: Researcher in speech technology
Activity: R&D in speech/audio processing, machine learning, artificial intelligence, supervision of PhD Students, PI and co-PI of EU and national projects, various industrial collaborations
Teaching: Speech and Audio Coding: Single semester doctoral course at EPFL
Web: <http://www.idiap.ch/~pmotlic>
- 2003-now** **Brno University of Technology,** Brno, Czech Republic
Description: Faculty of Computer Science
Position: External teacher and scientific collaborator
Activity: Teaching and research in signal and speech processing, machine learning, computer science
Web: <http://www.fit.vutbr.cz/~motlicek>
- 2001-2002** **Oregon Graduate Institute,** Portland, USA
Description: Faculty of electrical engineering at OHSU
Position: Research scientist
Activity: R&D in speech processing, developing new standard (ETSI) for distributed speech recognition
- 2000-2001** **Ecole Supérieure d'Ingenieurs (ESIEE),** Paris, France
Description: Internship
Position: Research scientist
Activity: Research in the domain of very low bit-rate speech coding for RNRT project "SYMPATEX" (Systeme de messagerie unifie parole-texte), coordinated by Thales Communications

Ongoing projects

- 2018-2019** **CTI (Idiap/Logitech)** - Speech Hybrid Analytics Platform for Consumer and Enterprise Devices
- 2017-** **U.S. IARPA (Material)** - Summarization and domain-Adaptive Retrieval of Information Across Languages
Web: <https://www.iarpa.gov/index.php/research-programs/material>
- 2016-2018** **MALORCA (EC H2020)** - Machine Learning of Speech Recognition Models for Controller Assistance
Web: <http://www.malorca-project.de>
- 2016-2020** **MuMMER (EC H2020)** - MultiModal Mall Entertainment Robot
Web: <http://www.idiap.ch/scientific-research/projects/mummer>
- 2014-2018** **SIIP (EC FP7)** - Speaker Identification Integrated project
Web: <http://www.siip.eu>

Selected past projects

- DBOX** (EC Eurostars) - A generic dialog box for multilingual conversational applications (2012 – 2015)
- Samsung** (South Korea) - Spontaneous speech recognition exploiting natural interfaces (2011-2014)
- CTI** (Idiap/Koemei) - Task Adaptation and Optimisation for Conversational Speech Recognition (2011-2012)
- Armasuisse** (Switzerland) - Low bit-rate speech coding (2011-2012)
- TA2** (EC FP7) - Together Anywhere, Together Anytime (2008-2012)
- DIRAC** (EC, FP6) - Detection and Identification of Rare Audio-visual Cues (2007-2010)
- Qualcomm** (USA) - Speech and audio coding (2005-2007)
- Qualcomm** (USA) - Aurora: Advanced DSR Front-end, USA (2000-2001)
- BARRANDE** (France) - Codage de la parole a tres bas debit independent de la langue (1999-2000)

IEEE STYLE BIOGRAPHY

Dr Petr Motlicek (<http://www.idiap.ch/~pmotlic>) is a research scientist at Idiap Research Institute. Recently, he has been largely involved as PI, or co-PI in several FP7 or H2020 EC research projects (SIIP, Malorca, MuMMER, DBOX), as well as in industrial projects funded by Samsung, Qualcomm, or Armasuisse. His main interest is in audio and speech processing (coding, speech and speaker recognition), conversation analysis and machine learning. Many of the designed applications are developed in collaboration with security/government (LEA) bodies in Switzerland, or at EU level. Between 2000 and 2001, Petr was a researcher at Oregon Health and Science University, Portland, USA. From 2003, he has been a lecturer at Brno University of Technology in Czech Republic. Since 2012, he has been an external lecturer in the EPFL Electrical Engineering Doctoral (EDEE) program. Petr and his colleagues have largely contributed to Kaldi (<https://github.com/kaldi-asr>) - an open-source SW developed for speech and speaker recognition tasks, with many new libraries for signal processing provided by Idiap (<https://github.com/idiap>).

PATENTS

- 2006** **Assignee: Qualcomm Inc.**, Multistream Network Feature Processing for a Distributed Speech Recognition System, Patent number: 7089178, Issue date: Aug 8, 2006, (USA)
- 2006** **Assignee: Qualcomm Inc.**, Signal Coding and Decoding based on Spectral Dynamics, Issue date: Feb 8, 2008, (USA)
- 2014** **Assignee: Samsung Electronics CO., LTD.**, Multilingual Acoustic Model, Publication date: May 29, 2014, (USA)

SKILLS AND AFFILIATIONS, MEMBERSHIPS

- Signal processing, statistics, machine learning
- Speech processing:
 - speech recognition, robust feature extraction, multilinguality
 - multimedia information retrieval, detection tasks
 - speech/audio coding, synthesis, noise cancellation, sound localization
 - speaker recognition (identification/authentication), investigation and forensic speech technologies
 - audio processing for robotics
- Computer programming (including C/C++, Unix, Matlab, Bash, Python)
- IEEE fellow (from 2000)
- ISCA (International Speech Communication Association)