Jose Luis **Ponton**

RESEARCH ASSISTANT · COMPUTER ANIMATION · XR · COMPUTER GRAPHICS

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Education

Universitat Politècnica de Catalunya   *Barcelona, Spain*

M.Sc. IN INNOVATION AND RESEARCH IN INFORMATICS   *Sep. 2020 - Jul. 2022*

- Grade: 9.15/10.00
- Specialization in Computer Graphics and Virtual Reality
- Thesis: Motion Matching for Character Animation and Virtual Reality Avatars in Unity

Universitat Politècnica de Catalunya   *Barcelona, Spain*

B.S. IN COMPUTER SCIENCE AND ENGINEERING   *Sep. 2016 - Jul. 2020*

- Grade: 9.03/10.00 (Rank 3 of 239).
- Thesis: Navigation and collaboration techniques for Virtual Reality.

Research Experience

ViRVIG Research Group - Universitat Politècnica de Catalunya   *Barcelona, Spain*

RESEARCH ASSISTANT   *May. 2021 - Present*

- Researched real-time motion synthesis for character animation and VR avatars: Deep Learning, Motion Matching, IK and Motion Capture.
- Developed an open-source Unity package to easily integrate VR self-avatars to any application. https://github.com/UPC-ViRVIG/AvatarGo.

CYENS Centre of Excellence   *Nicosia, Cyprus*

RESEARCH INTERN   *Jul. 2022 - Sep. 2022*

- Researched Deep Learning for data-driven character animation from sparse input data.
- Supervisor: Dr. Andreas Aristidou.

ViRVIG Research Group - Universitat Politècnica de Catalunya   *Barcelona, Spain*

RESEARCH INTERN   *Apr. 2019 - Apr. 2021*

- Developed collaborative VR and AR tools for visualizing and interacting with architectural designs. Project in collaboration with Temple Expiatori de la Sagrada Família.

Skills

Programming	Python, C#, C++, LaTeX, R, CUDA, GLSL/HLSL
Game Engines/Libraries/SW	Unity, PyTorch, Blender, Git, SteamVR, Oculus, ARCore
Languages	English, Spanish, Catalan

Publications

Combining Motion Matching and Orientation Prediction to Animate Avatars for Consumer-Grade VR Devices

JOSE LUIS PONTON, HAORAN YUN, CARLOS ANDUJAR, NURIA PELECHANO

ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA). Sep. 2022. Durham, United Kingdom. (10.1111/cgf.14628)

https://upc-virvig.github.io/MMVR/

AvatarGo: Plug and Play self-avatars for VR

JOSE LUIS PONTON, EVA MONCLUS, NURIA PELECHANO

Eurographics 2022 - Short Papers. May. 2022. Reims, France. (10.2312/egs.20221037).

Selected Projects

Please, visit my website for a complete list of my projects: https://joseluisponton.com/projects

Motion Matching

Motion Matching implementation for the Unity game engine. It includes a spring-based character controller, BVH-accelerated search, inertialization blending, automatic and customizable feature extraction/selection, foot lock, among other features.

https://github.com/JLPM22/MotionMatching