

Jón Tómas Grétarsson

<http://ulfhedinn.net/>
<http://www.stanford.edu/~jontg/>
255 S Bayview Ave, Sunnyvale, CA 94086
(774) 262-4752 — jontg@cs.stanford.edu

EDUCATION

Stanford University, Stanford, CA – M.S. / Ph.D. Computational and Mathematical Engineering [3.86]	09/2006 – current
Worcester Polytechnic Institute, Worcester, MA – B.S. Computer Science [3.57], with a minor in Mathematics [4.00]	08/2002 – 05/2006 High Distinction

EXPERIENCE

Stanford University, Stanford, CA Post. Doc. – Worked in Charbel Farhat's research lab, developing numerical methods ...	03/2012 – current
Stanford University, Stanford, CA Research Assistant – Worked in Charbel Farhat's research lab, developing numerical methods related to embedded interface tracking and simulation. Worked on compressible flow and fluid-structure interface components of PhysBAM.	07/2008 – 03/2012
Stanford University, Stanford, CA Research Assistant – Worked in Ron Fedkiw's research lab, developing numerical methods for the simulation of compressible and incompressible fluids and interfaces.	07/2007 – 06/2011
Google Inc, Mountain View, CA Intern – Designed and implemented software to replace the functionality of Mailman, and is compatible with the Google Groups framework and existing spam, abuse and delivery solutions.	06/2008 – 09/2008
Stanford University, Stanford, CA Course Assistant – Ran problem sessions, graded and held office hours for Partial Differential Equations in Engineering, Math. Methods in Computer Vision, Robotics and Graphics, and Math. Methods for Fluids, Solids and Interfaces.	01/2007 – 08/2008
Google Inc, Mountain View, CA Intern – Implemented an algorithm involving a one-pass log-storage algorithm for counting the frequency of strings in a large data set. Designed and Implemented an email bounce tracker.	06/2007 – 09/2007
Lincoln Laboratory at MIT, Cambridge, MA Intern – Developed optimal scheduling algorithms for the SBSS (Space-Based Space Surveillance) project, involving discrete optimization of 10^3 variables over a continuous interval.	04/2006 – 10/2006
Lincoln Laboratory at MIT, Cambridge, MA Co-op Student – Designed and implemented a space wargaming engine and related optimization algorithms.	08/2005 – 11/2005
Intel Corporation, Hudson, MA Intern – Developed XML-aware routing software to demo next-generation technology. Became local expert in IXP-C, an in-house language similar to C and made recommendations on the IXP-C compiler and good coding practice.	04/2005 – 09/2005
Callidus Consulting Inc, Worcester, MA Co-founder – Created an independent technology consulting company providing web design and business technology solutions to corporate customers such as the American Antiquarian Society and Tatnuck Booksellers.	08/2003 – 10/2004

PUBLICATIONS

- **J Grétarsson**, and R Fedkiw. Fully conservative leak-proof treatment of thin solid structures immersed in compressible fluids. *Submitted*, 2012.
- **J Grétarsson**, N Kwatra, and R Fedkiw. Numerically Stable Fluid-Structure Interactions Between Compressible Flow and Solid Structures. *Journal of Computational Physics* 230, 3062–3084, 2011.
- M Lentine, **J Grétarsson**, and R Fedkiw. An Unconditionally Stable Fully Conservative Semi-Lagrangian Method. *Journal of Computational Physics* 230, 2857–2879, 2011.
- M Lentine, **J Grétarsson**, C Schoeder, A Robinson-Mosher, and R Fedkiw. Creature Control in a Fluid Environment. *IEEE TVCG* 17, 682–693, 2011.
- K Wang, **J Grétarsson**, A Mein and C Farhat. Numerical algorithms for tracking dynamic fluid-structure interfaces in embedded/immersed boundary methods. *AIAA-2011-3385, 6th AIAA Theoretical Fluid Mechanics Conference*, Honolulu, Hawaii, June 27-30 (2011).
- N Kwatra, **J Grétarsson** and R Fedkiw. Practical Animation of Compressible Flow for Shock Waves and Related Phenomena. *ACM SIGGRAPH/Eurographics Symposium on Computer Animation*, 207–215, 2010.
- N Kwatra, J Su, **J Grétarsson**, R Fedkiw. A Method for Avoiding the Acoustic Time-Step Restriction in Compressible Flow. *Journal of Computational Physics* 228, 4146–4161, 2009.
- A Robinson-Mosher, T Shinar, **J Grétarsson**, J Su, R Fedkiw. Two-way Coupling of Fluids to Rigid and Deformable Solids and Shells. *SIGGRAPH 2008, ACM TOG* 27, 46.1-46.9 (2008).
- **J Grétarsson**, F Li, M Li, A Samant, H Wu, M Claypool, and R Kinicki. Performance Analysis of the Intertwined Effects Between Network Layers for 802.11g Transmissions. *WMuNeP: Proceedings of the 1st ACM Workshop on Wireless Multimedia Networking and Performance Modeling*, pg. 123–130; October 2005.
- **J Grétarsson**, M Putnam, and M Shaw. Wargaming Modeling and Visualization. *Technical Report MXC-1082*. Worcester Polytechnic Institute; Fall 2005.
- **J Grétarsson**, A Lash, and M Forrest. Serving All Types of Learners. *Technical Report JMW-SLEW*. Worcester Polytechnic Institute; Spring 2006.

AFFILIATIONS

Association for Computing Machinery (ACM) Current Member.	08/2004 – current
Society for Industrial and Applied Mathematics (SIAM) Co-President of Stanford Chapter (2006-2008), Current Member.	10/2006 – current
Upsilon Pi Epsilon (UPE) Former Vice President (WPI Chapter, 2005-2006), Current Member.	08/2005 – current
Community Advisor Escondido Community Associate responsible for organizing several major events (1,000+ attendees).	09/2007 – 06/2009
Stanford Comedy Club Co-President in charge of organizing and setting up a weekly comedy club.	03/2007 – 03/2009
ICME Student Representative Student Representative for the Stanford ICME department.	09/2006 – 10/2007