

Monir Hadji

HPC :: Performance :: Graphics :: Blockchain :: Distributed Computing

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French citizen

9 years of C++ enthusiasm

Experience

referees contact upon request

- ToposWare, Inc. - Tokyo, Japan**
Since Dec. 19
2 years
Software Engineering: Distributed Computing and Blockchain
 - ✓ Implementation of an ACM paper to prevent leaks on the transaction graph
 - ✓ Implementation of a sidechain prototype on top of Bitcoin Core
 - ✓ Involved on the cross-chain protocol design
- OLM Digital, Inc. - R&D, Animation Studio (Pokemon, Berserk) - Tokyo, Japan**
Apr/19-Sep/19
6 months
Master thesis: Optimal transport theory for morphing of 2D & 3D shapes with different topology
 - ✓ Built a recent state of the art for morphing mainly from SIGGRAPH papers
 - ✓ Built a morphing prototype between different mesh topology using Wasserstein metric
 - ✓ Built a simple generator of 3D from 2D single view
 - ✓ Autodesk Maya plugin implementation
 - ✓ In progress : contribution to the [libigl](#) open source project
- CERN - European Organization for Nuclear Research - Geneva, Switzerland**
Mar/17-Apr/18
14 months
Software development: C++ optimization particle trajectories reconstruction at LHCb laboratory
 - ✓ Aiming at doing complex process for 3TB/s of data provided by the detector
 - ✓ Algorithm and code optimizations for Intel CPU (profiling, vectorization, cache, etc)
 - ✓ Redaction of presentation: [Results overview](#) and [HPC profiling tutorial](#)
 - ✓ Contributions to the [open source project](#)
- CNRS - French National Center for Scientific Research - Lyon, France**
Jan/16-Mar/16
3 months
Internship: LIRIS laboratory is specialized on computer graphics
 - ✓ Implement a topologically correct mesh voxelizer for the DGtal framework
 - ✓ Experimental work with C++ meta-programming for discrete geometry
 - ✓ Contributions to the [open source project](#)



Skill

Programming	mainly C++ 11/14/17 but also C and Java	Graphics	OpenGL glsl OpenCV MayaAPI
System	POSIX and SystemV IPC, Debian	Profiler	Intel-VTune® linux-perf callgrind
Script	Python MATLAB Scilab	Parallel	OpenMP MPI OpenCL
French: native		English: fluent	Japanese: beginner

Project

the whole list is on my github

- 2018 · 4months ○ Geometry processing library e.g. Delaunay and mesh simplification · [link](#)
- 2018 · 2weeks ○ Fast Burrows-Wheeler transform for Blocksorting · [link](#)
- 2016 · 2months ○ Fast value interpolation by space decomposition for simplexes · [link](#)
- 2015 · 5months ○ Framework for the 2D&3D visualization of graph algorithm execution · [link](#)
- 2013 · 3months ○ Parser and viewer of 3D model Collada DAE and Wavefront OBJ · [link](#)

Education

- 2018 ○ **MSc. 2nd year - Computer Science** University of Lyon, France
gpu programming · geometry processing · image synthesis · machine learning · image analysis · compression
- 2017 ○ **Gap year at CERN** Geneva, Switzerland
- 2016 ○ **MSc. 1st year** University of Lyon, France
- 2015 ○ **Bachelor** University of Reims, France - general computer science; ranked 2nd / 45 students