

# RNDr. Michal Balážia, Ph.D.

LAST UPDATE **27/Jun/2018**

PERSONAL *Nationality:* Slovak  
*Birthday:* 09/Aug/1988  
*Marital status:* single

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PROFESSION *Position:* Postdoctoral research scholar in computer science  
*Focus:* Gait recognition from MoCap data, activity and object detection in video  
*Web:* <https://gait.fi.muni.cz>



AUTHOR PROFILES *LinkedIn:* <https://www.linkedin.com/in/michal-balazia-07760ba5>  
*Scopus:* <https://www.scopus.com/authid/detail.uri?authorId=55250004400>  
*Google Scholar:* <http://scholar.google.com/citations?user=idIT1iYAAAAJ>  
*ResearchGate:* [https://www.researchgate.net/profile/Michal\\_Balazia](https://www.researchgate.net/profile/Michal_Balazia)  
*arXiv:* [http://arxiv.org/a/balazia\\_m\\_1](http://arxiv.org/a/balazia_m_1)  
*ORCID:* <https://orcid.org/0000-0001-7153-9984>

EDUCATION **Masaryk University**, Faculty of Informatics  
Brno, Czech Republic

**Doctoral Degree (RNDr., Ph.D.)**

**Feb/2013 – Apr/2018**

- Program: Computer Science
- Specialization: human gait recognition, biometrics, pattern recognition, machine learning
- Dissertation: *Gait Recognition from Motion Capture Data*
- Advisers: Pavel Zezula, Jan Sedmidubský, Konstantinos N. Plataniotis, Petr Sojka

**Master's Degree (Mgr.)**

**Sep/2010 – Feb/2013**

- Program: Information Technology Security
- Specialization: cryptography, biometric technologies, similarity search
- Master Thesis: *Human Gait Recognition Based on Body Component Trajectories*
- Advisers: Jan Sedmidubský, Pavel Zezula

**Bachelor's Degree (Bc.)**

**Sep/2007 – Jun/2010**

- Program: Mathematical Informatics
- Specialization: discrete mathematics, similarity search
- Bachelor Thesis: *Random Number Generation for Similarity Search*
- Advisers: David Novák, Pavel Zezula

OVERSEAS STUDIES AND INTERNSHIPS **University of Toronto**, The Edward S. Rogers Sr. Department of Electrical & Computer Engineering  
Toronto, Ontario, Canada

- **International Visiting Graduate Student Research** **Sep/2014 – Aug/2015**  
Scientific research on structure-based human gait recognition and signal processing

**Eindhoven University of Technology**, Department of Mathematics and Computer Science  
Eindhoven, Netherlands

- **Lifelong Learning Programme Erasmus** **Feb – Aug/2012**  
Industrial and Applied Mathematics

PROFESSIONAL EXPERIENCE	<b>University of South Florida</b> , Department of Computer Science and Engineering Tampa, Florida, USA	
	<ul style="list-style-type: none"> <li>• <b>Postdoctoral Research Scholar</b> May/2018 – present Activity and object detection in video for the TRECVID 2018 ActEV Challenge Adviser: Sudeep Sarkar</li> </ul>	
	<b>Masaryk University</b> , Faculty of Informatics Brno, Czech Republic	
	<ul style="list-style-type: none"> <li>• <b>Teaching Assistant</b> Feb/2016 – Jun/2017 Introduction to Information Retrieval</li> <li>• <b>Teaching Assistant</b> Sep/2010 – Dec/2015 Coding, Cryptography and Cryptographic Protocols</li> <li>• <b>Researcher</b> Oct/2009 – Apr/2018 Scientific research on sub-sequence matching, motion segmentation, gait recognition</li> </ul>	
	<b>Gemmy, s.r.o.</b> Prešov, Slovakia	
	<ul style="list-style-type: none"> <li>• <b>Webmaster</b> Sep/2007 – Apr/2018 Design and maintenance of the company web page using PHP/HTML/CSS/XML</li> </ul>	
EXTRA- CURRICULAR	<b>14th IEEE/IAPR/Eurasip International Summer School for Advanced Studies on Biometrics for Secure Authentication: Biometrics for Personalization and Forensic Identification</b> Alghero, Italy	
	<ul style="list-style-type: none"> <li>• <b>Summer school – participation</b> Jun/2017 Attending lectures and seminars, solving a group project Presenting research <i>MoCap-Assisted Walker Re-Identification</i></li> </ul>	
	<b>Erasmus Student Network Masaryk University Brno</b> Brno, Czech Republic	
	<ul style="list-style-type: none"> <li>• <b>Active team member and Buddy – volunteering</b> Feb/2010 – Apr/2018 Tutoring exchange students, organizing presentations, trips, games and sports</li> </ul>	
	<b>CERES, Munk School of Global Affairs, University of Toronto</b> Toronto, Ontario, Canada	
	<ul style="list-style-type: none"> <li>• <b>Work&amp;Study Program – internship</b> Sep/2014 – Feb/2015 Library research</li> </ul>	
	<b>DIECII, University of Messina</b> Messina, Italy	
	<ul style="list-style-type: none"> <li>• <b>Board of European Students of Technology – summer course</b> Aug – Sep/2013 Studying communication systems and wireless networks</li> </ul>	
	<b>Swedish Institute</b> Stockholm, Sweden	
	<ul style="list-style-type: none"> <li>• <b>Swedish Innovation Prize – study visit</b> Apr/2013 Studying security technologies of SAAB AB and FLIR Systems</li> </ul>	
	<b>Board of European Students of Technology, LBG Eindhoven</b> Eindhoven, The Netherlands	
	<ul style="list-style-type: none"> <li>• <b>Team member and Fundraiser executive – volunteering</b> Feb – Aug/2012 Organizing a summer course for students of technology</li> </ul>	
	<b>AIIESEC University of Oslo</b> Oslo, Norway	
	<ul style="list-style-type: none"> <li>• <b>Culture Experience Programme – internship</b> Jun – Aug/2011 Organizing a summer camp for asylum seekers in Bærum Kommune</li> </ul>	

PUBLICATIONS	<u>Balazia M.</u> , Sojka P.: <b>You Are How You Walk: Uncooperative MoCap Gait Identification for Video Surveillance with Incomplete and Noisy Data</b> . IEEE/IAPR International Joint Conference on Biometrics (IJCB), IEEE, pp 208–215, Denver, USA, October 2017.	
	<u>Balazia M.</u> , Sojka P.: <b>Gait Recognition from Motion Capture Data</b> . ACM Transactions on Multimedia Computing, Communications and Applications (TOMM), special issue on Representation, Analysis and Recognition of 3D Humans, ACM, volume 14(1s), pp 22:1–22:18, New York, USA, February 2018. Impact Factor: 2.250	
	<u>Balazia M.</u> , Sojka P.: <b>An Evaluation Framework and Database for MoCap-Based Gait Recognition Methods</b> . IAPR Workshop on Reproducible Research in Pattern Recognition (RRPR), Springer, LNCS 10214, pp 33–47, Cancun, Mexico, December 2016.	
	<u>Balazia M.</u> , Sojka P.: <b>Learning Robust Features for Gait Recognition by Maximum Margin Criterion (Extended Abstract)</b> . IAPR International Workshops on Structural and Syntactic Pattern Recognition (SSPR) and Statistical Techniques in Pattern Recognition (SPR), Springer, LNCS 10029, pp 585–586, Merida, Mexico, November 2016.	
	<u>Balazia M.</u> , Sojka P.: <b>Walker-Independent Features for Gait Recognition from Motion Capture Data</b> . IAPR International Workshops on Structural and Syntactic Pattern Recognition (SSPR) and Statistical Techniques in Pattern Recognition (SPR), Springer, LNCS 10029, pp 310–321, Merida, Mexico, November 2016.	
	<u>Balazia M.</u> , Sojka P.: <b>Learning Robust Features for Gait Recognition by Maximum Margin Criterion</b> . IEEE/IAPR International Conference on Pattern Recognition (ICPR), IEEE, pp 901–906, Cancun, Mexico, December 2016.	
	<u>Balazia M.</u> , Plataniotis K.N.: <b>Human Gait Recognition from Motion Capture Data in Signature Poses</b> . IET Biometrics, IET, volume 6(2), pp 129–137, London, United Kingdom, March 2017. 2018 Premium Award for Best Paper in IET Biometrics. Impact Factor: 1.382	
	<u>Balazia M.</u> , Sedmidubsky J., Zezula P.: <b>Semantically Consistent Human Motion Segmentation</b> . International Conference on Database and Expert Systems Applications (DEXA), Springer, LNCS 8644, pp 423–437, Munich, Germany, September 2014.	
	Sedmidubsky J., Valcik J., <u>Balazia M.</u> , Zezula P.: <b>Gait Recognition Based on Normalized Walk Cycles</b> . International Symposium on Visual Computing (ISVC), Springer, LNCS 7432, pp 11–20, Rethymno, Greece, July 2012.	
	Valcik J., Sedmidubsky J., <u>Balazia M.</u> , Zezula P.: <b>Identifying Walk Cycles for Human Recognition</b> . Pacific Asia Workshop on Intelligence and Security Informatics (PAISI), Springer, LNCS 7299, pp 127–135, Kuala Lumpur, Malaysia, May 2012.	
AWARDS	<b>Joseph Fourier Prize</b> – 1st place Awarded by: French Institute in Prague Project: <i>Gait Recognition from Motion Capture Data</i>	<b>Jun/2018</b>
	<b>IET Biometrics Premium Award</b> Awarded by: Institution of Engineering and Technology Paper: <i>Human Gait Recognition from Motion Capture Data in Signature Poses</i>	<b>Jun/2018</b>
	<b>Swedish Innovation Prize</b> – 1st place in Civil Security Awarded by: Embassy of Sweden in Prague Project: <i>Gait Recognition for Biometric Surveillance</i>	<b>Feb/2013</b>
	<b>IT Security Award</b> – 2nd place Awarded by: Laboratory of Security and Applied Cryptography at Masaryk University Project: <i>Human Gait Recognition Based on Body Component Trajectories</i>	<b>Nov/2013</b>

CERTIFICATES	<b>IEEE Membership</b> Issued by: IEEE	<b>Sep/2016, Aug/2017</b>
	<b>Key Competencies in International Academic Communication</b> Issued by: Language Centre at Masaryk University	<b>Dec/2015</b>
	<b>Graduate Professional Skills</b> Issued by: School of Graduate Studies at University of Toronto	<b>Aug/2015</b>
	<b>Teaching Fundamentals Certificate</b> Issued by: Centre for Teaching Support and Innovation at University of Toronto	<b>Jun/2015</b>
	<b>TOEFL iBT</b> Issued by: ETS Global Note: Score 94, equivalent of C1 in English language	<b>Mar/2014</b>
SKILLS	<ul style="list-style-type: none"> <li>• Programming languages: Java, C, Delphi, MATLAB, Python</li> <li>• Development tools: NetBeans, Weka, Git</li> <li>• Web: PHP, HTML, CSS</li> <li>• Spreadsheet design: Microsoft Office, L<sup>A</sup>T<sub>E</sub>X</li> <li>• English language: fluent</li> <li>• Driver's licence: A, B</li> </ul>	
HOBBIES	TaeKwon-Do, traveling, geography, cycling, Latin American music, cryptocurrencies, scouting, parachute	