

JONATHAN DECKER

lokno.rabbitfury.com • website
Lokno1@gmail.com • email

(410) 591-0714 • phone
@Lokno • twitter

Jonathan Decker earned his Master's Degree at UMBC and currently works at the Naval Research Laboratory in Washington, DC. His interests include graphics programming, GPGPU, cluster computing, machine learning and optimization.



EDUCATION

- University of Maryland, Baltimore County (2008)
Graduated, Master's of Science, Computer Science
- University of Maryland, Baltimore County (2006)
Graduated, Bachelor of Science, Computer Science

EXPERIENCE

- Naval Research Laboratory (2008 - present)
Graphics programmer, visualization researcher
- UMBC Graduate Department (2007)
Teaching Assistant

SKILLS

- **Programming Languages**
C, C++11, C#, Javascript, Python, PHP, Lua, Go, Squirrel
- **GPU Computer/Shader Languages**
HLSL/CG, GLSL, CUDA, OpenCL
- **Graphical APIs**
DirectX9, DirectX11, OpenGL 2.0/3.0

- **IDEs**
Visual Studio 08-10, Xcode 4, Eclipse
- **Revision Systems**
Perforce, Subversion, Git

PROJECTS

Building a Large Tiled-Display Cluster

Designed, quoted, built and maintain a large 245.76 megapixel tiled-display cluster at NRL. 18 compute nodes power a 12x5 U-shaped display cluster. Implemented a demonstration of the cluster using the Equalizer middleware which renders a 36k by 18k resolution spherical panorama of the night sky.

- C++, Python

Jonathan W. Decker and Mark A. Livingston. Proceedings of IEEE Symposium on Large-Scale Data Analysis and Visualization, October 2012.

Cruise GPGPU Optimization

Worked on an applied research project to accelerate various subsystems of CRUISE_Missiles with graphics hardware, a physics-based computer simulation of ship missile defense systems.

- C++, CUDA, OpenCL

C. Scannell, J. Decker, J. Collins, W. Smith. 2013, 51st AIAA Aerospace Sciences Meeting including the New Horizons Forum and Aerospace Exposition.

LittleBigPlanet Community Level Featured on GOTY Edition

Commissioned by Sony Computer Entertainment Europe to develop a level called "In Search" for the GOTY edition of LittleBigPlanet.



Thesis: System of Bound Particles for Interactive Flow Visualization

Developed a particle system to visualize the flow of simulated hurricane data. Small sets of the particles are bound together with spring constraints, creating deformable elements that tumble as they move, demonstrating vorticity within a given field.

- C#, HLSL, XNA Game Studio 1.0

Jonathan Decker. M.S. Thesis, University of Maryland at Baltimore County, December 2007. Exposition.

Leveraging Graphics Hardware to Accelerate Dynamic Programming

Implemented Longest Common Subsequence and Edit Distance on the GPU using CUDA.

- C++, CUDA

John Kloetzi, Brian Strege and Jonathan Decker. In Proceedings of EGPGV 2008: the 8th Eurographics Symposium on Parallel Graphics and Visualization, Crete, Greece, April 14-15, 2008.

Bird Watching : Interactive Exhibit Visualization

Worked with artist Katherine Marmor to create artistic visualization of activity in a surveillance-technology inspired exhibit, Bird Watching. Presented as a tech demo at SIGGRAPH 2008.

- C++, Actionscript, Macromedia Flash MX 2004

References available upon request