

# DR. VITOMIR ŠTRUC

## CV



Prof. **Vitomir Štruc**, PhD

University of Ljubljana, Faculty of Electrical Engineering

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**Research interests:** Computer vision, biometrics, face recognition, artificial intelligence, deep learning

**Dr. Vitomir Štruc (M)** is a full Professor at the Faculty of Electrical Engineering (FEE) in Ljubljana, Slovenia. He received his PhD degree from the University of Ljubljana in 2010 and was awarded the Vodovnik award for his doctoral work in 2011. Vitomir lectures courses on all three Bologna levels, including Signal Processing, Speech and Image Technologies, Seminar on Biometric Systems, and Random Processes and Signals. He currently (co)supervises 4 PostDocs, 8 PhDs, as well as multiple Master and Bachelor level students. Dr. Štruc was a visiting professor at the CSE department of the University of Notre Dame, USA in 2015.

Vitomir is an internationally recognized expert on computer vision, machine learning and artificial intelligence. He authored (or co-authored) more than 150 research papers for leading international peer-reviewed journals and conferences. He is the recipient of multiple awards, including the best paper in IET Biometrics, the Max Snijder/Industry/Research award for the best PhD thesis in Europe on biometric by three of his PhD students (in 2019, 2021, 2023), best research achievement funded by ARIS in 2023 and the outstanding editorial board member awards of the IEEE Transactions on Information Forensics and Security 2021 and 2023 by the IEEE Signal Processing society to name a few recent examples.

Vitomir served in different capacities on the organizing committees of several top-tier vision and AI conferences, including IEEE Face and Gesture 2015, 2018, 2019, 2020, 2021, 2023, and 2024 the International Joint Conference on Biometrics 2017, 2020, 2022, 2023, 2025 (IJCB), the IEEE Winter Conference on Applications in Computer Vision 2020, 2021, 2022, 2023, 2025 (WACV) and others. He was a Program Chair for the International Joint Conference on Biometrics (IJCB) 2020 (and will be again in 2025), for the International Workshop on Biometrics and Forensics (IWBF) 2022 and 2023 and is currently a Program Co-Chair for IEEE Face and Gesture 2024, and the IEEE Winter Conference on Applications in Computer Vision 2025. He was the general co-chair for IJCB 2023. He also serves as a Tutorial Co-Chair for CVPR 2024. Vitomir is a Senior Area Editor for the IEEE Transactions on Information Forensics and Security - TIFS (IF 6.8), a Subject Editor for Elsevier's Signal Processing (IF 4.4), and an Associate Editor for Pattern Recognition (IF 8.0), EURASIP Journal on Image and Video Processing (IF 2.4) and IET Biometrics (IF 2.0). Dr. Štruc organized special issues as a guest editor (GE) in Image and Vision Computing, IET Biometrics, and the IEEE Transactions on Biometrics, Behavior, and Identity science (TBIOM). Dr. Štruc served as an Area Chair for WACV 2018, 2019, 2020, IAPR

ICPR 2018, 2022, Eusipco 2019 and FG 2020, 2021, and 2023, and contributed on program committees of more than 65 international conferences in the last 5 years. Vitomir is a member of the IEEE, IAPR and the Slovenian Language Technologies Society, he is Slovenia's ambassador for the European Association on Biometrics (EAB), a member of the EURASIP Technical Area Committee BForSat, a member of the IEEE Technical Committee on Information Forensics and Security (IFS), and the former president (4 years) and current executive committee member of the Slovenian Pattern Recognition Society – branch of IAPR. Dr. Štruc is the Vice President (VP) of the IEEE Biometrics Council for Technical Activities 2022- 2026. He is the founding Chair of the IEEE Biometrics Council Slovenia Chapter. Since 2023, Dr. Štruc also serves as the secretary of the IAPR Technical Committee on Biometrics and as a member of the Supervisory Board of the European Association on Biometrics (EAB).

Dr. Štruc participated in numerous national and EU funded R&D projects (>20) either as a PI or key member. He is currently leading the 6-year ARIS research program Metrology and Biometrics Systems (2018-2024), he is the PI for the ARIS project "Deep generative models for beauty and fashion (DeepBeauty)" (2020-2024), the PI for the ARIS project "DeepFake detection using anomaly detection methods (DeepFake DAD)" (2023-2026) and leads the bilateral project on low-quality face recognition (FaceLQ). Vitomir has industrial experience from his time at the privately held SME Alpineon Ltd. There he worked as a senior software developer and head of the computer vision department in charge of all projects of the company related to computer vision and artificial intelligence. Dr. Štruc owns the rights for three national patents and has one EU-wide patent related to visual depth sensors pending.

Webpage: <https://lmi.fe.uni-lj.si/en/vitomir-struct/>

Google Scholar profile: <https://scholar.google.si/citations?user=kr52cmAAAAAJ>

\*\* Research projects \*\*

Current:

- ARIS project "DeepFake detection using anomaly detection methods (DeepFake DAD)", PI, 2023 – 2026,
- ARIS research project "Deep generative models for beauty and fashion (DeepBeauty)", PI, 2020 – 2024,
- ARIS project "Mechanistic Interpretability for Explainable Biometric Artificial Intelligence (MIXBAI)", WP Leader, 2023 – 2026
- ARIS project "Deep Reinforcement learning for optimisation of LV distribution network operation with Integrated Flexibility in real-Time (DRIFT)", WP Leader, 2022-2025
- ARIS program: Metrology and Biometric Systems (P2-0250), PI, 2018-2024,
- International project with Istanbul Technical University "FaceLQ", PI at FEE, 2021 - 2023

Past (last 10 years, selected):

- ARRS project "Face deidentification with generative deep models (FaceGEN)", PI, 2019 - 2023
- ARRS project "Detection of inconsistencies in complex visual data using deep learning", WP Leader, 2018-2022
- ARRS project "Super-quadratic recovery with deep learning", PI at FEE, 2018 – 2022,

- HRZZ project “Knowledge-based Approach to Crowd Analysis in Video Surveillance”, consultant, 2018 – 2021.
- ARRS project “Detection of inconsistencies in complex visual data using deep learning”, project-team member, 2018 – 2021,
- ARRS research project “OptiLEX”, project-team member, 2018 – 2021,
- Bilateral project with the University of Notre Dame “SuperFACE”, 2019 – 2021, PI at FEE
- S4 Project GOSTOP: Voice&Vision, PI at FEE, 2017-2021,
- EU FP7 RESPECT: Rules, Expectations & Security through Privacy Enhanced Convenient Technology, 2012-2015, project-group member
- EU FP7 CP SMART: Scalable Measures for Automated Recognition Technologies, 2011-2014, project-group member
- An FBI project related to facial reposing (lead by the University of Notre Dame), consultant, 2015-2017
- The DePPSS 6733 project “De-identification for Privacy Protection in Surveillance Systems”, 2015 – 2018, Croatian HRZZ, consultant.

\*\* Awards and achievements (last 5 years, selected) \*\*

- IEEE 2023 Outstanding Editorial Board Member Award for services for the IEEE Transactions on Information Forensics and Security (IEEE TIFS)
- Our work on “A Global Modeling Framework for Load Forecasting in Distribution Networks” was selected among the best scientific achievements funded by ARIS in 2023
- My PhD student received the 2023 EAB Research and Industry Award – Best PhD in Europe in biometrics
- Best paper at MVA 2023
- My PhD student received the inaugural Ana Mayer Kansky 2022 award for his PhD thesis – the highest award of the University of Ljubljana
- IEEE 2021 Outstanding Editorial Board Member Award for services for IEEE TIFS
- My PhD student was the recipient of the 2021 EAB Research and Industry Award – Best PhD in Europe in biometrics
- My PhD student received the best PhD thesis award from the Slovenian Pattern Recognition Society 2021
- Best paper at ERK 2020
- My Master student received the University of Ljubljana Prešeren award in 2018
- My Master students received the faculty Prešeren award in 2015, 2016, 2017, 2019, 2020 and 2021
- IET Premium award 2019 for the best paper in IET Biometrics
- Top-10 research achievements of UL in 2019
- My PhD student received the 2019 EAB Max Snijder award for his doctoral work – Best PhD in Europe in the broader area of biometrics
- Best paper award at the Slovenian Artificial Intelligence Conference 2019
- Best paper at ERK 2018

\*\* Societies, associations, boards \*\*

- Senior Member of the IEEE,
- Vice President of the IEEE Biometrics Council for Technical Activities (2022-2026)

- Supervisory Board of the European Association for Biometrics (EAB), 2023 – present
- Member of the IEEE Technical Committee on Information Forensics and Security, 2023 - present
- Secretary of the IAPR Technical Committee on Biometrics (TC4), 2023 - present
- Founding Chair of the IEEE Biometrics Council Slovenia Chapter (2022 - present),
- Executive committee member of the Slovenian Pattern Recognition Society (2021 – present)
- Election chair of the EURASIP Technical Area Committee on Biometrics, Data Forensics, and Security, 2018-2023
- Member of the IEEE CIS »Intelligent Systems Applications Technical Committee«, 2019
- President of the Slovenian Pattern Recognition Society, 2017 – 2021
- Member of the International Association of Pattern Recognition IAPR,
- Member of the Slovenian Language Technology Society SDJT,
- Slovenian's national ambassador for the European Association for Biometrics EAB, 2015 - present

\*\* Service, editorial work \*\*

Editorial work (last 5-years):

- Senior Area Editor, IEEE Transactions on Information Forensics and Security (TIFS), 2020 – present
- Section editor, Signal Processing, 2020 – present
- Associate Editor, Pattern Recognition, 2020 – present
- Associate Editor, IEEE TIFS, 2019 – 2020
- Associate editor, Signal Processing, 2018 – 2020
- Associate editor, IET Biometrics, 2016 – present
- EURASIP Journal on Image and Video Processing. 2022 – present
- Associate editor, IET Computer Vision, 2018 – 2019
- Section editor, IEEE Biometrics Compendium, 2018 – 2020
- Guest Editor (GE), Image and Vision Computing, (3 times), 2017, 2019, 2022
- GE, IEEE Transactions on Biometrics, Behavior, and Identity science (TBIOM), 2020 – 2021
- GE, IET Biometrics, 2018

\*\* Organizational Activities (last 5-years) \*\*

- Tutorial Co-Chair for the International Conference on Computer Vision and Pattern Recognition, CVPR 2024 (highest ranked conference in the world across any scientific field),
- Program Co-Chair for the IEEE International Conference on Automatic Face and Gesture Recognition, FG 2024 (major vision conference, TC-PAMI sponsored),
- Program Co-Chair for the IEEE International Workshop on Information Forensics and Security, WIFS 2024,
- General Co-Chair for the International Joint Conference on Biometrics, IJCB 2023 (main global biometrics conference),
- Program Co-Chair for the IEEE International Workshop on Biometrics and Forensics, IWBF 2023
- Workshop Co-Chair for the IEEE Winter Conference on Applications in Computer Vision, WACV 2023,
- Workshop and Tutorial Co-Chair for IEEE FG 2023,

- Program Co-Chair for IWBF 2022
- Competition Co-Chair for IJCB 2022,
- Organizer of the International Workshop on Face and Gesture Analysis for COVID-19 at FG2021,
- Workshop Co-Chair for IEEE WACV 2022,
- Publication Chair for IEEE FG 2021,
- Co-organizer of the 11th International workshop on Human Behavior Understanding (HBU 2021) at WACV 2021,
- Workshop Co-Chair for IEEE WACV 2021,
- Program Chair for IJCB 2020
- Workshop Chair for IEEE WACV 2020,
- Publication Chair for the IEEE FG 2020,
- Sponsorship Chair for the IEEE International Conference on Biometrics: Theory, Applications and Systems, IEEE BTAS 2019,
- Finance Chair for IEEE FG 2019,
- Workshop and Tutorial Co-Chair for IEEE FG 2018,

\*\* Program Committees (last 5 years) \*\*

- IEEE BTAS 2018
- IEEE/IAPR IJCB 2017, 2020, 2021, 2023
- IAPR ICB 2018, 2019
- IEEE ICIP 2017, 2018, 2020
- IEEE FG 2017, 2018, 2019, 2021, 2023
- CVWW 2017, 2018, 2019, 2020, 2021
- IEEE WIFS 2021, 2022
- ACM ICMI 2021
- ibPRIA 2019, 2020, 2021
- IWOBI 2018, 2020
- ICAISC 2017, 2018, 2019
- IAPR ICPR 2018, 2020, 2022
- IWBF 2017, 2018, 2019, 2020, 2021, 2022, 2023
- EUSIPCO 2020, 2021, 2022
- TSD 2018, 2019, 2020, 2021
- MVIP 2018, 2019
- ERK 2017, 2018, 2019, 2020, 2021, 2022
- Mipro 2018, 2019, 2020, 2021, 2022
- WACV 2020, 2021, 2022, 2023
- CVPR 2019, 2020, 2021, 2022, 2023
- ICCV 2019, 2021, 2023
- ECCV 2018, 2020, 2022, 2024