Tiago de Freitas Pereira

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Homepage:	https://scholar.google.com.br/citations
Native from:	Brazil

Research Interests

Face and speaker recognition, Presentation Attack Detection, Machine Learning, Neural Networks, Reproducible Research, TensorFlow

Education

PhD in Electrical Engineering, 2019, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
Field: Heterogeneous Face Recognition
Title: Learning How To Recognize Faces In Heterogeneous Environments

MSc in Electrical Engineering, 2013, University of Campinas (UNICAMP), Brazil
Field: Antispoofing in face authentication systems
Title: A Comparative Study of Countermeasures to Detect Spoofing Attacks in Face Authentication Systems

BSc in Computer Science, 2010, University of São Paulo (USP), Brazil

Employment

Idiap - Biometrics Group (http://www.idiap.ch/scientific-research/research-groups/biometric-person-recognition), Postdoctoral Researcher, 2019-now
Working in an European project called ALLIES, whose one of goals is to research speaker diarization. My focus in this project is to explore unsupervised strategies to approach this task.

Idiap - Biometrics Group, Research Assistant, 2014-2019
Developed research in the field of Heterogeneous Face Recognition, which consists in the comparison of faces sensed in different image modalities, such as photographs with near infra-red, sketches or thermogram images. During this period I was also responsible for the development and maintenance of the machine learning and signal processing library called Bob (http://idiap.github.io/bob/).

Samsung Research America (http://thinktankteam.info/) Ph.D. Intern, April-July 2017
Part of the Think Tank Team - a small team of interdisciplinary researchers, scientists, designers and engineers, passionate about inventing experience-centric future products and technologies. The group aim to transform their disruptive concepts into products that connect objects, environments, information and people. My work was mainly focused in the application of Machine Learning for a particular signal processing task.

CPqD Telecom and IT Solutions (https://www.cpqd.com.br/en/), 2010-2014
As part of the the machine learning group, worked with face and speaker recognition. My research was mainly focused in face recognition, although I was also supporting the speaker recognition team. The outcome of this project was a product called CPqD Smart Authentication.

Publications

Journal Articles

T. d. F. Pereira, A. Anjos and S. Marcel, "Heterogeneous Face Recognition Using Domain Specific Units," in IEEE Transactions on Information Forensics and Security. doi: 10.1109/TIFS.2018.2885284

FREITAS PEREIRA, TIAGO; KOMULAINEN, JUKKA; ANJOS, ANDRÉ; DE MARTINO, JOSÉ MARIO; HADID ABDENOUR; PENTIKÄINEN, MATTI and MARCEL SÉBASTIEN. "Face liveness detection using dynamic texture." EURASIP Journal on Image and Video Processing 2014, no. 1 (2014): 2.

Guillaume Heusch, Tiago de Freitas Pereira, and Sébastien Marcel. A comprehensive exper- imental and reproducible study on selfie biometrics in multistream and heterogeneous settings. (Paper Submitted to) - IEEE Transactions on Biometrics, Behavior, and Identity Science, 2019

Proceedings

FREITAS PEREIRA, TIAGO, and SÉBASTIEN MARCEL. "Heterogeneous Face Recognition using Inter-Session Variability Modelling." Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops. 2016.

PEREIRA, T. F. ; ANJOS, A. R. ; MARTINO, J. M. ; MARCEL, S. . Can face anti-spoofing countermeasures work in a real world scenario?. In: 6th IAPR International Conference on Biometrics (ICB2013), 2013, Madrid, Spain. 6th IAPR International Conference on Biometrics (ICB2013), 2013.

ANJOS, A.; GUNTER, M.; de FREITAS PEREIRA, T.; KORSHUNOV, P.; MOHAMMADI, A. and MARCEL, S. (2017). "Continuously reproducing toolchains in pattern recognition and machine learning experiments." In Thirty-fourth International Conference on Machine Learning, August 2017.

SEQUEIRA, ANA, et al. "Cross-Eyed 2017: Cross-Spectral Iris/Periocular Recognition Competition." IEEE/IAPR International Joint Conference on Biometrics. No. EPFL-CONF-233586. IEEE, 2017.

FREITAS PEREIRA, TIAGO, and SÉBASTIEN MARCEL. "Periocular biometrics in mobile environment." Biometrics Theory, Applications and Systems (BTAS), 2015 IEEE 7th International Conference on. IEEE, 2015.

BEVERIDGE, J. ROSS, et al. "The ijcb 2014 pasc video face and person recognition competition." Biometrics (IJCB), 2014 IEEE International Joint Conference on. IEEE, 2014.

GUNTER, M., et al. ; The 2013 Face Recognition Evaluation in Mobile Environment. In: 6th IAPR International Conference on Biometrics (ICB2013), 2013, Madrid, Spain. 6th IAPR International Conference on Biometrics (ICB2013), 2013.

KHOURY, E., et al. ; The 2013 Speaker Recognition Evaluation in Mobile Environment. In: 6th IAPR International Conference on Biometrics (ICB2013), 2013, Madrid, Spain. 6th IAPR International Conference on Biometrics (ICB2013), 2013.

CHINGOVSKA, I., et al. ; The 2nd Competition on Counter Measures to 2D Face Spoofing Attacks. In: 6th IAPR International Conference on Biometrics (ICB2013), 2013, Madrid, Spain. 6th IAPR International Conference on Biometrics (ICB2013), 2013.

Awards

Idiap PhD Student Award 2018