

CV

DR. VITOMIR ŠTRUC

Education

- BSc degree in Electrical Engineering from the University of Ljubljana (UL), 2005
- PhD degree in Electrical Engineering from UL, 2010

Academic and research titles

- Associate Professor of Electrical Engineering at UL (2017 - present)
- Guest Assistant Professor at the CS Department of the University of Notre Dame, USA (2015)
- Assistant Professor of Electrical Engineering at UL (2012 - 2017)
- Research Associate at UL (2012 - 2017)

Employment

- Teaching staff at UL (2014 - present)
- Researcher on EU FP7 Projects HIDE, SMART and RESPECT, teaching assistant at the Faculty of Electrical Engineering UL (2013 - 2014),
- Postdoctoral Fellow at UL (2011 - 2013),
- Senior software developer/Head of the Computer Vision division at Alpineon Ltd. - industrial experience (2010 - 2011),
- Junior researcher and PhD candidate at the UL (2007-2010),

Teaching

Dr. Štruc is involved in the following courses:

- Signal Analysis,
- Signal Processing,
- Pattern Recognition,
- Language and Web Technologies,
- Intelligent Systems in Automatics,
- Information and Coding,
- Seminar in Biometrics,
- Speech and Image Technologies,
- Image technologies.

He (co)authored study material for these courses including slides, notes, and textbooks. His most recent textbook is:

ŠTRUC, V., DOBRIŠEK, S. *Informacija in kodi : dopolnilni učbenik z vajami.* 1. izd., FE, 2016. ISBN 978-961-243-303-1.

Mentorship and supervision

Vitomir has so far supervised 13 students from all three Bologna levels (undergrad, MSc, and PhD) and the old University program. Two students received the **faculty award for the best Master and Bachelor thesis** of 2015 and 2016.

Dr. Štruc is currently supervising:

- 3 PhD students, and
- 8 Master and Bachelor students.

Vitomir currently serves as a member on 5 PhD thesis defense committees at FE UL (2x), at FRI UL (Slovenia), at IIIT-Delhi (India), and at QUT (Australia).

Research work and bibliography

Vitomir's research interests center on pattern recognition, biometrics, face recognition, emotion recognition, signal processing, speech technologies, machine learning and related areas. In the scope of his work he published (source: COBISS):

- 42 papers in peer-reviewed journals,
- 50 papers in national and international conferences, and
- 3 book chapters.

A (relatively) complete citation list of Vitomir's work is available from his Google Scholar page: <http://scholar.google.si/citations?user=kr52cmAAAAAJ&hl=sl>

Vitomir owns the rights to two patents and has one international patent applications pending.

Research projects

Dr. Štruc participated in several R&D projects at FE UL and Alpineon. Among the projects conducted at the faculty the following are the most important:

- The postdoctoral project BAMBI: Biometric face recognition in ambient intelligence environments, ARRS ID: Z2-4214, duration: 2011-2013, dr. Štruc was the project leader;
- AvID: Audiovisual identification and analysis of speakers for secure, CRP: Science for security in peace 2007, ID: M20210, duration: 2007-2009, dr. Štruc was a key member;
- The research program: Metrology and Biometric Systems (P2-0250), dr. Štruc is a member of the program group;
- EU FP7 RESPECT: Rules, Expectations & Security through Privacy Enhanced Convenient Technology, duration 2012-2015, dr. Štruc was a key member of the project group;
- EU FP7 CP SMART: Scalable Measures for Automated Recognition Technologies, duration: 2011-2014, Vitomir Štruc was a key member;
- EU FP7 CSA HIDE: Homeland Security, biometric Identification & Personal Detection Ethics, duration: 2008-2010, dr. Štruc was a key member of the project group;
- Bilateral cooperation with Croatia, Bulgaria and China.

Among the industrial projects conducted during his time at Alpineon, the following are the most important:

- KC CLASS: Cloud assisted services (competence center, European Regional fund), duration: 2010-2013; dr. Štruc managed and coordinated the activities of the project for Alpineon d.o.o.,
- BioID (European Regional and Social Funds), participation in: 2010 – 2011,
- Various internal projects of the company, dr. Štruc was the project leader in all internal projects related to computer vision.

Vitomir is currently participating in:

- The bilateral project with the University of Notre Dame “SuperFACE”,
- The S4 Project GOSTOP: Voice&Vision,
- The DePPSS 6733 project on “De-identification for Privacy Protection in Surveillance Systems” funded by the Croatian HRZZ.

Awards and achievements

- Recipient of the Zois scholarship 2000-2007,
- Recognition of the dean of the Faculty of Electrical Engineering for outstanding achievements during his studies (received 2X, in 2001 and 2005),
- Vodovnik Award of the Faculty of Electrical Engineering in Ljubljana for the best PhD thesis of 2011,
- The University of Ljubljana award for “young researchers and teachers” 2015 awarded to outstanding junior staff of the university.

Invited talks and keynotes

- *Face authentication using a hybrid approach*, Shenyang: Northeastern University, Oct. 22, 2008,
- *On the use of Gabor filters for face recognition*. Zagreb: Fakultet elektrotehnike i računarstva, 2009,
- *Facial landmark localization*, University of Notre Dame, College of Engineering, Indiana, 2015,
- *Face Alignment: Addressing Pose Variability in Face Recognition Systems*, invited keynote talk at the BiForD conference, 2016.
- *Face Deidentification with Generative Deep Networks*, Zagreb: Fakultet elektrotehnike i računarstva, 2017.

Societies, associations, boards

Vitomir is an active member of:

- The IEEE, the IEEE Computer Society, the IEEE Signal Processing Society,
- The Slovenian Pattern Recognition Society (vice-president: 2010-2011; treasurer: 2013-2017; **acting president: 2017 - present**),
- The International Association of Pattern Recognition IAPR,
- Slovenian Language Technology Society SDJT,
- The European Association for Biometrics EAB (**Slovenia’s national contact point**),
- COST Action IC 1106: Integrating Biometrics and Forensics for the Digital Age (substitute MC member),
- COST Action IC 1206: De-identification for privacy protection in multimedia content (substitute MC member),

- COST Action IC 1307: Integrating Vision and Language (**MC member**)

Service, editorial work

Editorial work:

- Proceedings co-editor for ISPA 2017
- Guest editor for IET Biometrics (SCI IF 1.382) for the Special Issue on “Unconstrained Ear Recognition”
- Guest editor for Image and Vision Computing (SCI IF 2.671) for the Special issue on the “Biometrics in the Wild”, 2016 -
- Associate Editor for IET Biometrics (SCI IF 1.382), 2016 - present
- Guest editor for Image and Vision Computing (SCI IF 2.671) for the Special issue on the “Best of FG 2015”, 2015 – 2017
- (Co)-Editor of the FG 2015, CVWW 2016, ISPA 2017 booklets
- Co-Editor of the CVWW 2016 proceedings
- Section Editor for CIT, 2014 - present

Organizational Activities:

- Finance Chair for the IEEE International Conference on Automatic Face and Gesture Recognition – IEEE FG 2019,
- Workshop and Tutorial Co-Chair for the IEEE International Conference on Automatic Face and Gesture Recognition – IEEE FG 2018,
- Program Co-Chair for the International Symposium on Image and Signal Processing and Analysis 2017 – ISPA 2017
- Organizer of the first Unconstrained Ear Recognition Competition (UERC) – at IJCB 2017,
- Organizer of the 2nd International Workshop on Biometric in the Wild - BWild 2017
- Competition Co-chair for the IEEE/IAPR International Joint Conference on Biometrics – IEEE/IAPR IJCB 2017,
- Organizer and Program Co-chair of the 21st Computer Vision Winter Workshop 2016 – CVWW 2016,
- Local Arrangement Chair for the IEEE International Conference on Automatic Face and Gesture Recognition – IEEE FG 2015,
- Organizer of the International Workshop on Biometric in the Wild 2015 - BWild 2015,
- Organizer of the International Workshop on De-identification for Privacy Protection in Multimedia 2015,
- Organizer of the special session at FG 2015 on “My 10 Year Research Vision”.

Area Chair:

- WACV 2018

Conference Program Committees:

- IEEE BTAS 2015, 2016,
- IEEE IJCB 2017,
- IAPR ICB 2016, 2018
- IEEE FG 2015, 2017, 2018,
- IEEE ICIP 2016, 2017,
- IEEE ISBA 2017, 2018

- IEEE ICAISC 2014, 2015, 2016, 2017,
- IWBF 2015, 2016, 2017,
- CVWW 2016, 2017,
- IPTA 2016,
- ERK 2011, 2012, 2013, 2014, 2015, 2016, 2017 ...

Journal reviewer:

- IEEE TPAMI, IEEE TIP, IEEE TNNLS, IEEE TIFS, IEEE TMM, Pattern Recognition, Information fusion, Pattern Recognition Letters, ACM TOMM, Signal Processing, IET Computer Vision, Journal of Electronic Imaging, ...

Selected publications – last 2 years

- GRM, K., ŠTRUC, V. Deep Face Recognition for Smart Surveillance Applications, IEEE Intelligent Systems (in press), 2017.
- Klemen Grm ; Vitomir Struc ; Anais Artiges ; Matthieu Caron ; Hazim Ekenel, Strengths and Weaknesses of Deep Learning Models for Face Recognition Against Image Degradations, IET Biometrics, 2017.
- MEDEN, Blaž, MALLI, Refik Can, FABIJAN, Sebastjan, EKENEL, Hazim Kemal, ŠTRUC, Vitomir, PEER, Peter. Face deidentification with generative deep neural networks. IET signal processing, ISSN 1751-9675, May 2017, pp. 1-17
- EMERŠIČ, Žiga, ŠTRUC, Vitomir, PEER, Peter. Ear recognition: more than a survey. Neurocomputing, ISSN 0925-2312, Mar. 2017, str. 1-18.
- Ziga Emersic; Dejan Štepec; Vitomir Struc; Peter Peer; Anjith George; Adil M Ahmad; Elshabini Omar; Terrance Boulton; Reza Safdari; Yuxiang Zhou; Stefanos Zafeiriou; Dogucan Yaman; Fevziye Eyiokur; Hazim EKENEL, The Unconstrained Ear Recognition Challenge, IJCB 2017, October 1-4, Denver, pp. 715 – 724.
- KRAVANJA, J., ŽGANEC, Mario, ŽGANEC GROS, J., DOBRIŠEK, S., ŠTRUC, V. Robust depth image acquisition using modulated pattern projection and probabilistic graphical models. Sensors, 2016, vol. 16, no. 10, pp. 1-24.
- EMERŠIČ, Žiga, ŠTEPEC, Dejan, ŠTRUC, Vitomir, PEER, Peter. Training convolutional neural networks with limited training data for ear recognition in the wild. V: FG 2017, 12th IEEE International Conference on Automatic Face and Gesture Recognition, 30 May - 3 June 2017, Washington, DC, USA. Danvers: IEEE, cop. 2017, pp. 897-994.
- MEDEN, Blaž, EMERŠIČ, Žiga, ŠTRUC, Vitomir, PEER, Peter. k-Same-Net : neural-network-based face deidentification. V: MORGADO-DIAS, Fernando (ed.), TRAVIESO-GONZÁLEZ, Carlos M. (ed.), ALONSO-HERNÁNDEZ, Jesús B. (ed.). Intelligent systems for biodiversity conservation: IWOBI 2017 : proceedings, (IEEE conference, 42403). Danvers (MA): IEEE. cop. 2017, pp. 1-7
- SCHEIRER, Walter J., FLYNN, Patrick J., DING, Changxing, GUO, Guodong, ŠTRUC, Vitomir, AL JAZAERY, Mohamad, GRM, Klemen, DOBRIŠEK, Simon, TAO, Dacheng, ZHU, Yu, BROGAN, Joel, BANERJEE, Sandipan, BHARATI, Aparna, WEBSTER, Brandon Richard. Report on the BTAS 2016 Video Person Recognition Evaluation. V: 2016 IEEE 8th International Conference on Biometrics Theory, Applications and Systems (BTAS), September 6-9 2016, Niagara Falls, USA. [S. l.]: IEEE Xplore, 2016, cop. 2017, pp. 1-8.