

# Nunzio Alexandro Letizia

## Curriculum Vitae

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 [nunzio-alexandro-letizia](#)

 [Nunzio A. Letizia](#)

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## Profile

Co-founder and CTO of PiktID, building GenAI-based solutions for automatic image editing at scale. Researcher-turned-founder with a PhD in Communications Engineering and publications at NeurIPS and in IEEE Transactions. Combining deep expertise in machine learning with hands-on full-stack engineering and product development.

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## Work Experience

July 2022 – Present **PiktID FlexCo**, *Co-founder and Chief Technology Officer*.

Architecting and building from scratch the full GenAI stack powering AI-driven image editing platforms focused on **human identities**.

- **On-Model** – SaaS for fashion e-commerce enabling model swap, flat-lay to on-model conversion, and AI identity management; designed for high-volume batch processing with API integration, trusted by 50+ fashion brands including Zalando [↗](#)
- **Studio** – comprehensive image editing platform featuring identity anonymization, facial expression editing, face swap, full-body and background generation, and image upscaling, serving **300K+** users [↗](#)

Dec. 2018 - Dec. 2022 **University of Klagenfurt**, *Teaching Assistant and Research Project Participant*.

Designed and taught university courses while contributing to EU-funded research projects.

- **Teaching:** Machine Learning for Information and Communication Engineering, Signal Processing for Communications, Digital Signal Processing, Communications Engineering
- **Projects:** Assessment of G3-PLC technology improvements, ERASMUS+ KA NEON, ERASMUS+ KA BENEFIT

### Visiting

Dec. 2022 - Jan. 2023 **Princeton University**, *Visiting Researcher*, Princeton.

Work on deep learning-based algorithm for channel capacity estimation, supervision of Prof. H.Vincent Poor, department of electrical engineering [↗](#)

March - July 2018 **Emory University**, *Master Degree Thesis Research*, Atlanta.

Work on Compressive Sensing of cardiac data and detection of systolic peaks in a PPG signal, supervision of Prof. Gari Clifford, department of biomedical informatics [↗](#)

### Volunteering

May 2025 - Present **NeurIPS**, *Reviewer*.

Peer reviewer for the *Advances in Neural Information Processing Systems* conference

August 2024 - Present **Lead The Future**, *Mentor*.

Mentor of multiple high-achieving STEM Italian students and professionals in a non-profit organization focused on *Give Back* [↗](#)

2013 - 2018 **Mathematics Olympiad Preparation Courses**, *Teacher*.

Topics covered: Calculus, Algebra and Number Theory

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## Education

Mar. 2019 - Oct. 2024 **PhD in Communications Engineering**, *University of Klagenfurt*, Institute for Networked and Embedded Systems.

Thesis : "**Deep Learning Models for Physical Layer Communications**"

Supervisors: Prof. Andrea M. Tonello and Prof. Bernhard Rinner

- Oct. 2016 - Oct. 2018 **Master's Degree in Electronics Engineering**, *Università degli Studi di Udine*, Curriculum Telecommunications.  
Final Mark: 110/110 cum Laude  
Thesis : "Compressive Sensing of Cardiac Data"  
Supervisors: Prof. Gari D. Clifford, Prof. Roberto Rinaldo and Dr. Giulia Da Poian
- Oct. 2013 - July 2016 **Bachelor's Degree in Electronics Engineering**, *Università degli Studi di Udine*.  
Final Mark: 110/110 cum Laude  
Thesis : "Acquisizione di segnali con tecniche di Compressive Sensing"  
Supervisors: Prof. Roberto Rinaldo and Dr. Giulia Da Poian
- Sept. 2013 - Oct. 2018 **School for Advanced Studies**, *Università degli Studi di Udine*.  
5 years full scholarship of excellence, high-level educational path

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## Selected Publications

- [1] **Nunzio A. Letizia**, Nicola Novello and Andrea M. Tonello, "Mutual Information Estimation via  $f$ -Divergence and Data Derangements," *Advances in Neural Information Processing Systems*, Vancouver, pp. 105114-105150, Dec. 2024.
- [2] **Nunzio A. Letizia**, Andrea M. Tonello and H.Vincent Poor, "Cooperative Channel Capacity Learning," *IEEE Communications Letters*, vol. 27, no. 8, pp. 1984-1988, Aug. 2023.
- [3] **Nunzio A. Letizia** and Andrea M. Tonello, "Segmented Generative Networks: Data Generation in the Uniform Probability Space," *IEEE Transactions on Neural Networks and Learning Systems*, vol. 33, no. 3, pp. 1338-1347, March 2022.
- [4] **Nunzio A. Letizia**, Babak Salamat and Andrea M. Tonello, "A Novel Recursive Smooth Trajectory Generation Method for Unmanned Vehicles," *IEEE Transactions on Robotics*, vol. 37, no. 5, pp. 1792-1805, Oct. 2021.
- [5] **Nunzio A. Letizia** and Andrea M. Tonello, "Capacity-Driven Autoencoders for Communications," *IEEE Open Journal of the Communications Society*, vol. 2, pp. 1366-1378, June 2021.

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## Fellowships and Awards

- November 2025 Best Dissertation Award, *Faculty of Technical Sciences*.
- October 2021 Best Paper Award, *IEEE ISPLC 2021*.
- July 2016 Best Graduated Student of the Electronics Engineering Curriculum.
- December 2014 Marinella Panozzo Scholarship, *Best Freshman in Electronics Engineering Degree*.
- Sept. 2013 - Oct. 2018 Scholarship of Excellence, *Scuola Superiore dell'Università degli Studi di Udine*.
- May 2013 Italian Mathematics Olympics Finalist, *Bronze Medal*.

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## Skills and Competences

- AI/ML Python, PyTorch, TensorFlow, ComfyUI; fine-tuning and large-scale deployment of open-source image generation models (Stable Diffusion, Flux, Wan, Qwen); containerized model serving.
- Infra, Coding Git, Docker, AWS, GCP, Azure, Cursor (1B+ tokens in 2025), Claude Code.
- Theoretical Expertise Advanced math and statistics, machine learning, deep learning, generative models, signal processing, communication theory, information theory, computer vision.
- Languages Italian (native), English (fluent), Spanish (fluent), German (A2).