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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, 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, 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

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. Recipient, National Science Foundation, Graduate Research Fellowship.

### service

Reviewer, ACM SIGGRAPH 2014.  
 Cornell Computer Science Student Brown Bag Czar, 2013–Present.  
 Organized weekly presentations on current research by graduate students.  
 Volunteer, Expand Your Horizons, 2012.  
 Co-organized an educational workshop for middle-school students.