Jerald Thomas

25 East Kent Road
Duluth, MN 55812

thoma891@d.umn.edu
http://www.d.umn.edu/~thoma891
(218) 252-0863

Projects

Nerve (neurologically enhanced real-time virtual environment)
Currently working on an undergraduate research project called nerve. The goal of nerve is to determine if current consumer brain computer interface (BCI) devices will act as a good interface for an immersed virtual environment. Using the campus SIVE (Simulation and Interaction in Virtual Environments) lab and the Emotiv Epoc to preform experiments, and the Blender Game Engine to create a controllable virtual environment. Project ongoing.

MuVR (multi-user virtual reality)
MuVR is a project with goals to create an immersive virtual reality platform that is easily accessible, readily available, self containing, and multi-user. Using exclusively consumer products we created a system that is completely worn by the user and is not physically connected to anything else. The platform uses an internal tracking algorithm, and hence is not dependent on any external localization system. Project ongoing.

Quic Energy
Quic Energy focuses on trying to model how heat and other environmental variables propagate through an urban environment. We are working on utilizing massively parallel systems to generate large scale simulations in an efficient manner. Project ongoing.

Research Interests

- Human computer interaction in spatial environments
- Wearable computing
- Artificial intelligence algorithms
- Human robot interaction
- Embedded systems focusing on system security
- Radio frequency communication

Publications

- "Effectiveness of commodity BCI devices as means to control an immersive virtual environment." J. Thomas, S. Jungst, and P. Willemsen. *Proceedings of the 1st symposium on Spatial user interaction*. ACM, 2013.

Awards

- Deans List, Northwester College – Fall 2010
- Deans List, UMD – Fall 2011, Spring 2013
- UMD Engineering Scholarship recipient – Fall 2012, Spring 2013

Activities

- IEEE member – Arrowhead branch, IEEE Computer Society member
- ACM member
- Member of the campus branches of the ACM and IEEE, UMD Media Arts Club
- Member of the Nevis High School FIRST Robotics Team - 2009
- Mentor of the Nevis High School FIRST Robotics Team – 2010 to 2011
- Mentor of the Denfeld High School FIRST Robotics Team – 2011 to present

References and letters of recommendation available upon request