

## Louis Kratz

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### Education

Ph.D. Computer Science, Drexel University, September 2006 - Current  
M.S. Computer Science, Drexel University, September 2004 - June 2006 *Magna Cum Laude*  
B.S. Computer Science, Drexel University, September 2001 - June 2006 *Magna Cum Laude*

### Research Experience

Research Assistant 2006–Current  
Drexel University Philadelphia, PA  
Investigation of unusual event detection in video streams of extremely crowded scenes using probabilistic approaches.

Research Assistant 2005–2006  
Drexel University Department of Physics Philadelphia, PA  
Design and development of distributed software for astrophysical calculations. Integration of distributed software for real time visualization on stereoscopic displays.

### Teaching Experience

Teaching Assistant, Experimental Game Design (Graduate Level), Drexel University, Spring 2007  
Teaching Assistant, Systems Architecture (Undergraduate Level), Drexel University, 2004-2006

### Honors and Awards

Drexel University George Hill, Jr. Fellowship 2007  
Drexel Chapter of Upsilon Pi Epsilon 2006  
Drexel University Dean's List 2002-2006  
Drexel Milton Rosenberg Scholarship 2005  
Delaware Governor's Award for Outstanding Volunteer  
National Society of Collegiate Scholars  
AJ Drexel Scholar

### Publications

*Anomaly Detection in Extremely Crowded Scenes Using Spatio-Temporal Motion Pattern Models*  
Louis Kratz and Ko Nishino. Accepted for publication in Proc. of IEEE Conference on Computer Vision and Pattern Recognition CVPR '09, June, 2009.

*Spatio-Temporal Motion Pattern Modeling of Extremely Crowded Scenes*. Louis Kratz, Ko Nishino. The 1st International Workshop on Machine Learning for Vision-based Motion Analysis. October, 2008.

*Wizards: 3D Gesture Recognition for Game Play Input*. Louis A. Kratz, Frank J. Lee and Matthew A. Smith. Proceedings of the 2007 conference on Future Play. 209–212. November, 2007.

*Explorations in Gameplay: Bimanual Input*. Frank J. Lee, Louis A. Kratz, and William B. Morgan. The Journal of Game Development, 2(1):47–62, 2006.

**Presentations**

“Target Tracking in Video Sequences,” Guest Lecture - Advanced Computer Vision. Drexel University. May 14, 2009.

“Event Detection in Video Streams,” Ph.D. Candidacy Examination, Drexel University Department of Computer Science. May 22, 2008.

“Innovative Input for Games,” Guest Lecture - Experimental Game Design. Drexel University. June 4, 2007.

“Steerable Filters for Interactive Applications,” Guest Lecture - Advanced Computer Vision. Drexel University. May 31, 2007.

**Mentorship and Service Activities**

University City Kiwanis Club

Drexel University College of Engineering Summer Mentorship Program 2007-2008

Drexel University Research Experience for Teachers 2007-2008

Drexel University STAR Program 2006

First Robotics 2005