Alexandre Morgand

PhD candidate in Computer Vision
Specialized in light sources modeling for realism in Augmented-Reality and Diminished Reality.
Looking for opportunities in Computer Graphics/Augmented+Diminished Reality/SLAM in 2018.

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Education

Since 2014 **Clermont Auvergne University**, ***Phd Student in Computer Vision***.
Thesis on Augmented Reality improvement through light source modeling in real-time.
Supervised by Mohamed Tamaazousti and Directed by Adrien Bartoli.
- Supervision of four interns
- Publications in ISMAR/TVCG/VRST and filing of one international patent

2008–2013 **EPITA**, ***Master Degree in Computer-Science & Engineering***.
- Major in Cognitive Sciences and Advanced Computing
- Class rank: 2 of 41

June–August 2010 **University of California Berkeley**.
Structure and Interpretation of Computer Programs CS61A
Machine Structures CS61C.

Experience

2013–2014 **French Alternative Energies and Atomic Energy Commission**, Research Engineer.
Augmented Reality for Military purposes and 3D localization for automatic driving

2013 **French Alternative Energies and Atomic Energy Commission**, 6 months Internship, Realism improvement for Augmented Reality.
Specularity Detection (published in VISAPP 2014), Light sources modeling, Diminished Reality

2011-2013 **Sup'biotech**, Bioinformatics Teacher, 30 students per class, freshman and sophomore, Python, CSS/HTML, MySQL.

2011–2012 **Gostai**, 5 months Internship, Urbi project in the Kernel team.
Urbiscript language improvement, Debian/RPM packages for Urbi, OpenCV, ROS for robot prototyping.

2009–2010 **Tutor**, *Preparatory classes*, Mathematics/Algorithms.

Computer Skills

Languages **C++, C, Python, Matlab,** GLSL.

Tools **Ogre 3D, Agisoft Photoscan, MeshLab, Blender, OpenGL, Photoshop, Adobe Premiere Pro**.

Notable Projects

Personal project (2016) **C++**, Inpaiting and Diminished Reality toolbox.

Final Year Project (2012) **C++/ROS**, Automatic Robot Guidance in a maze from flying drone using monocular camera.

Augmented Reality (2012) **C++**, ARpiano: Interactive Music Sheets by projecting notes on the piano using Vuzix Augmented Reality glasses.

Video Game (2011) **C++**, Particles and Physics Engine.

Publications

VRST 2017 **A. Morgand, M. Tamaazousti and A. Bartoli**, *A multiple-view geometric model of specularities on non-uniformly curved surfaces.*, *VRST*, 2017.

TVCG 2017 **A. Morgand, M. Tamaazousti and A. Bartoli**, *A Multiple-View Geometric Model of Specularities on Non-Planar Shapes with Application to Dynamic Retexturing*, *TVCG*, 2017.

TVCG 2017 **A. Morgand, M. Tamaazousti and A. Bartoli**, *A Geometric Model for Specularity Prediction on Planar Surfaces with Multiple Light Sources*, *TVCG*, 2017.

Patent **A. Morgand, M. Tamaazousti and A. Bartoli**, *Image Processing in the Presence of Specularities*, 2017.

ISMAR 2016 **A. Morgand, M. Tamaazousti and A. Bartoli**, *An Empirical Model for Specularity Prediction with Application to Dynamic Retexturing*, *ISMAR*, 2016.

VISAPP 2014 **A. Morgand and M. Tamaazousti**, *Generic and Real-time Detection of Specular Reflections in Images*, *VISAPP*, 2014.

Languages

French **Mother tongue**.

English **Fluent (TOEIC 2013 890/990)**.