

Umberto Michieli

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🌐 [Umberto Michieli](#)
Date of birth: 28/11/1994



I am a Computer Vision and Deep Learning research engineer. My goal is to contribute to the continual adaptation of AI to human needs and its adoption into everyday life.

Last Update: April 20, 2021.

Education

- 2018–2021 **Ph.D. in Information Engineering, University of Padua.**
(expected) Research topic: "Knowledge Transfer Techniques for Semantic Segmentation".
Supervisor: prof. Pietro Zanuttigh.
Fellowship: University scholarship on free subject.
- 2016–2018 **M.Sc. in Telecommunication Engineering, University of Padua.**
Grade: 110/110 Summa cum Laude.
Thesis: "Link Prediction on Real and Synthetic Complex Networks".
Fellowship: Scholarship grant "Mille e una lode" for merit by University of Padova (2018)
- 2013–2016 **B.Sc. in Information Engineering, University of Padua.**
Grade: 110/110 Summa cum Laude
Thesis: "Correlation and Coherence Analysis between EEG and EMG Signals".
- 2008–2013 **High School Diploma, Liceo Scientifico Giorgione, Castelfranco Veneto.**

Work Experience

- Sep. 2020 – **Internship at Samsung Research UK, AI Research Engineer.**
May 2021 Supervisor: prof. Mete Ozay
- Feb. – Jul. **Visiting Researcher at Technische Universität Dresden (TUD).**
2018 Experimental research on link prediction on real and synthetic complex networks.
Supervisor: prof. Carlo Vittorio Cannistraci.
Fellowship: Erasmus fellowship & TUD grant to attend NetSci 2018
- 2018-20 **Teaching Assistant.**
Machine Learning (18/19 and 19/20), M.Sc. course
Computer Vision (18/19), M.Sc. course
- Reviewer.**
- *Journals:* **IEEE** T-MM, T-NNLS, T-ETC, T-IV; **Elsevier** Information Fusion (INFFUS); **ACM** TOMM; **MDPI** Remote Sensing, Applied Sciences; **ISPRS** Journal of Photogrammetry and Remote Sensing
 - *Main conferences:* ICPR, ICASSP, CPHS, BGM
 - *Workshops:* CVPRW on Continual Learning, ECCVW on Transferring and Adapting Source Knowledge, ICMLW on Continual Learning
- Seasonal Schools,** M2L2020, AI-DLDA2020, REGML2020, GTTI2020, ICVSS2019, GTTI2019, CMMRS2018.

Fellowships and Awards

- 2020 ICPR2020 Free Attendance Pass from the General Chairs.
- 2020 Collaborator of SEED project "Semantic Segmentation in the Wild" (EUR 33K).

- 2018 Selected and awarded a fellowship from the organizers of "*The Cornell, Maryland, Max Planck Pre-doctoral Research School*" (CMMRS).
- 2018 Fellowship by Technische Universität Dresden to attend NetSci 2018.
- 2018 Erasmus fellowship at Technische Universität Dresden.
- 2018 Scholarship grant "Mille e una lode" for merit by University of Padova.

Personal Skills

Languages

- Italian **Mother Tongue**
- English **C1 level (Advanced user)**
- Spanish **A2 level (Basic user)**

Computer skills

- Programming and scripting with different languages: python, MATLAB, java, C++, bash, batch
- Deep learning frameworks: Tensorflow, Pytorch, Keras
- Data science toolkits: Jupyter Notebooks, Pandas, Scikit-learn
- Discrete event network simulator ns-3
- Typesetting: L^AT_EX

Communication and Managerial Skills

Supervision, I have co-supervised more than 20 M.Sc. and B.Sc. dissertations. Many works were published in international peer-reviewed conferences and journals.

Team Work, I worked in teams with people from different cultural backgrounds, both on site and remotely.

Project Management, I am pre-enrolled at AICQ SICEV "Associated Project Manager" Register. I was finalist of *Accenture Innovation Business Game 2017*.

Publications

Journals

- [1] U. Michieli and P. Zanuttigh, "Knowledge Distillation for Incremental Learning in Semantic Segmentation," *Elsevier Journal on Computer Vision and Image Understanding (CVIU)*, 2021.
- [2] M. Toldo, U. Michieli, G. Agresti, and P. Zanuttigh, "Unsupervised Domain Adaptation for Mobile Semantic Segmentation based on Cycle Consistency and Feature Alignment," *Image and Vision Computing (IMAVIS)*, 2020.
- [3] M. Toldo, A. Maracani, U. Michieli, and P. Zanuttigh, "Unsupervised Domain Adaptation in Semantic Segmentation: a Review ," *Technologies*, vol. 8, no. 35, 2020.
- [4] M. Mel, U. Michieli, and P. Zanuttigh, "Incremental and Multi-Task Learning Strategies for Coarse-to-Fine Semantic Segmentation," *Technologies, special issue on Computer Vision and Image Processing Technologies*, vol. 8, no. 1, 2020.
- [5] U. Michieli, M. Basetton, G. Agresti, and P. Zanuttigh, "Adversarial Learning and Self-Teaching Techniques for Domain Adaptation in Semantic Segmentation," *IEEE Transactions on Intelligent Vehicles (T-IV)*, vol. 5, no. 3, pp. 508–518, 2020.

Conferences

- [6] U. Michieli and M. Ozay, "Are All Users Treated Fairly in Federated Learning Systems?," *Conference on Computer Vision and Pattern Recognition (CVPR), Workshop on Responsible Computer Vision (RCV)*, 2021.

- [7] F. Barbato, M. Toldo, U. Michieli, and P. Zanuttigh, "Latent Space Regularization for Unsupervised Domain Adaptation in Semantic Segmentation," *Conference on Computer Vision and Pattern Recognition (CVPR), Workshop on Autonomous Driving (WAD)*, 2021.
- [8] U. Michieli and P. Zanuttigh, "Continual Semantic Segmentation via Repulsion-Attraction of Sparse and Disentangled Latent Representations," *Computer Vision and Pattern Recognition (CVPR) 2021 [acceptance rate approx. 27%]*, 2021.
- [9] M. Toldo, U. Michieli, and P. Zanuttigh, "Unsupervised Domain Adaptation in Semantic Segmentation via Orthogonal and Clustered Embeddings," *Winter Conference on Applications of Computer Vision (WACV) [acceptance rate approx. 28%]*, 2021.
- [10] U. Michieli, E. Borsato, L. Rossi, and P. Zanuttigh, "GMNet: Graph Matching Network for Large Scale Part Semantic Segmentation in the Wild," *European Conference on Computer Vision (ECCV), Glasgow (UK) [acceptance rate=26%]*, 2020.
- [11] T. Spadotto, M. Toldo, U. Michieli, and P. Zanuttigh, "Unsupervised Domain Adaptation with Multiple Domain Discriminators and Adaptive Self-Training," *International Conference on Pattern Recognition (ICPR), Milan (Italy) [first round acceptance rate=35.6%]*, 2020.
- [12] U. Michieli and P. Zanuttigh, "Incremental Learning Techniques for Semantic Segmentation," *International Conference on Computer Vision (ICCV), Workshop on Transferring and Adapting Source Knowledge in Computer Vision (TASK-CV), Seoul (South Korea)*, 2019.
- [13] U. Michieli, M. Camporese, A. Agiollo, G. Pagnutti, and P. Zanuttigh, "Region Merging Driven by Deep Learning for RGB-D Segmentation and Labeling," *International Conference on Distributed Smart Cameras (ICDSC), Trento (Italy)*, 2019.
- [14] M. Biasetton, U. Michieli, G. Agresti, and P. Zanuttigh, "Unsupervised Domain Adaptation for Semantic Segmentation of Urban Scenes," *Conference on Computer Vision and Pattern Recognition (CVPR), Workshop on Autonomous Driving (WAD), Long Beach (US)*, 2019.
- [15] U. Michieli and L. Badia, "Game Theoretic Analysis of Road User Safety Scenarios Involving Autonomous Vehicles," *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna (Italy)*, pp. 1377–1381, 2018.
- [16] G. Cisotto, U. Michieli, and L. Badia, "A coherence study on EEG and EMG signals," *IEEE Global Wireless Summit (GWS), Aarhus (Denmark)*, pp. 372–376, 2016.

Book Chapters

- [17] U. Michieli, M. Toldo, and P. Zanuttigh, "Unsupervised Domain Adaptation and Continual Learning in Semantic Segmentation," *Advanced Methods and Deep Learning in Computer Vision, Elsevier*, 2021 (scheduled).

I hereby authorize the processing of the personal data contained in this CV in compliance with the Italian Personal Data Protection Code (Legislative Decree no. 196 of 30 June 2003).