# Marc Hartley

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**Summary** — Currently finishing my PhD studies in Procedural terrain generation.

## **Skills**

**Research interests** Procedural generation, 3D modeling, Geometry processing, Physics simulation

Programming Languages C/C++, Python, Julia, R, VBA, Java, C#, AutoIt

Web Development PHP, SQL, HTML5, CSS3, jQuery, AJAX, AngularJS, ASP.NET

Database Management Oracle, Postgres, MySQL, Google Datastore, Firebase, MongoDB, InfluxDB

Program Architecture UML, MERISE

Languages French (Native), English (Fluent), Spanish (Intermediate), German (Intermediate)

#### Education

PhD student: "Procedural generation of underwater environments"

2021 – Present

University of Montpellier, France Director: FIORIO Christophe, Supervisors: FARAJ Noura & GODARY-DEJEAN Karen

Master's in Visual Computing

2019 - 2021

University of Nantes, France
Bachelor's in IT Systems Management

Valedictorian

Hitema, Paris, France

2018 - 2019

**DUT in Computer Science** 

2016 - 2018

IUT of Annecy, France

# Experience

# Mission complémentaire d'enseignement

2021 - 2024

University of Montpellier, Montpellier, France

- L1: Computational complexity
- L3: Image processing and 3D programming. TER: Procedural terrain generation
- M1: OpenGL programming, mesh processing. TER: Procedural vegetation generation

#### **Master 2 Research Internship**

Feb 2020 – Aug 2020

LISTIC, University Savoie Mont-Blanc, Annecy, France

- Researching a low cost ML process for gait measurement with the use of PIR sensors trained through RGBD camera.
- Implementation of pose estimation, computation of gait measures, training of NN from the depth camera to PIR sensors.
- Best paper award at XXIII IMEKO World Congress 2021.

# Master 1 Research Internship

Apr 2019 – Jul 2019

LS2N, University of Nantes, France

 Implementation and analysis of a methodology for compression of temporal 3D point-cloud sequences with the use of TSPLVQ (Tree-Structured Point-Lattice Vector Quantization).

### **Bachelor Apprenticeship**

Sep 2018 - Aug 2019

Domomat, Annecy, France

- Developed and optimized an e-commerce website and an intranet application for employees.

## VBA Developer Internship

Apr 2018 – Jun 2018

Marti Construction SA, Geneva, Switzerland

- Developed a dynamic shared knowledge portal and a stock management tool.

#### **Publications**

Abdel Khalek, F. and Hartley, M. and Benoit, E. and Perrin, S. and Marechal, L. and Barthod, C. A low-cost machine learning process for gait measurement using biomechanical sensors

XXIII IMEKO World Congress 2021

Best paper award

## Hartley, Marc and Mellado, Nicolas and Fiorio, Christophe and Faraj, Noura. Flexible terrain erosion

The Visual Computer, 2024

- Best student paper award at CGI2024