

CV Nikola Pavešić

Nikola Pavesic was born in Rijeka, on December 7 1946. After his final exam at the natural science and mathematics department of the II. Gymnasium in Rijeka, he studied at the Faculty of Electrical Engineering, University of Ljubljana. There he received the BS degree in electronics, the MS degree in automation, and the Ph.D. degree in electrical engineering in 1970, 1973 and 1976, respectively.

He was the recipient of the Mario Osana Award in 1974, the Vratislav Bedjanic Award in 1976, the Boris Kidric Fund Award in 1982, the Milan Vidmar Award in 1996, and Golden sign of University of Maribor in 2006.

Since 1970 he has been a staff member of the Faculty of Electrical Engineering in Ljubljana, where he is currently a Full Professor for Systems, Automatics and Cybernetics, and the Head of the Laboratory for Artificial Perception, Systems and Cybernetics.

He is teaching the following undergraduate, master and PhD level courses at the Faculty of Electrical Engineering, University of Ljubljana: Pattern Recognition, Intelligent systems in automation, Information theory and coding, Biometric systems. He acted as a supervisor for 212 bachelor students, 33 master students and 15 PhD students.

His research interests include Pattern Recognition and Image Processing, Speech Recognition and Understanding, and Theory of Information. He has authored or co-authored more than 200 papers and 4 books addressing several aspects of the above areas.

Profesor Pavesic was involved as a member in several national and international projects, addressing various problems from his research fields, including:

- EU FP7 RESPECT: Rules, Expectation & Security through Privacy-Enhanced Convenient Technologies (2012-)
- EU FP7 HIDE: Homeland Security, Biometric Identification & Personal Detection Ethics (2008-2010),
- The National project AvID: Audio-Visual User Authentication and Stress Analysis for Secure Communications (2007-2009),
- COST Action 1106: Integrating Biometrics and Forensics for the Digital Age (2012-)
- Cost Action 1206: De-identification for privacy protection in multimedia content, ...

He acts as a reviewer for several international journals:

- IEEE Transactions on Information Forensics and Security,
- IEEE Transaction on Image Processing,
- IEEE Transactions on Pattern Analysis and Machine Intelligence,
- Pattern Recognition,
- Pattern Recognition Letters,
- IET Signal Processing, ...

Dr. Pavešić has served on the Program Committee of:

- The international Electrotechnical and Computer Science Conference (ERK) 2013,
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- The international Electrotechnical and Computer Science Conference (ERK) 2011,
- The international Electrotechnical and Computer Science Conference (ERK) 2010, ...

He is a member of:

- IEEE,
- the Slovenian Association of Electrical Engineers (meritorious member),
- the Slovenian Pattern Recognition Society (founder and first president),
- International Association of Pattern Recognition - IAPR,
- the Slovenian Society for Medical and Biological Engineering, ...

Publication List

A complete publication list is available from the Slovenian bibliographic database COBISS:

<http://splet02.izum.si/cobiss/bibliography?code=01938&langbib=eng>

Below is a list of publication from the last four years.

Peer-reviewed journal articles

1. DOBRIŠEK, Simon, GAJŠEK, Rok, MIHELIČ, France, **PAVEŠIĆ, Nikola**, ŠTRUC, Vitomir. Towards efficient multi-modal emotion recognition. *International Journal of Advances in Robotic Systems*, 2013, vol. 10, no. 53, pp. 1-10.
2. VESNICER, Boštjan, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**, ŠTRUC, Vitomir. Face recognition using simplified probabilistic linear discriminant analysis. *International Journal of Advances in Robotic Systems*, 2012, vol. 9, no. 180, pp. 1-10.
3. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. The complete Gabor-Fisher classifier for robust face recognition. *EURASIP Journal of Advances in Signal Processing*, 2010, vol. 2010, pp. 1-26.
4. Poh, N., Chan C.H., Kittler, J., Marcel, S., McCool, C., Rua, E.A., Castro, J.L.A., Villegas, M., Paredes, R., Štruc, V., **PAVEŠIĆ, Nikola**, Salah, A.A., Fang, H., Costen, N. An evaluation of video-to-video face verification. *IEEE transactions on information forensics and security*, Dec. 2010, vol. 5, no. 4, pp. 781-801.
5. RIBARIĆ, Slobodan, **PAVEŠIĆ, Nikola**. Inference procedures for fuzzy knowledge representation scheme. *Applied artificial intelligence*, 2009, vol. 23, no. 1, str. 16-43.
6. ŠTRUC, Vitomir, GAJŠEK, Rok, MIHELIČ, France, **PAVEŠIĆ, Nikola**. Using regression techniques for coping with the one-sample-size problem of face recognition. *Electrotechnical Review*, 2009, vol. 76, no 1/2, pp. 7-12.
7. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Gaussianization of image patches for efficient palmprint recognition. *Electrotechnical Review*, 2009, vol. 76, no. 5, pp. 245-250.
8. DOBRIŠEK, Simon, ŽIBERT, Janez, **PAVEŠIĆ, Nikola**, MIHELIČ, France. An edit-distance model for the approximate matching of timed strings. *IEEE Transactions on pattern analysis and machine intelligence*, Apr. 2009, vol. 31, no. 4, pp. 736-741.
9. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Phase congruency features for palm-print verification. *IET signal processing*, Jul. 2009, vol. 3, no. 4, pp. 258-268.
10. **PAVEŠIĆ, Nikola**, RIBARIĆ, Slobodan, GRAD, Benjamin. Finger-based personal authentication : a comparison of feature-extraction methods based on principal component analysis, most discriminant features and regularised-direct linear discriminant analysis. *IET signal processing*, Jul. 2009, vol. 3, no. 4, pp. 269-281.
11. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Gabor-based kernel partial-least-squares discrimination features for face recognition. *Informatica (Vilnius)*, 2009, vol. 20, no. 1, pp. 115-138.

12. ŠTRUC, Vitomir, ŽIBERT, Janez, **PAVEŠIĆ, Nikola**. Histogram remapping as a preprocessing step for robust face recognition. *WSEAS transactions on information science and applications*, Mar. 2009, vol. 6, no. 3, pp. 520-529.

Peer reviewed international conference proceedings

13. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**, ŽGANEC GROS, Jerneja, VESNICER, Boštjan. Patch-wise low-dimensional probabilistic linear discriminant analysis for face recognition. In: 2013 IEEE International Conference on Acoustics, Speech, and Signal Processing, May 26-31, Vancouver, Canada. *ICASSP 2013*, 2013, pp. 2352-2356.

14. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**, ŽGANEC GROS, Jerneja. Composite score normalization for face verification. In: International Workshop on Biometrics and Forensics, April 4-5, 2013, Lisbon, Portugal. *IWBF 2013*, 2013, pp. 1-4.

15. VESNICER, Boštjan, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**, ŠTRUC, Vitomir. Low-dimensional probabilistic linear discriminant analysis : application to face recognition. In: Deveta Konferencija Digitalna obrada govora i slike DOGS2012, Kovačica, Novi Sad: Fakultet tehničkih nauka, 2012, pp. 68-71.

16. ŠTRUC, Vitomir, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**. Non-parametric score normalization for biometric verification systems. In: 21st International Conference on Pattern Recognition (ICPR 2012), November 11-15, 2012, Tsukuba, Japan. *ICPR 2012*, 2012, pp. 2395-2399.

17. ŠTRUC, Vitomir, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**. Advanced correlation filters for facial landmark localization. In: ZAJC, Baldomir (Ed.), TROST, Andrej (Ed.). *Proceedings of ERK 2012, 17.-19. september 2012, Portorož, Slovenija*, pp. 153-156.

18. ŠTRUC, Vitomir, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**. Principal directions of synthetic exact filters for robust real-time eye localization. *Lecture notes in computer science*, 2010, pp. 180-192.

19. KRIŽAJ, Janez, ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Adaptation of SIFT features for robust face recognition. *Lecture notes in computer science*, 2010, pp. 394-404.

20. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Face recognition from color image using sparse projection analysis. *Lecture notes in computer science*, 2010, pp. 445-453.

21. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Illumination invariant face recognition by non-local smoothing. *Lecture notes in computer science*, 2010, pp. 1-8.

22. ŠTRUC, Vitomir, ŽGANEC GROS, Jerneja, **PAVEŠIĆ, Nikola**. Eye localization using correlation filters. In: Osma Konferencija Digitalna obrada govora i slike DOGS2010, Novi Sad: Fakultet tehničkih nauka, 2010, pp. 188-191.

23. ŠTRUC, Vitomir, VESNICER, Boštjan, MIHELIČ, France, **PAVEŠIĆ, Nikola**. Removing illumination artifacts from face images using the nuisance attribute projection. In: IEEE International Conference on Acoustics, Speech, and Signal Processing, *ICASSP 2010*, 2010, pp. 846-849.

24. ŠTRUC, Vitomir, DOBRIŠEK, Simon, **PAVEŠIĆ, Nikola**. Confidence weighted subspace projection techniques for robust face recognition in the presence of partial occlusions. In: 20th International Conference on Pattern Recognition, Istanbul, Turkey, *ICPR 2010*, 2010, pp. 1334-1338.
25. KRIŽAJ, Janez, ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Adaptation of SIFT features for face recognition under varying illumination. In: BOGUNOVIĆ, Nikola (Ed.), RIBARIĆ, Slobodan (Ed.). *Proceedings of MIPRO*, 2010, pp. 178-181.
26. RIBARIĆ, Slobodan, LOVRENČIĆ, Juraj, **PAVEŠIĆ, Nikola**. A neural-network-based system for monitoring driver fatigue. V: MELECON 2010, 15th IEEE Mediterranean Electromechanical Conference, 25-28 April, 2010, Valletta, Malta, 2010, pp. 1356-1361.
27. RIBARIĆ, Slobodan, **PAVEŠIĆ, Nikola**, ZADRIJA, Valentina. Intersection search for a fuzzy Petri net-based knowledge representation scheme. *Lecture notes in computer science*, 2009 pp. 1-10.
28. GAJŠEK, Rok, ŠTRUC, Vitomir, DOBRIŠEK, Simon, ŽIBERT, Janez, MIHELIČ, France, **PAVEŠIĆ, Nikola**. Combining audio and video for detection of spontaneous emotions. *Lecture notes in computer science*, 2009, pp. 114-121.
29. POH, Norman, ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**, et al. Face video competition. *Lecture notes in computer science*, 2009, pp. 715-724.
30. ŠTRUC, Vitomir, GAJŠEK, Rok, **PAVEŠIĆ, Nikola**. Principal Gabor filters for face recognition. In: IEEE Third International Conference on Biometrics : Theory, Applications and Systems, BTAS 2009. *BTAS 2009*, 2009, pp. 1-6.
31. **PAVEŠIĆ, Nikola**, RIBARIĆ, Slobodan. Biometric recognition : an overview. In: MORDINI, Emilio, GREEN, Manfred S. (Eds.). *Identity, security and democracy : the wider social and ethical implications of automated systems for human identification*, (NATO science for peace and security series, Sub-series E, Human and societal dynamics, vol. 49, 2009, pp. 43-55.
32. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. A comparison of feature normalization techniques for PCA-based palmprint recognition. In: TROCH, Inge, BREITENECKER, Felix (Eds.). 6th Vienna Conference on Mathematical Modelling, February 11-13, 2009, Vienna University of Technology, Austria. *MATHMOD*, 2009, pp. 2450-2453.
33. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Image normalization techniques for robust face recognition. In: TRILLING, Leon (Ed.). *Recent advances in signal processing , robotics and automation : proceedings of the 8th WSEAS International Conference on Signal Processing, Robotics and Automation, Cambridge, UK, February 21-23, 2009*, pp. 155-160.
34. ŠTRUC, Vitomir, MA, Zongmin, **PAVEŠIĆ, Nikola**. Face recognition using sparse projection axes. In: ZAJC, Baldomir (Ed.), TROST, Andrej (Ed.). *Proceedings of ERK 2009, 21-23. september 2009, Portorož, Slovenija*. Ljubljana, 2009, pp. 271-274.
35. ŠTRUC, Vitomir, VESNICER, Boštjan, MIHELIČ, France, **PAVEŠIĆ, Nikola**. Nuisance attribute projection in the logarithm domain for face recognition under severe illumination changes. In: ZAJC, Baldomir (Ed.), TROST, Andrej (Ed.). *Proceedings of ERK 2009, 21-23. september 2009, Portorož, Slovenija*, 2009, pp. 279-282.

Edited Book, Book Chapters and Thesis

36. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Photometric normalization technique for illumination invariance. In: ZHANG, Yu-Jin (Ed.). *Advances in face image analysis : techniques and technologies*. Hershey; New York: IGI Global: Medical Information Science Reference, 2011, pp. 279-300.

37. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. From Gabor magnitude to Gabor phase features : tackling the problem of face recognition under severe illumination changes. In: ORAVEC, Miloš (Ed.). *Face recognition.*, In-Tech, 2010, pp. 215-238.

38. ŠTRUC, Vitomir, **PAVEŠIĆ, Nikola**. Hand-geometry device. In: LI, S. Z. (Ed.). *Encyclopedia of biometrics*. New York: Springer, 2009, pp. 693-698.

Citation List

A complete citation count can be obtained from Dr. Pavešić's SICRIS page:
<http://sicris.izum.si/search/rsr.aspx?lang=eng&id=4381>