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TIMOTHY R. LANGLOIS

education

Ph.D. Candidate, Computer Science, Cornell University, 2011–Present.
Advised by Doug James
Courses: Computational Fluid Dynamics, Computational Motion, Nonlinear Finite Element Methods, Dynamical Systems, Sparse Matrix Computations, Realistic Image Synthesis, Partial Differential Equations, Operating Systems, Programming Languages and Logics, Analysis of Algorithms

B.S., Computer Systems Engineering, University of Massachusetts Amherst, 2009.
Summa Cum Laude
Double major in Computer Science

research interests

Physical Simulation
Computer Graphics
Computational Physics (esp. Acoustics)
Scientific Computing

publications

Conference and Journal articles

Timothy R. Langlois, Changxi Zheng, and Doug L. James. "Toward Animating Water with Complex Acoustic Bubbles." *ACM Transactions on Graphics (SIGGRAPH 2016)*. 35(4), July, 2016.

Timothy R. Langlois, Steven S. An, Kelvin K. Jin, and Doug L. James. "Eigenmode Compression for Modal Sound Models." *ACM Transactions on Graphics (SIGGRAPH 2014)*. 33(4), August, 2014.

Timothy R. Langlois and Doug L. James. "Inverse-Foley Animation: Synchronizing rigid-body motions to sound." *ACM Transactions on Graphics (SIGGRAPH 2014)*. 33(4), August, 2014.

Timothy R. Langlois, Ramgopal R. Mettu, and Richard W. Vachet. "Protein Identification Using Receptor Arrays and Mass Spectrometry." *Advances in Computational Biology*, Springer Advances in Experimental Medicine and Biology Series. 680, 343-351, 2010.

Patents

Srinivas Ravela, William J. Dupree, Timothy R. Langlois, Marilyn M. Wolfson, and Christopher M. Yang. "Method and apparatus for generating a forecast weather image." U.S. Patent No. 8,625,840. 7 Jan. 2014.

experience

Research Intern, Disney Research Boston, 2015 (summer).
Software Engineer, MIT Lincoln Laboratory, 2009–2011.
Developed distributed, real-time weather prediction algorithms.
Software Engineering Intern, Raytheon, 2008 (summer).
Software Engineering Intern, DEKA Research and Development, 2006–2008 (summers and winters).
Developed software for embedded systems on various medical devices.

teaching

Teaching Assistant, Physically Based Animation (CS5643), Cornell University, 2015.
Teaching Assistant, Introduction to Computer Graphics (CS4620), Cornell University, 2013.

grants & awards

2012–2016. Recipient, National Science Foundation, Graduate Research Fellowship.

service

Reviewer, ACM SIGGRAPH 2014 - 2016.

Reviewer, ACM Transactions on Networking 2016.

Reviewer, ACM SIGGRAPH Asia 2015.

Cornell Computer Science Student Brown Bag Czar, 2013-2015.

Organized weekly presentations on current research by graduate students.

Volunteer, Expand Your Horizons, 2012.

Co-organized an educational workshop for middle-school students.