

PROFESSIONAL EXPERIENCE

Technical Lead, ATHENA Research and Innovation Center, GR

November 2019-Present

- Participating in national and EU-funded projects for the Narralive team.
- Leading the design and development process of the team's product and research efforts for effective user interaction and creating engaging digital experiences.
- **NoFold – Social VR Platform for Board Games:**
 - Leading the creation of a platform for board game creators and players.
 - Conducting quantitative and qualitative studies with creators gathering user requirements.
 - Implementing user interaction through rapid prototyping and iterative design using Unity.
 - Successfully demoed an early prototype to tens of users at the FDG conference with very positive feedback.
- **Narralive Suite:** Leading the design for the unification of the several web-based tools the team has created for the authoring and experiencing of digital interactive narratives.

Web and Unity Engineer, ATHENA Research and Innovation Center, GR

January 2017-October 2019

- Software engineer on the front-end aspects of the EU-funded project EMOTIVE (<https://emotiveproject.eu/>).
- Collaborated with an interdisciplinary consortium of European partners with the aim of using emotional storytelling to change how people cultural experience heritage sites.
- **Narralive tools:**
 - Designed and developed the team's web-based authoring and experiencing systems for digital interactive narratives in cultural heritage using iterative design and the Angular framework.
 - The tools have been used by thousands of users for this and several other projects.
- **Catalhoyuk VR:**
 - Coordinated the design and implementation of a multi-user VR experience for the archaeological site of Catalhoyuk.
 - Designed and developed all interactions and game logic using Unity, SteamVR and Photon.
 - Successfully evaluated with hundreds of users and made public on itch.io (<https://narralive.itch.io/catalhoyuk-vr>).

Full-Stack Web Engineer and IT Support, CERN, CH

October 2014-September 2015

- Technical student working as a software engineer for CERN's S'Cool LAB Project.
- Responsible for the design and implementation of two websites for the CERN's S'Cool LAB Project, for both the front and the back end using Drupal and MySQL. Provision of technical support for CERN's Education Department.

RESEARCH EXPERIENCE

Visiting Research Scholar, Virginia Tech, USA

October 2023-April 2024

- Joined the 3DI Group for a 6-month scholarship awarded by Fulbright and IKY.
- Advisor: Doug Bowman

Research Assistant, National and Kapodistrian University of Athens, GR

January 2023-Present

- Researcher assistant for the EU-funded project CAPHE (<https://www.caphe.space/>).
- Collaborating with a multidisciplinary and multicultural consortium of artists, philosophers, architects and educators. Providing open presentations, tutorials and demos related to XR technology and research.
- **Opera VR performance:** Conceptualized, designed and developed a proof-of-concept for blending opera with real-time VR performance using Unity and VRTK. The result was a part of a live concert in Kenya.

Research Assistant, National and Kapodistrian University of Athens, GR

October 2020-September 2022

- Research assistant for the EU-funded research project BRIDGES (<https://www.bridges-horizon.eu/>).
- Collaborated with an interdisciplinary consortium of European partners with the aim of bringing a holistic solution for co-located group experiences in room-scale immersive XR environments.
- Explored different immersive approaches for **evaluation methods of XR experiences** through a user study.
- Part of the design process of 2 use-case scenarios, a **virtual visit to Ancient Athens** and a **firefighter training simulation**.

EDUCATION

PhD - Computer Science, National and Kapodistrian University of Athens, Greece

June 2020-Fall 2024

- Research interests: HCI, Virtual Reality, Physics-simulated Hand Interaction, Avatars, Embodiment.
- Contributed to the open source Unity library Hand Physics Toolkit (HPTK).
- Advisor: Maria Roussou

MSc - Computer Science, National and Kapodistrian University of Athens, Greece

October 2017-March 2020

- Thesis in the field of HCI and VR: “*Effects of Virtual Hand Representation on Interaction and Embodiment in HMD-based Virtual Environments Using Controllers*”
- Advisor: Maria Roussou

BSc - Computer Science, National and Kapodistrian University of Athens, Greece

April 2007-February 2016

SKILLS

- **Programming tools:** C#, Unity, VS Code, Git.
- **Unity SDKs and Libraries:** XR Interaction Toolkit, Meta XR SDKs, VRTK-Tilia, SteamVR, HPTK, Animation Rigging, ML-Agents, Photon, NormCore

TEACHING AND SERVICE

Course Assistant, Department of Informatics and Telecommunications, NKUA, GR

- Human-Computer Interaction (YΣ08) – Fall 2018, 2019, 2020, 2021, 2022
- Design and Use of Database Systems (K29) – Spring 2022

Student Mentorship

- 1 undergraduate research student, Department of Computer Science, Virginia Tech, USA
- 4 bachelor and 2 master theses, Department of Informatics and Telecommunications, NKUA, GR

Service

- Reviewer: CHI (2022, 2023, 2024), IEEE VR (2024), FDG (2022), Virtual Reality Journal (2021)
- Committee Member: EuroMed (2020), FDG (2022)

AWARDS

- **PhD Research Mobility Scholarship**, Partnership of Fulbright and IKY-State Scholarships Foundation, 2023.
- **Gary Marsden Travel Award**, ACM SIGCHI, 2021.

SELECTED PUBLICATIONS

- **Lougiakis, C.**, Gonzalez, J., Ganas, G., Katifori, A., Ioannidis, I.-P., & Roussou, M. (2024) “*Comparing Physics-based Hand Interaction in Virtual Reality: Custom Soft Body Simulation vs. Off-the-Shelf Integrated Solution*”. IEEE VR.
- Kougoumtzian, L., **Lougiakis, C.**, & Katifori, A., (2023). ““*Show your cards!*”: *What do creators need for the game design process?*”. FDG.
- Ganas, G., **Lougiakis, C.**, Katifori, A., Roussou, M., Ioannidis, Y., & Ioannidis, I. P. (2023). “*Comparing Different Grasping Visualizations for Object Manipulation in VR using Controllers*”. IEEE TVCG.
- Katifori, A., **Lougiakis, C.**, & Roussou, M. (2022). “*Exploring the Effect of Personality Traits in VR Interaction: the Emergent Role of Perspective-Taking in Task Performance*”. Frontiers in Virtual Reality.
- Katifori, A., **Lougiakis, C.**, & Roussou, M. (2021). “*The Role of High-fiving for Sustaining Engagement in Social VR Experiences*”. CHI 2021 SocialVR Workshop.
- **Lougiakis, C.**, Katifori, A., Roussou, M., & Ioannidis, I.-P. (2020). “*Effects of Virtual Hand Representation on Interaction and Embodiment in HMD-based Virtual Environments Using Controllers*”. IEEE VR.