

Institute for Biochemistry
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Peter HORVATH Ph.D.

Personal

Born: 11/10/1980 Hungary
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Skills

Professional

- Strong informatics and mathematical background
- Successful teaching and advisory background
- Wide image segmentation knowledge
- 3 years remote sensing imagery background
- 4 years biological and screening experience
- Expert in motion detection and robotics
- Expert in machine learning methods
- Expert at coding and development
- Microelectronic and signal processing bases

Programming, environments, OS

language/OS	Expert	last usage
C/C++/Pascal	10 years	Currently
Java/SQL	3 years	4 years ago
Matlab	10 years	Currently
Windows	12 years	Currently
Unix/Linux	8 years	Currently

Languages

	Level
Hungarian	mother tongue
English	Fluent
German	Fluent
French	Basic

Activities

Publications

http://www.lmc.ethz.ch/People/hp_details/hp_pub_list

Teaching

- 2010-** MATLAB for Biologists (MLS) ETH Zurich
- 2008-** Protein and cell dynamics, ETH Zurich
- 2007-** Introduction to MATLAB, Image processing, and different microscopic software
- 2004-2007** Introduction to Pascal and C Programming; Master thesis co-supervision
- 2003-2005** Digital Image Segmentation
- 2003-2004** Programming Languages
- 2001-2003** Introduction to Informatics
- 2001-2003** Algorithms and Data Structures

Last update: 01-10-2011

Education

- INRIA (ARIANA Research Group), Sophia Antipolis, France; University of Szeged, Hungary (2004-2007) PhD degree in image processing, defense in December 2007
- Technical College, Budapest, Hungary (2001-2004) Electrical Engineer
- University of Szeged, Hungary (1999-2004) Master degree in Computer Science, spec. in Image processing, Machine learning and Artificial intelligence
- Táncsics Mihály High School, Orosháza, Hungary (1991-1999) High-school graduation

Grants

- 2006-2007 12 months PhD Grant at INRIA, Sophia Antipolis, France Supported by the French Government
- 2005 6 months PhD Grant at INRIA, Sophia Antipolis, France Supported by the IMAVIS EU project, Marie Curie Fellowship
- 2004 Ph.D. Grant in Image Processing at University of Szeged, Hungary
- 2003 5 months CEEPUS (Central European Exchange Program for University Studies) Johannes Kepler University, Linz, Austria

Projects

- 2009- Data analysis of the first six Swiss academic human genome-wide screens (ETH, Light Microscopy Centre, Zurich)
- 2007- Head of image processing; Responsible for image and data processing related problems in microbiology; advising PostDoc, PhD and Masters students (ETH, Light Microscopy Centre)
- 2007-2009 Setting up a new High-Content Screening facility (ETH, Institute of Biochemistry, Zurich)
- 2004-2007 Image segmentation using shape priors; Introduced a novel active contour-based shape representation and segmentation method, and implemented it in C++ and Matlab. Applied the method to aerial and satellite images (INRIA ARIANA Research Group; University of Szeged)
- 2003-2004 Segmentation using color and motion; Developed active contour-based segmentation models and implemented them in C++. Introduced a real-time motion tracking robot (Image Processing and Computer Graphics Department, University of Szeged)
- 2002 Speech recognition system; (Artificial Intelligence Group, University of Szeged)