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# Timothy R. Langlois

## education

Ph.D., Computer Science, Cornell University, 2011–2016.
Advised by Doug James
Courses:

- Nonlinear Finite Element Methods
- Computational Motion
- Dynamical Systems
- Sparse Matrix Computations
- Programming Languages and Logics
- Realistic Image Synthesis
- Partial Differential Equations
- Operating Systems
- Analysis of Algorithms

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

## research interests

Computer Graphics
Computational Physics
Acoustics
Scientific Computing

## publications

*Conference and Journal Articles*

Timothy R. Langlois, Ariel Shamir, Daniel Dror, Wojciech Matusik, David I.W. Levin. "Stochastic Structural Analysis for Context-Aware Design and Fabrication." *ACM Transactions on Graphics (SIGGRAPH Asia 2016)*. 35(6), December, 2016.

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 Scientist: Adobe Research Creative Technologies Lab, 2016-Present.

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/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.

## service

Reviewer:

- ACM SIGGRAPH
- ACM SIGGRAPH Asia
- ACM TON
- CGF
- TVCG
- ECCV
- Pacific Graphics

Organizer: Cornell Computer Science Student Brown Bag Seminar, 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.

## grants & awards

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