

MAEL VIGNAUX, PHD

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EXPERIENCE

2014 –

SOFTWARE DEVELOPER, FREELANCER

Development of interactive systems highlighting Architectural visits in Virtual Reality. Creation of innovative systems for user interactions at the beginning of the virtual reality emergence.

Team leader and designer of a virtual agent tools whose goal was to identify cognitive disorders caused by cranial trauma.

2014 –

TEACHER, PARIS UNIVERISTY - ITESCIA

Integration of a course as part of the training Master of Programming at Paris Cergy University. Class topic is focused on the integration of an audio engine (FMOD) and the usage of it in both “Unity 3d” and “Unreal Engine 4”. The course also focus on the creation of different sound effect to highlight student’s year of work.

AUGUST – NOVEMBER 2013

GAME DESIGNER – TEAM LEADER,

Management of a development team and lead game design for the creation of a real-time online virtual casino prototype on Unity 3D. Prototype sold at the end of development.

APRIL – AUGUST 2013

INTERNSHIP, ASTROPHYSICS LABORATORY OF MARSEILLE

Internship for the creation of a control algorithm (Matlab and Labview) for the wavefront analyzer of the European Extremely Large Telescope. Publication and presentation of results at the **AO4ELT** of Florence.

EDUCATION

DECEMBER 2017

PHD DEGREE, ARIANE SPACE – AIX MARSEILLE UNIVERSITY

Candidate for PhD majoring in physics, optics and signal processing. The thesis was financed and co-directed by Ariane space and the Aix-Marseille university. The objectives were to create diverse algorithm to help thin film deposition engineers create more stable and reliable process. The thesis led to 2 publications and the release of a thin-film simulation and prediction software.

SEPTEMBER 2014

MASTER DEGREE, AIX-MARSEILLE UNIVERISTY

Master degree specialized in physics, optics and laser instrumentation.

OTHER

2007 – MODDER,

Participation and release of diverse game modification as sound designer, musician and programming help, with for instance “Logistique” or “Dniepr” who had a total download count of almost a million copy.

2007 – SOUND DESIGNER,

Sound design and integration on different animated shorts, as with for instance “salesman pete” which won the 3rd place during the imagina award of 2011 and vimeo staff pick.

SKILLS

- C++ , Matlab, HTML/CSS
- Unreal Engine’s Blueprint system
- Sound design, Music Composition
- Physics and Optics
- T-Shaped skill

PUBLICATIONS

- M. Vignaux et al “Trinary mappings: a new tool for the determination of potential spectral paths for optical monitoring of optical interference filters,” Appl. Opt. 57, 7012-7020 (2018)
- M. Vignaux et al "In situ optical monitoring of Fabry-Perot multilayer structures: analysis of current techniques and optimized procedures," Opt. Express 25, 18040-18055 (2017)
- Alexandre Joerg, Mael Vignaux, and Julien Lumeau, "Versatile digital micromirror device-based method for the recording of multilevel optical diffractive elements in photosensitive chalcogenide layers (AMTIR-1)," Opt. Lett. 41, 3415-3418 (2016)
- Kacem El Hadi, Mael Vignaux 1, Thierry Fusco “ Development of a Pyramid Wave-front Sensor, “ AO4ELT 3