

Tommaso Calò

✉ tommaso.calo@polito.it 🌐 tommasocalo.github.io 📞 +39 340 288 2547 📍 Turin, Italy

RESEARCH STATEMENT & SELECTED PUBLICATIONS

My research bridges **Human-Computer Interaction** and **Artificial Intelligence**, focusing on automated understanding, modeling, and generation of user interfaces^[1-5]. I develop machine learning methods for design-to-code translation^[1,9,10], sketch-based interface prototyping^[9,10], and adaptive user interface generation^[4,5,7,8]. My work explores how **AI can interpret and personalize UI components** from visual, multimodal, and behavioral signals^[4,6,8]—empowering end-users to adapt software to their needs.

1. **Advancing Code Generation from Visual Designs through Transformer-Based Architectures and Specialized Datasets.** T Calò, L De Russis. *PACM-HCI*, 2025. <https://doi.org/10.1145/3734190>
2. **Investigating How Computer Science Researchers Design Their Co-Writing Experiences With AI.** A M Roffarello, T Calò, L De Russis. *CHI*, 2025. <https://doi.org/10.1145/3706598.3713205>
3. **DeepFlow: A Flow-Based Visual Programming Tool for Deep Learning Development.** T Calò, L De Russis. *IUI*, 2025. <https://doi.org/10.1145/3708359.3712109>
4. **Bridging Web and Figma: Automating Large-Scale UI Dataset Generation for AI-Enhanced Design.** F Russo, T Calò, L De Russis. *EICS*, 2025. 🏆 <https://doi.org/10.1145/3731406.3734974>
5. **Evaluating Visual Prompting Modalities for Generative AI-Assisted UI Design.** T Calò, L De Russis. *IS-EUD*, 2025. https://doi.org/10.1007/978-3-031-95452-8_11
6. **Enhancing Smart Home Interaction through Multimodal Command Disambiguation.** T Calò, L De Russis. *Personal and Ubiquitous Computing*, 2024. <https://doi.org/10.1007/s00779-024-01827-3>
7. **Towards Educator-Driven Tutor Authoring: Generative AI Approaches for Creating Intelligent Tutor Interfaces.** T Calò, C Maclellan. *L@S*, 2024. <https://doi.org/10.1145/3657604.3664694>
8. **Leveraging Large Language Models for End-User Website Generation.** T Calò, L De Russis. *IS-EUD*, 2023. https://doi.org/10.1007/978-3-031-34433-6_4
9. **Style-Aware Sketch-to-Code Conversion for the Web.** T Calò, L De Russis. *EICS*, 2022. <https://doi.org/10.1145/3531706.3536462>
10. **Creating Dynamic Prototypes from Web Page Sketches.** T Calò, L De Russis. *PAINT*, 2022. <https://doi.org/10.1145/3563836.3568724>

EDUCATION

Ph.D. in Artificial Intelligence

National Program, Politecnico di Torino

Nov 2021 – Nov 2024

Turin, Italy

- ▶ Dissertation on UI modeling and AI-assisted End-User Development
- ▶ Results published at CHI, IUI, PACM, L@S and PUC

M.Sc. in Data Science and Engineering

Politecnico di Torino

Sep 2019 – Oct 2021

Turin, Italy

- ▶ Focus on machine learning and data analysis
- ▶ GPA: 3.9

B.Sc. in Information Engineering

Politecnico di Torino

Sep 2015 – Mar 2019

Turin, Italy

- ▶ Focus on statistics and optimization

PROFESSIONAL EXPERIENCE

Visiting Scholar

Georgia Institute of Technology

Feb 2024 – Jul 2024

Atlanta, USA

- ▶ Conducted research on human-like learning in AI systems under Prof. Christopher MacLellan

- ▶ Developed novel approaches for educator-driven intelligent tutoring systems, published paper at L@S 2024 on AI-assisted tutor authoring

Teaching Assistant - Human Computer Interaction

Sep 2022 – Present

Politecnico di Torino

Turin, Italy

- ▶ Guiding 50+ students annually in developing and evaluating AI-driven user interfaces

Python Programming Instructor

Sep 2023 – Present

ITS Foundation

Turin, Italy

- ▶ Teaching Python programming to 30 students with aerospace/mechatronics focus

Teaching Assistant - Computer Vision

Feb 2023 – Jul 2023

Politecnico di Torino

Turin, Italy

- ▶ Led 12 hands-on labs for 80 students on algorithm implementation and ML integration

SW Analyst - Internship

June 2018 – Sept 2018

Marelli

Cluj-Napoca, Romania

- ▶ Mapped processes and identified inefficiencies in SW department

AWARDS & HONORS

- ▶ **Best Late Breaking Result Paper Award** - EICS (2025)
- ▶ **PhD Scholarship** - Three-year merit-based (2021)
- ▶ **1st Place** - PwC Cybersecurity Challenge (2020)
- ▶ **1st Place** - FSAE Italy Electric Category (2019)
- ▶ **Top 10** - High School Mathematics Competition (2015)
- ▶ **Exchange Student** - Ranked in Top 5% in Mathematics at Sydney High School (2014)
- ▶ **Top 5% Finisher** - Ibiza Half Marathon (2025)
- ▶ **3rd Place** - Winter Sailing Championship (2024)

SERVICE & LEADERSHIP

- ▶ **Associate Chair** – CHI 2025 Late-Breaking Results track
- ▶ **Program Committee / Reviewer**
 - ▶ CHI (2024 – 2025), IUI (2024 – 2025), EICS (2024 – 2025)
 - ▶ IS-EUD 2025, PACM-HCI 2025, L@S 2024 – 2025

OTHER PUBLICATIONS

- ▶ **Towards Step-Aware ITSs: Generation and Evaluation of Synthetic Step-by-Step Exercise Solutions.** F Russo, T Calò, L De Russis. *L@S'25: Proceedings of the Twelfth ACM Conference on Learning@Scale* (2025)
- ▶ **Beyond Final Answers: Evaluating Large Language Models for Math Tutoring.** A Gupta, J Reddig, T Calò, D Weitekamp, CJ MacLellan. *AIED'25: Artificial intelligence in education: 26th international conference* (2025)
- ▶ **Generating Comparative Explanations of Financial Time Series.** J Fior, L Cagliero, T Calò. *ADBIS'22: European Conference on Advances in Databases and Information Systems* (2022)

CERTIFICATIONS & LANGUAGES

- ▶ **TOEFL iBT:** 98/120 (C1 Level)
- ▶ **English:** Fluent (C1)
- ▶ **Italian:** Native