### **CURRICULUM VITAE**

John M. Galeotti, Ph.D. 5 March 2014

# **BIOGRAPHICAL**

**Home Address:** 367 Spahr Street **Birth Date:** 26-January-1979

Pittsburgh, PA 15232

Citizenship: USA

**Business Address:** Carnegie Mellon University

Robotics Institute, NSH A525

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# **EDUCATION**

**BS** Computer Engineering May 2001: *Valedictorian* North Carolina State University; Raleigh, North Carolina

MS Computer Engineering May 2002

North Carolina State University; Raleigh, North Carolina

The EvBot: A Small Autonomous Mobile Robot for the Study of Evolutionary Algorithms in Distributed Robotics Under the direction of Edward Grant

MS Robotics August 2005

Carnegie Mellon University; Pittsburgh, Pennsylvania

Under the direction of George Stetten

NSF Graduate Research Fellowship (Fall 03 - Summer 06)

**PhD** Robotics August 2007

Carnegie Mellon University; Pittsburgh, Pennsylvania

Near-Field Holographic Display for In-Situ Merger of Real-Time Tomographic Data with Direct Vision Under the direction of George Stetten

NSF Graduate Research Fellowship (Fall 03 - Summer 06)

Postdoctoral Robotics September 2007 - August 2009

Carnegie Mellon University; Pittsburgh, Pennsylvania

Under the direction of George Stetten

# **APPOINTMENTS and POSITIONS**

Senior Project Scientist, July 2011 - Present

The Robotics Institute, Carnegie Mellon University; Pittsburgh, Pennsylvania

**Adjunct Assistant Professor** with graduate-student advising privileges, October 2012 - Present Department of Biomedical Engineering, Carnegie Mellon University; Pittsburgh, Pennsylvania

**Adjunct Assistant Professor** with graduate-student advising privileges, November 2012 - Present Department of Bioengineering, University of Pittsburgh; Pittsburgh, Pennsylvania

Project Scientist, August 2009 – June 2011

The Robotics Institute, Carnegie Mellon University; Pittsburgh, Pennsylvania

Visiting Lecturer, January 2008 – October 2012

Department of Bioengineering, University of Pittsburgh; Pittsburgh, Pennsylvania

## **HONORS**

**Teaching Mentor**, spring 2014

Carnegie Mellon University Joint Institute of Engineering

Outstanding Teaching Certificate, 2010-2011 and 2011-2012

University of Pittsburgh School of Engineering

Best Poster Award, 2011

Int. Conf. on Information Processing in Computer-Assisted Interventions (IPCAI)

**Outstanding Reviewer**, 2009

IEEE Transactions on Instrumentation & Measurement

Graduate Research Fellowship, August 2003 - August 2006

National Science Foundation

Dean's Fellowship, August 2001 - August 2002

North Carolina State University

Alumni Scholarship, August 2001 - August 2002

North Carolina State University

Valedictorian, May 2001

North Carolina State University

## **CERTIFICATION and LICENSURE**

NIH Protecting Human Research Participants: Certification # 143787

## MEMBERSHIPS IN PROFESSIONAL & SCIENTIFIC SOCIETIES

Institute of Electrical and Electronics Engineers (IEEE)	(1998 - present)
Institute of Electrical and Electronics Engineers (IEEE) Computer Society	(1998 - present)
Medical Image Computing and Computer Assisted Intervention (MICCAI) Society	(2005-2006)
SPIE (the international society for optics and photonics)	(2008 - 2010)

### RESEARCH FUNDING

## **Submitted Proposals**

(PI on subcontract to U. Pitt) *NSF MRI*, \$2,446,680, "Collaborative MRI: Development of a 3D Magnetic Trap for Mechanical Testing of Complex Living Biomaterials," (2 mo. effort/ yr.), August 2014 - July 2019.

### **Current Grants and Contracts**

(Co-PI) Department of Defense, Defense Medical Research and Development Program PRMRP-IIRA, ~\$1,200,000, "3D Video Augmented High-Resolution Ultrasound Imaging For Monitoring Nerve Regeneration and Chronic Rejection After Composite Tissue Allotransplantation," October 2014 - September 2017. (Recommended for funding on March 4, 2014, supplemental paperwork and negotiations underway.)

(PI on subcontract to U. Pitt; grant based in part on Galeotti's post-doc work) *NIH R01*, \$2,317,800, "Microsurgical In-Situ Image Guidance with Optical Coherence Tomography," (1R01EY021641) (90% effort), April 2011 - March 2015.

#### **Past Grants and Contracts**

- (PI) *National Library of Medicine*, \$150,000, "Methods in Medical Image Analysis: An ITK-Based Course with Deliverable Algorithms that extends and evaluates ITK while broadening its developer base," (50% effort), June 2010 June 2011, NCE to June 2013.
- (PI) NSF Graduate Research Fellowship, for combining bottom-up and top-down computer vision algorithms to quickly and accurately find the shape and position of target objects in medical images and for enhancing the underlying primitives used to describe medical images for automated diagnosis, Robotics Institute, Carnegie Mellon University, August 2003 August 2006
- (PI on subcontract to U. Pitt; grant based on Galeotti's dissertation work) *NIH R21*, \$1,231,790, "Holographic Sonic Flashlight For Guidance of Invasive Procedures," (R21 EB007721-01) (100% effort), August 2007 July 2010, NCE to July 2012.

### **PUBLICATIONS**

### **Manuscripts in Progress**

- J. Galeotti, A. Sajjad, B. Wang, L. Kagemann, S. Horvath, G. Shukla, M. Siegel, B. Wu, R. Klatzky, G. Wollstein, J. S. Schuman, G. Stetten, "In-Situ Display of Optical Coherence Tomography within the Stereomicroscope for Microsurgical Guidance in the Anterior Segment," near submission to Optics Express.
- J. Wang, V. Shivaprabhu, J. Galeotti, S. Horvath, G. Stetten, "Towards video guidance for ultrasound, using a prior high-resolution 3D surface map of the external anatomy," submitted to MICCAI 2014.
- S. Horvath, J. Galeotti, G. Stetten, "Refocusing a scanned laser projector: a simple, novel system for simultaneously controlling the profile of each pixel's laser beam and the envelope containing the entire image," submitted to *Applied Optics*.
- J. Galeotti, K. Macdonald, J. Wang, S. Horvath, A. Zhang, B. Wu, R. Klatzky, "A novel visual stimulus that lacks pictorial depth cues but contains sufficient information to allow stereopsis," submitted to *Vision Research*.

### **Peer-Reviewed Journal Articles**

- S. Horvath, J. Galeotti, B. Wu, R. Klatzky, M. Siegel, G. Stetten, "FingerSight: Fingertip Haptic Sensing of the Visual Environment," *Journal of Translational Engineering in Health and Medicine*, 2014 (accepted).
- B. Wu, R. Klatzky, J. Galeotti, "Effects of magnification on depth perception and visually-guided reaching," *Journal of Vision*, vol. 13, no. 9, p. 220, 2013.

- J. Vidal, G. Bueno, J. Galeotti, M. García-Rojo, F. Relea, O. Déniz, "A fully automated approach to prostate biopsy segmentation based on level-set and mean filtering," *Journal of Pathology Informatics*, 2011; Vol. 2: p.5. Available free in open access from: http://www.jpathinformatics.org/text.asp?2011/2/2/5/92032 (An initial version of this paper was presented at the Histopathology Image Analysis workshop.)
- J. Galeotti, M. Siegel, G. Stetten, "Real-time tomographic holography for augmented-reality," *Optics Letters*, vol. 35, no. 14, pp. 2352–2354, July 15, 2010. PMCID: PMC3022476.
  - Republished in: *Virtual Journal for Biomedical Optics (VJBO)*, vol. 5, no. 12, September 30, 2010, (http://www.opticsinfobase.org/VJBO/virtual issue.cfm?vid=119).
- C. A. Cois, R. Tamburo, J. Galeotti, M. Sacks, G. Stetten, "Shells and Spheres: An n-Dimensional Framework for Medial-Based Image Segmentation," *International Journal of Biomedical Imaging*, special issue on Mathematical Methods for Images and Surfaces, Vol. 2010, Article ID 980872, doi:10.1155/2010/980872.
- John Galeotti and George Stetten, "Creation and Demonstration of a Framework for Handling Paths in ITK," in special "ISC/NA-MIC/MICCAI 2005 Workshop on Open-Source Software" issue of the *Insight Journal*, (http://hdl.handle.net/1926/40).
- A. Nelson, E. Grant, J. Galeotti, S. Rhody, "Maze Exploration Behaviors Using an Integrated Evolutionary Robotics Environment," *Robotics and Autonomous Systems*, vol. 46, no. 3, p. 212-217, March 2004.

### **Refereed Proceedings**

- G. Stetten, C. Wong, V. Shivaprabhu, A. Zhang, S. Horvath, J. Wang, J. Galeotti, V. Gorantla, and H. Aizenstein, "Descending Variance Graphs for Segmenting Neurological Structures," *3rd International Workshop on Pattern Recognition in Neuroimaging*, Philadelphia, PA, June 22-24, 2013.
- R. Lee, G. Stetten, V. Shivaprabhu, R. Klatzky, J. Galeotti, S. Horvath, M. Siegel, J. Schuman, R. Hollis, "Second-Generation Hand-Held Force Magnifier for Surgical Instruments," *Augmented Environments for Computer Assisted Interventions (AE-CAI)*, at *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, Nice, France, October 2012. (oral presentation)
- J. Wang, S. Horvath, G. Stetten, M. Siegel, J. Galeotti, "Real-Time Registration of Video with Ultrasound using Stereo Disparity," *SPIE Medical Imaging*, San Diego, California, February 4-9, Proc. SPIE 8316, 83162D (2012).
- S. Horvath, J. Galeotti, B. Wang, M. Perich, J. Wang, M. Siegel, P. Vescovi, G. Stetten, "Towards an Ultrasound Probe with Vision: Structured Light to Determine Surface Orientation," *Augmented Environments for Computer Assisted Interventions* (AE-CAI), at *Medical Image Computing and Computer-Assisted Intervention* (MICCAI), Toronto, Canada, Sept. 22, 2011. (oral presentation)
- J. Vidal, G. Bueno, J. Galeotti, M. García-Rojo, F. Relea, O. Déniz, "A fully automated approach to prostate biopsy segmentation based on level-set and mean filtering," *Histopathology Image Analysis Workshop*, at *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, Toronto, Canada, September 18, 2011. (oral presentation) (The revised, final version of this work was published in *Journal of Pathology Informatics*.)
- G. Stetten, B. Wu, R. Klatzky, J. Galeotti, M. Siegel, R. Lee, R. Hollis, "Hand-Held Force Magnifier for Surgical Instruments," 2<sup>nd</sup> International Conference on Information Processing in Computer-Assisted Interventions (IPCAI), Berlin, June 22-23, Lecture Notes in Computer Science vol. 6689, pp. 90-100, 2011. Best Poster Award.
- J. Galeotti, A. Sajjad, B. Wang, L. Kagemann, G. Shukla, M. Siegel, B. Wu, R. Klatzky, G. Wollstein, J. Schuman, G. Stetten, "The OCT penlight: In-situ image guidance for microsurgery," *SPIE Medical Imaging*, paper #7625-1, San Diego, Feb. 14 2010. (oral presentation)
- G. Stetten, S. Horvath, J. Galeotti, G. Shukla, B. Chapman, "Image segmentation using the student's t-test on adjacent spherical populations of pixels," *SPIE Medical Imaging*, paper #7623-125, Feb. 2010.

- G. Shukla, B. Wang, J. Galeotti, R. Klatzky, B. Wu, B. Unger, D. Shelton, B. Chapman, and G. Stetten, "A Movable Tomographic Display for 3D Medical Images," *Proceedings of the Augmented Environments for Medical Imaging including Augmented Reality in Computer-Aided Surgery (AMI ARCS), at Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, London, p. 69-76, September 24, 2009.
- J. Galeotti, M. Siegel, G. Stetten, "In-Situ Visualization of Medical Images Using Holographic Optics," *Proceedings of the Augmented Environments for Medical Imaging including Augmented Reality in Computer-Aided Surgery (AMI ARCS), at Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, New York City, p. 93-103, September 10, 2008.
- J. Galeotti, M. Siegel, R. Rallison, G. Stetten, "Design of the First Optical System for Real-Time Tomographic Holography (RTTH)," *SPIE Symposium on Optical Engineering + Applications*, San Diego, CA (USA), August 10-14, 2008, Paper #7061A-7.
- G. Stetten, R. Klatzky, B. Nichol, J. Galeotti, K. Rockot, K. Zawrotny, D. Weiser, N. Sendgikoski, S. Horvath, "Fingersight: Fingertip Visual Haptic Sensing and Control," 2007 IEEE International Workshop on Haptic Audio Visual Environments and their Applications, Ottawa, Canada, 12-14 October (HAVE07).
- R. Tamburo, G. Siegle, G. Stetten, C. A. Cois, K. Rockot, J. Galeotti, C. Reynolds, H. Aizenstein, "Localizing Amygdala Structure Differences in Late-Life Depression," 2007 *IEEE International Symposium on Biomedical Imaging* (ISBI07).
- C. A. Cois, K. Rockot, J. Galeotti, R. Tamburo, D. Gottlieb, J. Mayer, A. Powell, M. Sacks, G. Stetten, "Automated Segmentation of the Right Heart Using an Optimized Shells and Spheres Algorithm," *2007 IEEE International Symposium on Biomedical Imaging* (ISBI07).
- A. Nowatzyk, D. Shelton, J. Galeotti, G. Stetten, "Extending the Sonic Flashlight to Real Time Tomographic Holography," *Proceedings of the Augmented Environments for Medical Imaging including Augmented Reality in Computer-Aided Surgery (AMI ARCS), at Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, Rennes (France), September 30th, 2004.

Sonya Allin, John Galeotti, Seth Dailey, George Stetten, "Enhanced Snake-Based Segmentation of Vocal Folds," *IEEE International Symposium on Biomedical Imaging: Macro to Nano (ISBI04)*, Vol. 1, April 2004, pp. 812 - 815.

John Galeotti, Stacey Rhody, Andrew Nelson, Edward Grant, and Gordon Lee, "EvBots - The Design and Construction of a Mobile Robot Colony for Conducting Evolutionary Robotic Experiments," *Proceedings of the ISCA 15th International Conference: Computer Applications in Industry and Engineering (CAINE-2002)*, San Diego Ca, November 7-9, 2002, ISBN: 1-880843-45-5, pp. 86-91.

### **Patents**

G. Stetten, W. Weiser, D. Wang, J. Galeotti, D. Shelton, "Combining tomographic images in situ with direct vision in sterile environments," U.S. Patent: 8,211,020, Continuation in Part to Patent 7,559,895, Continuation in Part to Patent 6,599,247, filed Feb. 28, 2008, issued, July 3, 2012.

### **Abstracts and Posters**

- K. Macdonald, J. Galeotti, J. Wang, S. Horvath, A. Zhang, B. Wu, R. Klatzky, "Studying depth perception to aid microsurgery: Developing a novel visual stimulus that lacks pictorial depth cues but contains sufficient information to allow stereopsis," *Biomedical Engineering Society (BMES) Annual Meeting*, Abstract and Poster, Seattle, WA, September 28, 2013.
- B. Wu, R.L. Klatzky, J. Galeotti, "Impact of magnification on depth perception and visually-guided reaching," *Visual Sciences Society (VSS) Annual Meeting*, Abstract and Poster, Naples, Florida, USA, May, 2013.

- B. Wu, R.L. Klatzky, J. Galeotti, "Magnification modifies the Utility of Depth Cues" (abs. # 307), *Psychnomic Society Annual Meeting*, Minneapolis, MN, November 15, 2012.
- G. Stetten, R. Lee, V. Shivaprabhu, B. Wu, J. Galeotti, R. Klatzky, M. Siegel, R. Hollis, "Second Generation Hand-Held Force Magnifier for Surgical Instruments," *IEEE Haptics Symposium*, Abstract and Demo, Vancouver, Canada, March 4-7, 2012.
- J. Galeotti, J. Wang, S. Horvath, M. Siegel, G. Stetten, "ProbeSight: Video Cameras on an Ultrasound Probe for Computer Vision of the Patient's Exterior," *Fourth Image-Guided Therapy Workshop (IGT)*, 4:100, Accepted Abstracts Poster Session, (sponsored by NCIGT, NAC, NIH), Arlington, VA, October 12-13, 2011.
- G. Stetten, R. Lee, Bing Wu, J. Galeotti, R. Klatzky, M. Siegel, Ralph Hollis, "Hand Held Force Magnifier with Magnetically Stabilized Bidirectional Distal Force Sensor," *Fourth Image-Guided Therapy Workshop (IGT)*, 4:102, Accepted Abstracts Poster Session, (sponsored by NCIGT, NAC, NIH), Arlington, VA, October 12-13, 2011.
- R. Lee, B. Wu, R. Klatzky, J. Galeotti, M. Siegel, F. Mah, A. Eller, J. Schuman, R. Hollis, G. Stetten, "Second Generation Hand-Held Force Magnifier for Surgical Instruments," *University of Pittsburgh Science2011 Technology Showcase*, October 5, 2011, Pittsburgh, PA.
- G. Stetten, R. Lee, B. Wu, R. Klatzky, Mel Siegel, J. Galeotti, "Hand-Held Force Magnifier," *3 Rivers Venture Fair*, Pittsburgh PA, Sept 21-22, 2011.
- J. Galeotti, A. Sajjed, B. Wang, L. Kagemann, B. Nichol, S. Hanrahan, G. Rodriguez, G. Wollstein, J. Schuman, G. Shukla, M. Siegel, B. Wu, R. Klatzky, G. Stetten, "The OCT-Penlight: In-Situ Image Display for Guiding Microsurgery using Optical Coherence Tomography (OCT)," *Biomedical Engineering Society (BMES) Annual Conference*, Pittsburgh, PA, Oct. 10, 2009.
- G. Shukla, B. Wang, J. Galeotti, B. Wu, R. Klatzky, D. Shelton, B. Unger, B. Chapman, G. Stettten, "Grab-a-slice: In Situ Visualization of 3D Data using a Movable Tracked Touchscreen," *Biomedical Engineering Society (BMES) Annual Conference*, Pittsburgh, PA, Oct. 10, 2009. (podium presentation)
- J. Galeotti, S. Horvath, R. Klatzky, B. Nichol, M. Siegel, G. Stetten, "FingerSight: Fingertip Control and Haptic Sensing of the Visual Environment," *SIGGRAPH 2008 New Tech Demos*, August 11-15, 2008.
- John Galeotti, Mel Siegel, Roberta Klatzky, George Stetten, "Holographic Display for In-Situ Merger of Real-Time Tomographic Data with Direct Vision," *Image-Guided Interventions (IGI) Workshop* (sponsored by NCI, NCRR, NIBIB, NCIGT), Accepted Abstracts Poster Session, the Hilton Washington DC/Rockville MD, March 10-11, 2008.
- C.A. Cois, G. Stetten, J. Galeotti, M. Sacks, M. Chen, "Cardiac Segmentation Using Variable Scale Statistics," *Intel Research Pittsburgh (IRP) Open House*, poster session, Collaborative Innovation Center, CMU, October 24, 2007.

### **Other Publications**

John M. Galeotti. New teaching materials for my graduate course Methods in Medical Image Analysis with the National Library of Medicine's Insight Segmentation and Registration Toolkit (ITK) version 4. Includes videos of all lectures, full set of slides for each lecture, homework assignments, etc., all released under Creative-Commons licenses allowing reuse and modification, http://itk.galeotti.net/ June 2012.

- John M. Galeotti. "Near-Field Holographic Display for In-Situ Merger of Real-Time Tomographic Data with Direct Vision." *Dissertation*. Carnegie Mellon University. Pittsburgh, PA. August 2007.
- C.A. Cois, K. Rockot, J. Galeotti, R. Tamburo, G. Stetten, "Shells and Spheres: A Framework for Variable Scale Statistical Image Analysis," *CMU Robotics Tech Report* #CMU-RI-TR-04-19, April, 19, 2006, http://www.vialab.org/main/Publications/pdf/Cois\_RI\_TechReport\_2006.pdf

J. Galeotti, G. Stetten, "N-Dimensional Path Optimization: The Implementation of a Novel Algorithm in ITK," *Technical report in special MICCAI 2005 Workshop on Open-Source Software issue of The Insight Journal*, published online at http://hdl.handle.net/1926/42

John M. Galeotti. "The EvBot: A Small Autonomous Mobile Robot for the Study of Evolutionary Algorithms in Distributed Robotics." *Master's thesis*. North Carolina State University. Raleigh, NC. March 2002.

### **INVITED PRESENTATIONS**

#### **Panelist**

NIH/NLM: ITK 2010 Workshop, "Panel on Open Source and Open Science: Education and ITK," J. Galeotti, "ITK: Enabling Open Science in Education," National Library of Medicine, Washington, DC, June 28, 2010.

### Presenter

Robotics Institute Seminar, J. Galeotti, "Biomedical Image Guidance: 'BIG' Ideas for Improving the Tools of Medicine," Carnegie Mellon University, Pittsburgh, PA, January 31, 2014, http://www.ri.cmu.edu/event\_detail.html?event\_id=855&menu\_id=242&event\_type=seminars.

*Robotics Institute - Robotics Singularity Retreat*, J. Galeotti, "Biomedical Image Guidance," Oglebay Resort & Conference Center, Wheeling, WV, July 19, 2013.

*University of Pittsburgh Bioengineering Seminar*, J. Galeotti, "Custom Optics for Surgical Guidance: Extending the Role of In-Situ Virtual Images," University of Pittsburgh, Pittsburgh, PA, October 11, 2012.

Fox Center for Vision Restoration Lecture Series on Innovations in Vision Restoration, J. Galeotti, "In-Situ Display of Optical Coherence Tomography within the Stereomicroscope for Guiding Microsurgery," The Louis J. Fox Center for Vision Restoration, a joint program of UPMC Eye Center and the University of Pittsburgh McGowan Institute for Regenerative Medicine, Pittsburgh, PA, October 3, 2012.

*University of Pittsburgh ECE Graduate-Student Seminar*, J. Galeotti, "Real-Time True-Optical Virtual Images for Microsurgical Guidance," University of Pittsburgh, PA, April 18, 2012.

*NIH/NLM: ITKv4 2011 Winter Meeting*, J. Galeotti, "Teaching ITK: Thoughts for Version 4," Harvard Medical School, Boston, MA, February 3, 2011.

*NIH/NLM: ITK 2010 Workshop*, J. Galeotti, G. Stetten, "Methods in Medical Image Analysis: An ITK-Based Course," National Library of Medicine, Washington, DC, June 29, 2010.

Meeting of the NLM Insight Toolkit Consortium, J. Galeotti, L. Ibanez, G. Stetten, "A Draft Design for a Pair of Path Classes," Philadelphia, PA, Feb 6, 2003.

### Co-author

Meeting of the NLM Insight Toolkit Consortium, G. Stetten, D. Shelton, Y. Liu, J. August, C. Meltzer, J. Galeotti, S. Clanton, T. Cooper, L. Teverovskiy, P. Mitra, S. Allin, H. Shi, "ITK in Academic Research: A Project-Oriented Course for Graduate Students," National Library of Medicine, Washington, DC, Sept 22, 2003.

Meeting of the NLM Insight Toolkit Consortium, G. Stetten, R. Tamburo, J. Galeotti, W. Chang, D. Shelton, D. Sahn, "Real Time 3D Echocardiographic Data with Semi-Automated Boundary Tracking Algorithms," Philadelphia, PA, Feb 6, 2003.

### **TEACHING**

#### Instructor

Methods in Medical Image Analysis (16-725 CMU Robotics Institute, 42-735 CMU Biomedical Engineering, 18-791 CMU Electrical & Computer Engineering, BioE 2630 - University of Pittsburgh) Graduate course in medical image analysis techniques, (course evaluations > 75th percentile), ~ 28 students/yr., Spring semesters, 2008 - present.

*SAMS Robotics Project* (CMU Summer Academy for Mathematics + Science) Pre-College project-based course targeted at underrepresented minorities, teaching Robotics using Lego Mindstorms and Robot-C, ~ 20 students / yr., Summers, 2008 – 2010, 2012.

## **Teaching Assistant**

Machine Learning (15681 CMU Computer Science) Graduate course in machine learning by Dr. Roni Rosenfeld.

# **GRADUATE STUDENTS SUPERVISED**

Jihang Wang (BioEngineering, University of Pittsburgh, Ph.D. program)
Tejas Mathai (Biomedical Engineering, Carnegie Mellon University, M.S. program)
Samantha Horvath (Robotics Institute, Carnegie Mellon University, Ph.D. program)
Jihang Wang (Biomedical Engineering, Carnegie Mellon University, M.S. program)

### **Doctoral Dissertation Committee**

Sudhir Pathak (Bioengineering, University of Pittsburgh)
Davneet Singh Minhas (Biomedical Engineering, Carnegie Mellon University)
Larry Kagemann (Bioengineering, University of Pittsburgh)

Qualifying Examination Committee: Civil and Environmental Engineering, U. Pitt

Jia Wu

Visiting Students: Robotics Institute, CMU

Juan Vidal Vikas Revanna Shivaprabhu

### UNDERGRADUATE STUDENTS SUPERVISED

Research Interns: Bioengineering, U. Pitt

Kori Macdonald Claire Hoelmer Cynthia Wong Areej Sajjad Samantha Horvath Bo Wang

## Senior Design Project Teams: Bioengineering, U. Pitt

Sara Hanrahan, Brock Nichols, Gena Rodriguez, Areej Sajjad Samantha Horvath, Matthew Perich, Patrick Vescovi, Bo Wang

# MANUSCRIPT REVIEWER

IEEE International Symposium on Biomedical Imaging (ISBI) (2014) Engineering in Medicine and Biology Conference (EMBC) (2012) Engineering in Medicine and Biology Conference (EMBC) (2011) IEEE Transactions on Instrumentation & Measurement (2009) Biomedical Engineering Society (BMES) – Annual Meeting (2009) IEEE Int. Conf. on Multimedia and Expo (ICME) – Multimedia Retrieval for Biomedical Applications (2007)

Int. Conf. on Computer Vision (ICCV) - Computer Vision for Biomedical Image Applications workshop (2005)