John Edwards, Ph.D.

Contact Information	Center for Extreme Data Management and Visualization Scientific Computing and Imaging Institute University of Utah WEB 4660 Salt Lake City, UT 84112	(385) 207-8331 jedwards@sci.utah.edu http://sci.utah.edu/~jedwards
Research	Computational geometry, extreme data management, numerica	al analysis, scientific visualization
Education	Ph.D. Computer Science, The University of Texas, 2013M.S. Computer Science, Brigham Young University, 2004B.S. Computer Science, Utah State University, 1998	
Professional experience	Assistant professor, Idaho State University, 2015-current Post-doctoral fellow, Scientific Computing and Imaging Institu Visiting scholar, University of Hong Kong, 2012 Assistant instructor (during PhD studies), The University of T Robotics and visualization research engineer, Autonomous Solu Research and development engineer, ProLogic, Inc., 2005-2008 Software engineer, Rigaku, Inc., 1999-2005	nte, University of Utah, 2013-2015 Texas, 2010-2013 utions, Inc., 2008-2009
Honors	The University of Texas, Computer Science PhD Fellowship, 20 Graduation Magna Cum Laude, Utah State University, 1998 Member Phi Kappa Phi Honor Society, 1998 Wendell Pope Scholarship, Utah State University, 1998 Superior Student Scholarship, Utah State University, 1996-1998	009 8
PEER-REVIEWED PUBLICATIONS		
Journal	John Edwards, Eric Daniel, Valerio Pascucci, Chandrajit Baj Voronoi Diagram of Closely Spaced Objects. <i>Computer Graph</i>	jaj. Approximating the Generalized <i>ics Forum.</i> To appear. 2015
	John Edwards, Eric Daniel, Justin Kinney, Terrence Sejnowski, ten Harris, and Chandrajit Bajaj. VolRoverN: Enhancing surfa realistic dynamical simulation of cellular and subcellular function 2014.	, Tom Bartol, Daniel Johnston, Kris- ace and volumetric reconstruction for on. <i>Neuroinformatics</i> . 12(2):277-289.
	John Edwards and Chandrajit Bajaj. Topologically correct forests. <i>Computer-Aided Design.</i> 43(10):1296-1306. 2011.	reconstruction of tortuous contour
Conference	Sidharth Kumar, John Edwards, Peer-Timo Bremer, Aaron Kno Vishwanath, Philip Carns, John A. Schmidt, Valerio Pascucci. resolution data. <i>High Performance Computing, Networking</i> , Orleans, LA, November 2014.	oll, Cameron Christensen, Venkatram Efficient I/O and storage of adaptive Storage and Analysis (SC14). New
	John Edwards, Wenping Wang, and Chandrajit Bajaj. Surface ing. <i>Proceedings of the 21st International Meshing Roundta</i> October 2012.	e segmentation for improved remesh- ble, pages 403-418. San Jose, CA,

	John Edwards and Chandrajit Bajaj. Topologically correct reconstruction of tortuous contour forests. <i>Proceedings of the ACM Symposium on Solid and Physical Modeling</i> , pages 51-60. Haifa, Israel, September 2010.
	Joel Alberts, John Edwards, Josh Johnston, and Jeff Ferrin. 3D visualization for improved manip- ulation and mobility in EOD and combat engineering applications. <i>Proceedings of SPIE Defense</i> , <i>Security and Sensing</i> , April 2009.
	Josh Johnston, Joel Alberts, Matt Berkemeier, and John Edwards. Manipulator Autonomy for EOD Robots. 26th Army Science Conference, December 2008.
Theses	(Ph.D.) Analysis-Ready Models of Tortuous, Tightly Packed Geometries, 2013 (M.S.) Live Mesh: An Interactive 3D Image Segmentation Tool, 2004
Research Software	VolRoverN (neuronal reconstruction and geometric analysis) http://www.cs.utexas.edu/~bajaj/cvcwp/?page_id=2089
	$SimpleSeg \ (image \ segmentation \ in \ 3D \ using \ LiveMesh \ - \ no \ longer \ maintained) \\ http://www.youtube.com/watch?v=9KfhFvIvFK4$
Posters	J. Edwards, C. Johnson. Visualizing white matter tracts in the human brain. SIAM Conference on Computational Science and Engineering. Salt Lake City, UT, March 2015.
	S. Kumar, B. Summa, C. Christensen, J. Edwards, V. Pascucci. Multi-resolution I/O for Massive Simulations: Enabling Scalable Visualization and Processing. <i>Predictive Science Academic Alliance Program (PSAAP) TST Meeting.</i> Palo Alto, CA, May 2014.
	 J. Edwards, E. Daniel, C. Bajaj, J. Kinney, T. Bartol, T. Sejnowski, K. Harris, D. Johnston. VolumeRoverN: Analysis-ready domain models of neuronal forests. 2nd Annual Austin Translational Neuroscience Symposium. Austin, TX, October 2012. * Best poster award
	J. Edwards, A. Rand, J. Kinney, K. Harris, C. Bajaj. Analysis-ready meshes of neuronal forests. 1st IEEE Symposium on Biological Data Visualization. Providence, RI, October 2011.
	J. Edwards, A. Gillette, R. K. Bettadapura, A. Rand, C. Rumsey, Q. Zhang, D. Johnston, K. Harris, C. Bajaj. Electrophysiological Models Derived from EM Reconstructions. <i>The National Academies Keck Futures Initiative Conference on Imaging Science</i> . November 2010.
	A. Gillette, R. K. Bettadapura, F. Chowdury, J. Edwards, A. Gopinath, J. Rivera, B. Subramanian, A. Rand, C. Rumsey, Q. Zhang, D. Johnston, K. Harris, C. Bajaj, T. Bartol, D. Keller, J. Kinney, T. Sejnowski. Spatially Realistic and Reduced Electrophysiology Models Derived From EM Reconstruction. <i>MPG-HHMI Janelia Farm High-Resolution Circuit Reconstruction Conference</i> . Berlin, Germany, September 2009.
Contributed talks	Surface segmentation for improved isotropic remeshing. 21st International Meshing Roundtable. San Jose, CA. Oct 9, 2012.
	Topologically correct reconstruction of tortuous contour forests. 14th ACM Symposium on Solid and Physical Modeling. Haifa, Israel. September 1, 2010.
	Advanced techniques for LiDAR visualization and analysis using ArcGIS. 8th International Lidar Mapping Forum. Denver, CO. February 2008.

Invited talks	The adventure of discovery: geometry, topology and visualization. <i>Idaho State University</i> . Pocatello, ID. Oct 17, 2014.
	Exploration of high-dimensional scalar functions. Computational Visualization Center group meeting. Austin, TX. Nov 13, 2013.
	Analysis-ready models of tortuous, tightly packed geometries. University of Colorado Medical Cen- ter. Denver, CO. Mar 1, 2013.
	Analysis-ready models of tortuous, tightly packed geometries. <i>New Mexico State University</i> . Las Cruces, NM. Feb 15, 2013.
	Analysis-ready models of tortuous, tightly packed geometries. <i>Scientific Computing and Imaging Institute</i> . Salt Lake City, UT. Feb 8, 2013.
	Cool Geometry Stuff. Leander High School, Anna Bouboulis Geometry Class. Leander, TX. Jan 5, 2012.
	Surface segmentation for improved isotropic remeshing. University of Hong Kong graphics group meeting. Hong Kong. May 30, 2012.
	Polyhedron separation. Computational Visualization Center group meeting. Austin, TX. Sept 7, 2011.
	Analysis-ready 3D reconstructions of complex objects from planar cross-sectional slices. Computa- tional Visualization Center group meeting. Austin, TX. Mar 25, 2011.
	The connectome: challenges and approaches. Computational Visualization Center group meeting. Austin, TX, Oct 27, 2010.
	LidarExplorer Advanced LiDAR Workshop at the GeoTREE Center of the University of Northern Iowa. August 2007.
GRANT PROPOSAL CONTRIBUTIONS	MRI: Acquisition of advanced Unmanned Aircraft Systems (UAS) remote imaging sensors and ground-based spectrometry for understanding structural and phytochemical function of ecosystems D. Delparte, J. Edwards, J. Rachlow, J. Forbey. NSF15-504. 2015.
	Morse Smale Crystals as Meshing Primitives for Lagrangian Simulations. P-T. Bremer, V. Pascucci, J. Edwards, A. Gyulassy. DOE LAB 14-1003. 2013.
	Form and Function: Multiscale Modeling of Electrophysiology in the Hippocampus. C. Bajaj, D. Johnston. NSF CRCNS 1311276. 2010.
Awards	Translational Neuroscience Symposium Best Poster Award, 2012 (\$200) Professional Development Award for travel to San Jose, 2012 (\$275) Professional Development Award for travel to Rhode Island, 2011 (\$250) Professional Development Award for travel to Israel, 2010 (\$450) University of Texas PhD fellowship, 2009 (\$1000)

PROFESSIONAL SERVICE	Program committee	
	International Conference on Geometric Modeling and Processing (GMP) 2015	
	Reviewer	
	GMP 2015	
	Computing Surveys	
	Computer Aided Geometric Design	
	European Symposium on Algorithms 2014	
Teaching	Courses taught	
	CS 6150 Advanced Algorithms (with Valerio Pascucci, Fall 2013)	
	CS 354 Computer Graphics (Spring 2013)	
	CS 354 Computer Graphics (Fall 2012)	
	CS 108 UNIX (Fall 2011)	
	$CS \ 105 \ C++ \ (Spring \ 2011)$	
	$CS \ 105 \ C++ \ (Fall \ 2010)$	
	Teaching assistant	
	CS 312 Introduction to Programming (Summer 2012)	
	CS 354 Computer Graphics (Spring 2010)	
	CS 303E Elements of Programming (Fall 2009)	
STUDENTS	Zinnia Mukherjee (Masters, University of Utah)	
MENTORED	Sidharth Kumar (PhD, University of Utah)	
	Laura Lediaev (PhD, University of Utah)	
	Eric Greg Daniel (Masters, University of Texas, now at Google)	
Collaborations	Computer Science	
	Valerio Pascucci (SCI, University of Utah)	
	Christopher Johnson (SCI, University of Utah)	
	Chandrajit Bajaj (University of Texas)	
	Wenping Wang (University of Hong Kong)	
	Attile Curleger (SCI)	
	Brian Summa (SCL University of Utah)	
	Josh Johnston (Boise State University)	
	Parris Egbert (Brigham Young University)	
	Other disciplines	
	Andrew Gillette (Mathematics, University of Arizona)	
	Terrence Sejnowski (Neuroscience, Salk Institute)	
	Tom Bartol (Neuroscience, Salk Institute)	
	Kristen Harris (Neuroscience, University of Texas)	
	Justin Kinney (Neuroscience, Massachussetts Institute of Technology)	
	Daniel Johnston (Neuroscience, University of Texas)	