

Curriculum Vitae: Prof. Jiří Matas

Education and Academic Qualifications

- 1995 PhD degree from the University of Surrey. Advisor: Prof. J. Kittler.
- 1987 MSc degree (with honours) in technical cybernetics from the Czech Technical University in Prague, Czech Republic

Employment

- 2010- Full Professor, Center for Machine Perception, CTU Prague, Czech Republic.
- 2006-2010 Associate Professor, Center for Machine Perception, CTU Prague, Czech Republic.
- 2007 Visiting Professor, EPFL Lausanne, Switzerland
- 2005-2006 Visiting Researcher, CVSSP group, University of Surrey, UK.
- 1997-2005 Senior Researcher, Center for Machine Perception, Prague, Czech Republic.
- 1997-2001 I concurrently held two part-time positions, at the Centre for Vision, Speech and Signal Processing, U.of Surrey, UK; and Center for Machine Perception, Czech Technical University, Prague.
- 1991-1997 Research fellow, Centre for Vision, Speech and Signal Processing, U. of Surrey, UK.
- 1990 Visiting fellow, Centre for Vision, Speech and Signal Processing, U. of Surrey, UK.
- 1987-1990 Department of Control, Czech Technical University Prague, Czech Republic.
- 1986 Statistical Department of EDP Coimbra, Portugal. Two-month employment organised by the International Association For The Exchange Of Students For Technical Experience.

Awards

- 2013 The paper "T. Vojir, J. Noskova and J. Matas. Robust Scale-Adaptive Mean-Shift for Tracking" was awarded the best paper prize at the Scandianavian Conference on Image Analysis
- 2013 The paper " L. Neumann and Matas J.: On Combining Multiple Segmentations in Scene Text Recognition" was awarded the best student paper prize at the 12th International Conference on Document Analysis and Recognition
- 2010 L. Neumann's MSc thesis supervised by J. Matas won the Czech Master Thesis of Year 2010 in Informatics award.
- 2010 Outstanding Reviewer, CVPR 2010.
- 2009 K. Zimmermann's PhD thesis "Fast Learnable Methods for Object Tracking" supervised by J. Matas was awarded the prize for the "Best PhD dissertation in Czech Republic in the fields of cybernetics and informatics in 2008".
- 2007 The paper "J. Sochman, J. Matas: Learning A Fast Emulator of Binary Decision Process" was awarded the best paper prize at the Asian Conference on Computer Vision
- 2005 The Center for Machine Perception team that I was a member of finished second in the ICCV 2005 Contest
- 2005 The paper "J. Matas, S. Obdrzalek: Sub-linear Indexing for Large Scale Object Recognition" was awarded the best paper prize at the British Machine Vision Conference.
- 2004 "The Best Scientific Result" prize of the Czech Technical University Prague.
- 2002 The paper "J. Matas et al.: Robust wide baseline stereo from maximally stable extremal regions" was awarded the best paper prize at the British Machine Vision Conference.
- 1987 MSc. thesis awarded the Chancellor's prize.

Patents

I am a co-inventor of two patents (WO/2007/026948 WO/2007/026951).

Grants, Research Projects

I am the principal investigator of the Czech Science Foundation excellence center "Multimodal Data Interpretation" and was the principal investigator of Czech Science Foundation grants "Algorithms for Face recognition" (2001-2003) and "Methods for Visual Recognition of Large Collections of Non-rigid Objects" (2009-2011). Both grants were evaluated as "excellent".

I am the CTU responsible investigator of FP7 EU Project Darwin (2011-2015) and FP7 EU Project Maseltov (2012-2015).

I have participated in a number of EU funded projects as a researcher and later as a work package leader, working on following problems: recognition in active vision systems (1991-1995, VAP "Vision as Process" project), face recognition and lip tracking (1995-1997, M2VTS "Multimodal Verification for Teleservices and Security Applications), for face recognition, lip tracking and speaker verification, biometric identity verification (1997-1999, BANCA "Biometric access control for networked and e-commerce applications"), visual recognition (2001-2004, ActIpret "Activity Interpretation"), COSPAL (2004-2007, "COgnitiveSystems using Perception-Action Learning"), DIPLECS (2007-2010, "Dynamic Interactive Perception-action LEarning in Cognitive Systems") and . MASH (2010-2012, "Massive sets of heuristics").

Industrial Applications. Consultancies.

Co-founder of a university spin-off company Eyedea Reconciliation (established in 2006).

I have lead many industry-sponsored projects and consulted for a number of companies:

Toyota, Japan	2003-2014	Project leader. Object recognition in traffic applications.
Assa Abloy, Czech Republic	2012-2013	Senior consultant. Lock calculation system.
Samsung, S. Korea	2011-2012	Project leader. Mobile phone vision algorithms.
Hitachi, Japan	2003-2009	Project leader. Face analysis.
Samsung, S. Korea	2001-2004	Project leader. Face recognition.
VUL Prague, Czech Republic	2001-2002	Project leader. Feasibility study for VUL Praha, a manufacturer of unmanned reconnaissance airplanes. Computer vision techniques for processing of video data acquired by sensors on the airplane.
Boeing, USA	1999-2000	Project leader. Development of software for airplane recognition.
Racal, UK	1996	Consultant. Use of colour for license plate recognition.
Zbrojovka Brno, Czechoslovakia	1987-1988	Head developer. Image processing software for a machine vision system.
VUJE Trnava, Czechoslovakia	1988	Project leader. Software development for automatic positioning of a defectoscopic ultrasonic testing device in a nuclear power plant.
TESLA Roznov, Czechoslovakia	1989	Image processing specialist. Development of an image processing system for control of the silicon refinement process. TESLA Roznov was the largest major integrated circuit manufacturer in Czechoslovakia.

Other Professional Activities.

I am an Associate Editor-in-Chief of IEEE Transaction on Pattern Analysis and Machine Intelligence. I am on the editorial board of the International Journal of Computer Vision.

I served as an evaluator for the prestigious ERC fellowship grants (2012), EU FP6 IST call (2003), the EU FP7 IST call (2007), EU Marie-Curie fellowship applications (2007, 2008, 2009). EU FET (Future and Emerging Technologies) projects (2009). In evaluated projects for the Grant Agency of Hong Kong (2008, 2009, 2011, 2012) as well as for the Swiss and Swedish grant agencies. Since 2009 I am on the evaluation panel for the Czech National Science Foundation.

In 2003, I became a representative of the Czech Republic in the standardisation body ISO-IEC JTC 1SC 29WG 11(MPEG). I participated in the proposal of a face descriptor that was included in the MPEG standard.

I have been on the programme committee of a number of major international conferences in the area of computer vision, image retrieval and pattern recognition: International Conference on Computer Vision, Computer Vision and Pattern Recognition, International Conference on Pattern Recognition, Neural Information Processing Systems, European Conference on Computer Vision, International Conference on Face and Gesture Recognition, Audio- and Video-based Biometric Person Authentication, International Conference on Image and Video Retrieval, British Machine Vision Conference, Indian Conference on Computer Vision, Graphics and Image Processing and others. I have served as an area chair for CVPR 2005 and 2006; ECCV 2006, 2008 and 2010; ICCV 2009,.

I was a programme co-chair of the European Conference on Computer Vision in 2004 and the Com-

puter Vision and Pattern Recognition Conference in 2007. I will co-chair the European Conference on Computer Vision in 2014.

From 2002 to 2004, I was the chairman of Technical Committee 14 "Signal Analysis for Machine Intelligence" of the International Association for Pattern Recognition.

Teaching and PhD student supervision.

Lectures:

- 2005 Image Processing and Vision, MSc module, University of Surrey, UK
- 1997-2014 Pattern Recognition, MSc Course, Czech Technical University in Prague
- 2010-2014 Methods of Computer Vision, MSc Course, Czech Technical University in Prague
- 2000-2008 Digital Image Processing, MSc Course, Czech Technical University in Prague
- 2002-2014 Advanced Pattern Recognition, PhD Course, Czech Technical University in Prague

From 1996 till 2003 I co-supervised 4 PhD students at the University of Surrey. All four successfully defended their thesis. At CMP Prague 6 PhD students I supervised graduated. I am currently supervising or co-supervising 5 PhD students.

Publications and Citations

I have published about 200 papers in refereed journals and conferences. The papers have more than 4800 citations in the Science Citation Index and more than 16500 according to Google Scholar (see <http://scholar.google.com/citations?user=EJCNY6QAAAAJ>).

My h-index is 25 according to WOS and 48 according to Google Scholar.

Most publications are available on-line at <http://cmp.felk.cvut.cz/~matas/>.

Selected publications with impact factors (IF) as of the date of publication:

- Z. Kalal, K. Mikolajczyk, J. Matas: Tracking-Learning-Detection. *IEEE Trans. Pattern Analysis and Machine Intelligence*. 34(7): 1409-1422 (2012) (IF 5.3)
- L. Ellis, N. Dowson, J. Matas, and R. Bowden. Linear regression and adaptive appearance models for fast simultaneous modelling and tracking. *International Journal of Computer Vision* (2011) 95:154-179, (IF 5.2)
- J. Cech, J. Matas, M. Perdoch. Efficient Sequential Correspondence Selection by Cosegmentation. *IEEE Trans. Pattern Analysis and Machine Intelligence*. 32(9): 1568-1581, September 2010, (IF 4.4)
- O. Chum, J. Matas. Large-Scale Discovery of Spatially Related Images. *IEEE Trans. Pattern Analysis and Machine Intelligence*. 32(2): 371-377, February 2010 (IF 4.4)
- J. Sochman and J. Matas. Learning Fast Emulators of Binary Decision Processes. In *International Journal of Computer Vision*, 2009. (IF 5.4)
- K. Zimmermann, J. Matas, and T. Svoboda. Tracking by an Optimal Sequence of Linear Predictors. *IEEE Trans. on Pattern Analysis and Machine Intelligence*. 31(4), 2009, (IF 6.0)
- Chum, J. Matas, Optimal Randomized RANSAC, *IEEE Trans. Pattern Analysis and Machine Intelligence*. (30) 8, August 2008, pp. 1472-1482. (IF 3.6)
- J. Matas, O. Chum, U. Martin, and T Pajdla. Robust wide baseline stereo from maximally stable extremal regions. *Image and Vision Computing*, 22(10):761-767, September 2004. (IF 1.2)
- J. Matas, C. Galambos, and J. Kittler. Robust detection of lines using progressive probabilistic Hough Transform. *Computer Vision and Image Understanding*, 2000. (IF 0.9)
- J. Matas, K. Jonsson, and J. Kittler. Fast face localisation and verification. *Image and Vision Computing* , 17(8):578-581, June 1999. (IF 0.4)
- J. Kittler, M. Hatef, R.P.W Duin, and J. Matas. On combining classifiers. *IEEE Trans. Pattern Analysis and Machine Intelligence*. 20(3):226 - 239, March 1998. (IF 1.4)