

BART KEVELHAM

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Objective

A leading role in a development team within a real-time computer graphics context, using my academic and industry experience to provide creative solutions for both artists and consumers.

Employment

Senior researcher at Fondation Artanim, Geneva, Switzerland

Dec. 2012 – Nov. 2015

Jan. 2016 – Jan. 2016

- R&D lead on [Taylormatic](#). A Unity3D based garment customization platform.
- Developer on [Real Virtuality](#). A VR platform combining VR headsets and motion capture.
- R&D of a position-based dynamics approach to the [physical simulation of muscle elongation](#).
- Developer on a series of games for an exhibit at the Natural History Museum of Geneva.
- Developer on ["Motion Controlled Interactive Display"](#), a Kinect controlled video carousel and viewer.
- Developer on the ["Téo et Léonie"](#) Unity3D-based mobile applications for iOS and Android, providing an animated audio book and AR content.

Research assistant at MIRALab, University of Geneva, Switzerland

Oct. 2006 – Sep. 2012

- Research into the CUDA-based implementation of physics based garment simulation software.
- Development of a real-time virtual fashion platform, Virtual Try On.
- Maintenance of and support for in-house VR/AR engine VHD++
- Contributing author to several EU and Swiss National research proposals.
- Lab representative in EU funded research projects SERVIVE and 3DLife.
- Member of 3DLife's Network Steering Board.
- Assistance in the organization of the CGI 2010 conference in Singapore.

Member of the Editorial Office for "The Visual Computer" research journal

Oct. 2006 – Sep. 2010

- Management of all (>1000) research paper submissions from initial submission to publication.
- Assistance in the scheduling of each monthly issue including special issues.

**Visiting researcher Nanyang Technological University Singapore,
Institute for Media Innovation**

Jun. 2010 – Jul. 2010

- Assistance during the CGI 2010 conference in Singapore.
- Various demonstrations of VTO technology to academic and commercial visitors.
- Technology exchange with IMI related to the MIRALab's Virtual Try On technology.

Education

University of Twente, Enschede, The Netherlands

MSc. in Computer Science (2006)

Emphasis:

Computer graphics

Thesis: *"Real-time Shadows in Augmented Reality Environments"*

Minor:

Imaging (Digital Imaging and Image Processing)

Relevant courses:

Linear Algebra, Numerical Mathematics and Programming Techniques, Software Engineering, Graphics and Virtual Reality, Advanced Graphics

Internships:

2004 *MIRALab, University of Geneva (3 months)*

Development of translator for CgFX shaders to Cg shaders including automatic setup of appropriate OpenSceneGraph based scenegraph.

2005 *MIRALab, University of Geneva (7 months) Master project*

Development of GPU based shadow mapping capabilities for mixed reality environments.

Student Research Projects:

Rigid body dynamics

Development of a rigid body dynamics simulator.

3DWebcam

Development of 3D face tracking software in Java. Using an epipolar geometry approach with two simple webcams.

Computer competencies

Programming Languages:

C++, C#, C, and limited working experience with JavaScript, Python, SQL, Java

Engines, APIs and Libraries:

Unity3D (PC, Android, iOS, WebGL), Qt, VTK, PCL, JSON.net, Boost, OpenSceneGraph

Development tools:

Microsoft Visual Studio (2003-2015), CMake, Git, SVN, CVS

General Software:

Adobe Premiere, Adobe Photoshop, Adobe Photoshop Lightroom, Microsoft Office, Blender, Autodesk Maya

Languages

Dutch: Fluent (Native Language)

English: Fluent

German: Advanced

French: Advanced