

Interests

Scientific applications of: Visual computing, high-performance computing, simulations, machine learning.

Education

- Sep 2017 – March 2020 **Master's in Computer Science at ETH Zürich with focus in visual computing**
- Sep 2014 – Feb 2015 Secure Cloud Services certificate, EXIN
- Sep 2013 – Jun 2017 Bachelor's in Computer Engineering at the Technical University of Madrid (UPM)

History

Since Aug 2020	Software Engineer at Meteomatics Won internal event with CUDA acceleration (x70 speed-up), storage compression (x50 smaller), and on-the-fly decompression. Ingestion of weather models , and satellite wavelength channels (to RGB). Real-time blending of satellite images and radar composites . Use of Vision algos to clean up raw data. Dev of CSR reprojections and complex parameters based on finite derivatives and interp. methods. Design reliable/fast distribution across systems with RabbitMQ . Created data pipeline visualization tool .
Feb, May-July 2020	ETH Research assistant: developed Houdini plugin for neural smoke processing and taught a Tool Physics course.
Sep 2019 – Jun 2020	Training a neuronal network for a novel and efficient 3D patch-based smoke stylization method at the Computer Graphics Laboratory of ETH
Jan 2019 – Jul 2019	Internship at Esri R&D Zürich . Development of GPU globe terrain with instancing and GPU tile stitching with WebGL and TypeScript.
Feb 2018 – May 2018	Dev of a 3D strategy game about railway structure on mars for the Xbox
Sep 2017 – Dec 2017	Photon Beam Diffusion Subsurface Scattering implementation with texture parametrization and multiple-scattering for own path-tracer
Feb 2017 – Jun 2017	AES Cipher implemented on CUDA
Dec 2016 – May 2017	Multi-GPU pore fluid simulation at Repsol (petroleum industry) and the Research Centre for Computational Simulation at UPM
Sep 2016 – Jan 2017	Web-dev and gamification project at the CETTICO research group
Nov 2015 – Oct 2016	Bluetooth finder Android app
Jun 2014 – Oct 2017	Leading and development of "The Final Test", a CryEngine demo game .
Jun 2014 – Sep 2014	Google Summer Code contributor game-engine animation library

Experience with **C/C++ Python Bash CUDA Rust Java OpenGL JS PHP SQL HTML CSS PyTorch**
Photoshop Blender Davinci-Resolve Linux Git 3Ds-Max AWS Premiere

Languages: Spanish (Native), English (Advanced C1 – 199 Cambridge Score), German Intermediate