CHRISTOS LOUGIAKIS

https://louspawn.github.io/

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PROFESSIONAL EXPERIENCE

Technical Lead, ATHENA Research and Innovation Center, GR

November 2019-Present

- Leading the R&D of national and EU-funded projects of the Narralive team (https://www.narralive.org/)
- Focusing on user interaction and engagement.

• NoFold - Social VR/MR Platform for Board Games:

- o Leading the creation of a next generation platform for board game creators and players.
- o Conducting quantitative and qualitative studies with creators gathering user requirements.
- o Implementing player interactions through rapid prototyping using Unity, Meta's SDKs and Photon.
- oVR Demo of early prototype at the FDG 2023 conference and MR Demo at Meta's Hackathon 2024 and local events.
- Narralive Suite: Unifying the team's web tools for interactive digital narratives.
- Writing project proposals for grant applications (so far 2 European and 4 national).

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/).

• Narralive tools:

o Designed and developed web-based authoring and experiencing systems for interactive narratives in cultural heritage. OUsed Angular and Bootstrap. The systems have been used by hundreds of users.

Catalhoyuk VR:

- o Coordinated the design and implementation of a multi-user VR experience for a remote archaeological site.
- o Designed and developed all interactions and game logic using Unity, SteamVR and Photon.
- oSuccessfully 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.
- Designed and developed two websites, for both the front and the back end, using Drupal and MySQL.
- Provision of technical support for CERN's Education Department.

RESEARCH EXPERIENCE

Research Assistant, National and Kapodistrian University of Athens, GR

January 2023-Present

- Delivering open presentations, tutorials, and demos for the EU-funded project CAPHE (https://www.caphe.space/).
- Collaborating with diverse artists, philosophers, architects, and educators on 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 (Tilia). The result was a part of a live concert in Kenya.

Visiting Research Scholar - 3DI Lab, Virginia Tech, USA

October 2023-April 2024

- Research on physics-based hand interaction: designed, implemented, and ran user studies.
- Used Unity, Meta Interaction SDK and a self-custom version of Hand Physics Toolkit (HPTK).
- Advisor: Doug Bowman

Research Assistant, National and Kapodistrian University of Athens, GR

October 2020-September 2022

- Collaborated with European partners on a holistic solution for co-located group experiences in room-scale immersive XR for the EU-funded research project BRIDGES (https://www.bridges-horizon.eu/).
- Explored different evaluation methods in XR experiences through a user study with 38 participants.
- Contributed to designing 2 XR use-case scenarios: a virtual visit to Ancient Athens and a firefighter training simulation.

S EDUCATION

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

June 2020-Spring 2025

- Research topics: HCI, Virtual Reality, UX, Physics-simulated Hand Interaction, Avatars, Embodiment, Perception.
- 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"

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

April 2007-February 2016



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

- 4 bachelor and 3 master theses (VR/AR/MR, HCI), Department of Informatics and Telecommunications, NKUA, GR
- 1 undergraduate research student (VR, Reinforcement Learning), Department of Computer Science, Virginia Tech, USA

Reviewer: CHI ('22, '23, '24, '25), IEEE VR ('24, '25), TVCG ('24), VRST ('24), Frontiers of VR ('24), FDG ('22), VR Journal ('21)

AWARDS

- 3DUI Contest Winner Award, IEEE VR, 2025.
- PhD Research Mobility Scholarship, Partnership of Fulbright and IKY-State Scholarships Foundation, 2023.
- Gary Marsden Travel Award, ACM SIGCHI, 2021.

SELECTED PUBLICATIONS

- "Effects of Different Tracker-driven Direction Sources on Continuous Artificial Locomotion in VR", Lougiakis, C., Mandilaras, T., Katifori. A., Ganias, G., Ioannidis, I.-P, & Roussou, M. (2024), VRST.
- "Comparing Physics-based Hand Interaction in Virtual Reality: Custom Soft Body Simulation vs. Off-the-Shelf Integrated Solution", Lougiakis, C., Gonzalez, J., Ganias, G., Katifori, A., Ioannidis, I.-P, & Roussou, M. (2024), IEEE VR.
- "Comparing Different Grasping Visualizations for Object Manipulation in VR using Controllers", Ganias, G., Lougiakis, C., Katifori, A., Roussou, M., Ioannidis, Y., & Ioannidis, I. P. (2023), IEEE TVCG.
- "Exploring the Effect of Personality Traits in VR Interaction: The Emergent Role of Perspective-Taking in Task Performance", Katifori, A., Lougiakis, C., & Roussou, M. (2022), Frontiers in Virtual Reality.
- "Effects of Virtual Hand Representation on Interaction and Embodiment in HMD-based Virtual Environments Using Controllers", Lougiakis, C., Katifori, A., Roussou, M., & Ioannidis, I.-P. (2020), IEEE VR.