

Sharon Xiaolei Huang

A. BIOGRAPHICAL INFORMATION

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Education

Rutgers, the State University of New Jersey, New Brunswick, NJ, 2001 – 2006
Ph.D. in Computer Science, Awarded May 2006

Rutgers, the State University of New Jersey, New Brunswick, NJ, 1999 – 2001
M.S. in Computer Science, May 2001

Tsinghua University, Beijing, China, 1994 – 1999
B.E. in Computer Science, June 1999

Professional Experience

Associate Professor, Lehigh University, Bethlehem, PA, 06/2013 – present
Assistant Professor, Lehigh University, Bethlehem, PA, 08/2006 – 06/2013
Staff Scientist, Siemens Medical Solutions USA, Inc., Malvern, PA, 08/2005 - 08/2006
Research Assistant, Rutgers University, New Brunswick, NJ, 08/2002 – 06/2005
Teaching Assistant, Rutgers University, New Brunswick, NJ, 08/1999 – 05/2002
Summer Intern, Siemens Corporate Research, Inc., Princeton, NJ, 2001 and 2003
Research Programmer, Tsinghua University, Beijing, China, 1998-1999

B. PUBLICATIONS AND CREATIVE ACTIVITIES

Articles in Refereed Journals

- S. Wan, H.C. Lee, X. Huang, T. Xu, T. Xu, X. Zeng, Z. Zhang, Y. Sheikine, J.L. Connolly, J.G. Fujimoto, C. Zhou, "Integrated local binary pattern texture features for classification of breast tissue imaged by Optical Coherence Microscopy," In *Medical Image Analysis*, Vol. 38, pp. 104-116, 2017.
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- T. Xu, D. Vavylonis, F.C. Tsai, G.H. Koenderink, W. Nie, E. Yusuf, I.J. Lee, J.Q. Wu, X. Huang, "SOAX: A software for quantification of 3D biopolymer networks," In *Scientific Reports*, 13:5:9081, 2015. (Software link: <http://www.cse.lehigh.edu/~idealab/soax/>)
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- T. Xu, D. Vavylonis, X. Huang, "3D Actin Network Centerline Extraction with Multiple Active Contours," In *Medical Image Analysis*, Vol. 18, No. 2, pp. 272-284, 2014.
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- T. Xu, F. Li, D-H T. Nguyen, C.S. Chen, C. Zhou, X. Huang, "Delineating 3D Angiogenic Sprouting in OCT Images via Multiple Active Contours," In *Lecture Notes in Computer Science (LNCS)*, Vol. 8090: *Augmented Reality Environments for Medical Imaging and Computer-Assisted Interventions*, pp. 231-240, 2013.
- H. Li, X. Huang, L. He, "Object Matching Using A Locally Affine Invariant and Linear Programming Techniques," In *IEEE Trans. on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol. 35, No. 2, pp. 411-424, 2013.
- X. Huang, Y. Zhu, H. Li, H. Guan, V. Potesil, Y. Song, T. Kubota, X. Zhou, "Automatic Tumour Delineation in Whole Body PET/CT Images," In *International Journal of Biomedical Engineering and Technology (IJBET)*, Vol. 8, No. 2/3, pp. 182-199, 2012.
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Z. Qian, X. Huang, L. Axel, D. Metaxas, “Automatic Segmentation of Cardiac Tagged MRI,” In *Medical Image Analysis: Methodologies and Applications*, N. Paragios, J. Duncan, and N. Ayache (Editors), Springer, 2010.

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H. Li, T. Shen, X. Huang, “Actin Filament Segmentation Using Dynamic Programming,” In *Proc. of 22nd International Conf. on Information Processing in Medical Imaging (IPMI)*, pp. 411-423, 2011.

E. Kim, X. Huang, J. Heflin, “Finding VIPS - A Visual Image Persons Search Using a Content Property Reasoner and Web Ontology,” In *Proc. of IEEE International Conf. on Multimedia & Expo (ICME)*, 2011.

M. Cheng, G. X. Zhang, N. J. Mitra, X. Huang, S. M. Hu, “Global Contrast based Salient Region Detection,”

- In *Proc. of IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 409-416, 2011.
- S. Zhang, J. Huang, M. Uzunbas, T. Shen, F. Delis, X. Huang, N. Volkow, P. Thanos, D. N. Metaxas, "3D Segmentation of Rodent Brain Structures Using Hierarchical Shape Priors and Deformable Models," In *Proc. of 14th International Conf. on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, pp. 611-618, 2011.
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- W. He, X. Huang, D. Metaxas, and X. Ying, "Efficient Learning by Combining Confidence-rated Classifiers to Incorporate Unlabeled Medical Data," In *Proc. of the 8th International Conf. on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, LNCS-3749, pp. 745-752, 2005.
- X. Huang, D. Metaxas, and T. Chen, "Metamorphs: Deformable Shape and Texture Models," In *Proc. of the IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 496-503, 2004.
- X. Huang, Z. Li, and D. Metaxas, "Learning Coupled Prior Shape and Appearance Models for Segmentation," In *Proc. of the 7th International Conf. on Medical Image Computing and Computer Assisted Intervention*

(MICCAI), LNCS-3216, pp. 60-69, 2004.

X. Huang, N. Paragios, and D. Metaxas, "Establishing Local Correspondences towards Compact Representations of Anatomical Structures," In *Proc. of the 6th International Conf. on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, LNCS-2879, pp. 926-934, 2003.

M. Singh, and X. Huang, "Computing Layered Surface Representations: An Algorithm for Detecting and Separating Transparent Overlays," In *Proc. of the IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 11-18, 2003.

Other Refereed Conference and Workshop Papers

T. Xu, C. Xin, L.R. Long, S. Antani, Z. Xue, E. Kim, X. Huang, "A New Image Data Set and Benchmark for Cervical Dysplasia Classification Evaluation," In *Proc. of the 6th International Workshop on Machine Learning in Medical Imaging (MLMI)*, LNCS Vol. 9352, pp. 26-35, 2015.

T. Xu, E. Kim, X. Huang, "Adjustable AdaBoost Classifier and Pyramid Features for Image-Based Cervical Cancer Diagnosis," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 281-285, 2015. (Best Student Paper Award Finalist)

S. Wan, X. Huang, H.C. Lee, J.G. Fujimoto, C. Zhou, "Spoke-LBP and Ring-LBP: New Texture Features for Tissue Classification," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 195-199, 2015.

S. Huang, M. Gao, D. Yang, X. Huang, A. Elgammal, X. Zhang, "Unbalanced Graph-Based Transduction on Superpixels for Automatic Cervigram Image Segmentation," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 1556-1559, 2015.

T. Xu, X. Huang, E. Kim, L.R. Long, S. Antani, "Multi-test Cervical Cancer Diagnosis with Missing Data Estimation," In *Proc. of SPIE, Medical Imaging: Computer-Aided Diagnosis*, Vol. 9414, 2015.

S. Wan, X. Huang, C. Zhou, "OCM Image Texture Analysis for Tissue Classification," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 93-96, 2014.

S. Wan, X. Huang, "A New Variant of ICP for Efficient 3D Point-Set Registration," In *Proc. of International Conf. on Computational Visual Media (CVM)*, 2013.

X. Cui, S. Zhang, J. Huang, X. Huang, D. Metaxas, L. Axel, "Left Endocardium Segmentation using Spatio-temporal Metamorphs," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 226-229, 2012.

T. Xu, H. Li, T. Shen, N. Ojkic, D. Vavylonis, X. Huang, "Extraction and Analysis of Actin Networks based on Open Active Contour Models," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 1334-1340, 2011.

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S. Zhang, J. Huang, M. Uzunbas, T. Shen, F. Delis, X. Huang, N. Volkow, P. Thanos, D. Metaxas, "3D Segmentation of Rodent Brain Structures using Active Volume Model with Shape Priors," In *Proc. of the IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, pp. 433-436, 2011.

E. Kim, T. Shen, X. Huang, "A Parallel Cellular Automata with Label Priors for Interactive Brain Tumor Segmentation," In *Proc. of 23rd IEEE International Conf. on Computer-Based Medical Systems (CBMS)*, 2010.

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D. Lopresti, X. Zhou, X. Huang, G. Tan, "Document Analysis Support for the Manual Auditing of Elections," In *Proc. of the 10th International Conf. on Document Analysis and Recognition (ICDAR)*, pp. 733-737, 2009.

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Y. Zhu, X. Huang, D. Lopresti, L. R. Long, S. Antani, Z. Xue, and G. Thoma, "Web-Based Multi-Observer Segmentation Evaluation Tool," In *Proc. Of the 21st IEEE International Symposium on Computer-Based Medical Systems (CBMS)*, pp. 167-169, 2008.

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X. Huang, S. Wan, C. Zhou, "Diagnostic System and Method for Biological Tissue Analysis," International patent application filed as PCT/US14/64218 on Nov. 6, 2014.

X. Huang, A. Krishnan, K. Okada, X. Zhou, "Robust Click-Point Linking with Geometric Configuration Context: Interactive Localized Registration Approach," Patent issued as USP 7,903,857 on Mar. 8, 2011. Also filed in Germany and China.

X. Huang, X. Zhou, A. Jerebko, A. Krishnan, H. Guan, T. Kubota, V. Potesil, "System and Method for Whole Body Landmark Detection, Segmentation and Change Quantification in Digital Images," Patent issued as USP 7,876,938 on Jan. 25, 2011.

D. Metaxas, D. Banerjee, and X. Huang, "System and Methods for Generating Three-dimensional Images from Two-dimensional Bioluminescence Images and Visualizing Tumor Shapes and Locations," Patent issued as USP 8,218,836 on Jul. 10, 2012.

C. Xu, X. Huang, Y. Sun, "Fast Parametric Non-rigid Image Registration Based on Feature Correspondences," Patent issued as USP 7,596,283 on Sep. 29, 2009.

C. Xu, X. Huang, Y. Sun, C. Chefd'hotel, J. Guehring, F. Sauer, and S. Vogt, "Method and System for Hybrid Rigid Registration of 2D/3D Medical Images," Patent issued as USP 7,409,108 on Aug. 5, 2008.

C. Xu, X. Huang, Y. Sun, and F. Sauer, "Method and System for Hybrid Rigid Registration based on Joint Correspondences between Scale-Invariant Salient Region Features," Patent issued as USP 7,362,920 on Apr. 22, 2008.

C. HONORS AND AWARDS

- Outstanding Reviewer Award, by Computers in Biology and Medicine (CBM) journal, 2015
- P.C. Rossin Assistant Professorship, Lehigh University, 2009
- Sigma Xi Scientific Research Honor Society Lehigh University Inductee, 2008
- Minority Junior Faculty Award for Career Enhancement, Christian R. and Mary F. Lindback Foundation, 2007
- Outstanding Reviewer Award at the IEEE International Conf. on Computer Vision (ICCV), 2007
- DIMACS Award for Student-initiated Research Projects, Rutgers University, 2002
- Tsinghua Excellent Student Scholarships, Tsinghua university, 1995,96,97,98

D. RESEARCH FUNDING

Competitively Awarded Research Grants

- "Endoplasmic Reticulum Stress and Hyperinsulinemia in Human Type 2 Diabetes and Equine Laminitis," Lehigh University FIG grant, Co-PI, (with L. Cassimeris), \$30,000, 6/1/2016 - 6/1/2017.
- "Advanced Computational Methods for Anatomical and Functional Brain Data Analysis," National Institutes of Health, National Library of Medicine, PI, \$74,000, 9/21/2015 - 9/20/2017. (With one more optional period until 9/20/2018; total award amount will be \$114,000.)
- "Modeling and Analysis of Actin Filament Organization in Yeast," National Institutes of Health, National Institute of General Medical Sciences, Co-PI, (with D. Vavylonis), \$1,357,748, 4/01/2012 - 3/31/2017.
- "A Secure, High Performance System Interconnect Architecture for Next Generation Data Centers," Pennsylvania Infrastructure Technology Alliance, Co-PI, (with J. Li), \$36,075, 1/01/2015 - 6/30/2016.
- "Web-based Image Annotation and Retrieval; Computer-assisted Technologies for Medical Image Segmentation and Pattern Recognition," National Institutes of Health, National Library of Medicine, Sole PI, \$275,000, 9/01/2010 - 8/31/2015.
- "III-CXT-Small: Collaborative Research: Structuring, Reasoning, and Querying in a Very Large Medical Image Database," National Science Foundation, PI, (with D. Lopresti), \$229,519, 9/01/2008 - 8/31/2011.
- "Computational Analysis and Modeling of Contractile Ring Assembly," National Institutes of Health, National Institute of General Medical Sciences, PI, (with D. Vavylonis), \$385,515, 9/01/2008 - 8/31/2011.
- "Technologies for Computer-Assisted Biomedical Image Segmentation and Content-based Image Retrieval through Web Browsers," National Institutes of Health, National Library of Medicine, Sole PI, \$65,000, 9/15/2009 - 9/14/2010.
- "Network computing for biomedical image processing; cervigram segmentation," National Institutes of Health, National Library of Medicine, Sole PI, \$55,000, 9/01/2008 - 08/31/2009.
- "Segmentation of Uterine Cervix Images by Support Vector Machine Methods," National Institutes of Health, National Library of Medicine, Sole PI, \$24,900, 9/20/2007 - 9/19/2008.
- "A Physically-based Heart Model for Segmentation, Motion Analysis and Disease Classification," Christian R. and Mary F. Lindback Foundation, Sole PI, \$20,000, 6/01/2007 - 5/31/2008.
- "Novel Methods and Applications for Chemical Image Analysis," Pennsylvania Infrastructure Technology Alliance, PI, (with R. Nagel), \$44,000, 3/01/2008 - 8/31/2009.

Non-competitive Research Grants

- "Novel Methods and Applications for Chemical Image Analysis," Air Products and Chemicals, Inc., Sole PI, \$80,000, 9/01/2007 - 12/31/2010. Collaborators: A. Esmaili (Air Products and Chemicals, Inc.), R. Nagel (Lehigh CSE).

Competitively Awarded Training Grants

- "Analysis of actin cytoskeleton structures using active contours," Biosystems Dynamics Summer Institute (BDSI), Howard Hughes Medical Institute and Lehigh University, PI, (with D. Vavylonis), \$30,000, 6/01/2010 - 8/01/2010.

- “Actin filament polymerization: modeling of elongation kinetics based on analysis of TIRFM images,” Biosystems Dynamics Summer Institute (BDSI), Howard Hughes Medical Institute and Lehigh University, PI, (with D. Vavylonis), \$29,000, 6/01/2009 - 8/01/2009.

E. EDITORIAL REVIEW BOARD MEMBERSHIP FOR SCHOLARLY PUBLICATIONS

Editorial Review Board Membership for Journals

Associate Editor for Computer Vision and Image Understanding (CVIU) journal, 2014-present
 Handling Editor for Computers in Biology and Medicine (CBM) journal, 2013-present
 Member of Editorial Review Board for The Scientific World Journal: Signal Processing Section, 2013-present

Reviewer for Journals

IEEE Transactions on Pattern Analysis and Machine Intelligence
 International Journal of Computer Vision
 Medical Image Analysis
 IEEE Transactions on Medical Imaging
 Computer Vision and Image Understanding
 IEEE Transactions on Biomedical Engineering
 IEEE Transactions on Visualization and Computer Graphics
 IEEE Transactions on Image Processing
 Image and Vision Computing
 Pattern Recognition
 Signal Processing
 Machine Vision and Applications
 Graphical Models
 Computer-aided Design
 NeuroComputing
 The Visual Computer
 Computerized Medical Imaging and Graphics
 Cytometry
 International Journal of Biomedical Imaging

F. SCHOLARLY PRESENTATIONS

Invited presentations/seminars

- “StackGAN: Text to Photo-realistic Image Synthesis,” at The National Library of Medicine, Bethesda, MD, Jan. 10, 2017.
- “Cervical Cancer Screening based on Images and Multiple Integrated Data Sources,” at The National Library of Medicine, Bethesda, MD, Mar. 24, 2015.
- “Object Matching using Affine Invariants and Linear Programming,” at Zhejiang University, Hangzhou, China, Jul. 19, 2014.
- “3D Actin Network Centerline Extraction with Multiple Active Contours,” at Ohio State University, Columbus, OH, Feb. 2014.
- “A Data-driven Image Interpretation System for Making Diagnosis Decisions in Cervical Screenings,” at Tsinghua University, Beijing, China, March 2013.
- “A Parallel Cellular Automata on the GPU for Interactive Brain Tumor Segmentation,” High Performance Computing Day at Lehigh University, Apr. 2011.
- “Deformable Object Models for Segmentation and Matching,” at Drexel University, Philadelphia, PA, Feb. 2011.
- “Nonrigid Shape Registration and Object Matching,” at University of Pennsylvania, Philadelphia, PA, Dec. 2010.
- “Analysis of Actin Cytoskeleton using Active Contour and Active Surface Models,” at Janelia Farm/HHMI Conference on “What Can Computer Vision Do for Neuroscience and Vice Versa?”, Ashburn, VA, Nov. 2010.
- “Markup SVG - A Content Aware Image Abstraction for Online Image Annotation,” at Tsinghua University, Beijing, China, Sept. 2010.
- “Deformable Shape and Appearance Models for Segmentation and Registration,” at Siemens Corporate Technology, Beijing, China, Sept. 2010.
- “Object Models for Boundary Extraction with Application to Medical Image Analysis,” at Temple University, Philadelphia, PA, Sept. 2009.

- “Deformable Shape and Appearance Models for Segmentation and Registration,” at Tsinghua University, Beijing, China, Jun. 2009.
- “Computational Analysis of Cellular Images,” COT (Center for Optical Technologies) Workshop on Advanced Biophotonic Imaging Technologies at Lehigh University, Oct. 2008.
- “Extracting Quantitative Information from Pictorial Input,” Applied Statistical Sciences Roundtable Seminar at Air Products and Chemicals, Inc., Sept. 2008.
- “High Performance Computing in Biomedical Image Analysis and Visualization,” High Performance Computing Day at Lehigh University, Apr. 2008.
- “Free-form Deformable Shape and Appearance Models,” at Boston University, Boston, MA, Sept. 2007.
- “Free-form Deformable Shape and Appearance Models,” at City College and the Graduate Center, City University of New York, New York, NY, May 2007.
- “CISL: Cervical Image Segmentation by Learning from Ground Truth Database,” at National Library of Medicine, Bethesda, MD, Mar. 2007.
- “Using Implicit Shape Representation for Registration and Segmentation,” at Stevens Institute of Technology, Hoboken, NJ, Nov. 2006.
- “Free Form Deformable Models,” at Univ. of North Carolina - Chapel Hill, Chapel Hill, NC, Apr. 2006.
- “Free Form Deformable Models,” at Lehigh University, Bethlehem, PA, Mar. 2006.
- “Integrating Shape and Appearance for Deformable Modeling and Segmentation,” at Siemens Corporate Research, Princeton, NJ, Feb. 2005.
- “Integrating Shape and Appearance for Deformable Modeling and Segmentation,” at Siemens Medical Solutions, Malvern, PA, Mar. 2005.
- “Hybrid Image Registration using Salient Region Features,” at Siemens Corporate Research, Princeton, NJ, Jul. 2004.

Presentations at Selected Conferences/Workshops

- “A New Image Data Set and Benchmark for Cervical Dysplasia Classification Evaluation,” at *the 6th International Workshop on Machine Learning in Medical Imaging (MLMI)*, Munich, Germany, Oct. 2015.
- “Global Contrast based Salient Region Detection,” at *International Conference on Computational Photography (ICCP)*, Seattle, Apr. 2012.
- “Actin Filament Segmentation Using Dynamic Programming,” at *International Conf. on Information Processing in Medical Imaging (IPMI)*, Kloster Irsee, Germany, Jul. 2011.
- “Automated Actin Filament Segmentation, Tracking, and Tip Elongation Measurements based on Open Active Contour Models,” at *IEEE International Symposium on Biomedical Imaging: From Nano to Macro (ISBI)*, Boston, Jul. 2009.
- “Simultaneous Image Transformation and Sparse Representation Recovery,” at *IEEE International Conf. on Computer Vision and Pattern Recognition (CVPR)*, Anchorage, AK, Jun. 2008.
- “Cluster Features for Lesion Detection in Digital Cervigrams,” at *SPIE Medical Imaging: Image Processing Conference*, San Diego, CA, Feb. 2008.
- “Phase Impact Factor: A Novel Parameter for Determining Optimal CT Phase in 4D Radiation Therapy Treatment Planning for Mobile Lung Cancer,” at *SPIE Medical Imaging Conference: Visualization, Image-guided Procedures, and Modeling*, San Diego, CA, Feb. 2008.
- “Robust Click-point Linking: Matching Visually Dissimilar Local Regions,” at *IEEE Workshop on Beyond Multiview Geometry (BMG)*, Minneapolis, MN, Jun. 2007.
- “Deformable Model based Textured Object Segmentation,” at *Energy Minimization in Computer Vision and Pattern Recognition Workshop*, St. Augustine, FL, Oct. 2005.
- “Metamorphs: Deformable Shape and Texture Models,” at *IEEE International Conf. On Computer Vision and Pattern Recognition*, Washington D.C., Jun. 2004.
- “Hybrid Image Registration based on Configurational Matching of Scale-invariant Salient Region Features,” at *Second IEEE Workshop on Image and Video Registration*, Washington D.C., Jun. 2004.
- “Establishing Local Correspondences towards Compact Representations of Anatomical Structures,” at *Annual International Conf. on Medical Image Computing and Computer Assisted Intervention*, Montreal, Canada, Nov. 2003.
- “Computing Layered Surface Representations: An Algorithm for Detecting and Separating Transparent Overlays,” at *IEEE International Conf. on Computer Vision and Pattern Recognition*, Madison, WI, Jun. 2003.

G. TEACHING AND RESEARCH ADVISING

Courses Taught

Instructor, Computer Science and Engineering Dept., Lehigh University

- CSE 313: Computer Graphics, Fall 2006
- CSE 398/498: Image Analysis and Graphics, Spring 2007
- CSE 313: Computer Graphics, Fall 2007
- CSE 398/498: Image Analysis and Graphics, Spring 2008
- CSE 313: Computer Graphics, Fall 2008
- CSE 331: User Interface Systems and Techniques, Fall 2008
- CSE 319/419: Image Analysis and Graphics, Spring 2009
- CSE 313: Computer Graphics, Fall 2009
- CSE 397/497: Biomedical Image Computing, Fall 2009
- CSE 319/419: Image Analysis and Graphics, Spring 2010
- CSE 319/419: Image Analysis and Graphics, Spring 2011
- CSE 313: Computer Graphics, Fall 2011
- CSE 261: Discrete Structures, Spring 2012
- CSE/BioE 320/420: Biomedical Image Computing, Spring 2012
- CSE 313: Computer Graphics, Fall 2012
- CSE 261: Discrete Structures, Spring 2013
- CSE/BioE 320/420: Biomedical Image Computing, Spring 2013
- CSE 313: Computer Graphics, Fall 2013
- CSE 261: Discrete Structures, Spring 2014
- CSE 313: Computer Graphics, Fall 2014
- CSE/BioE 320/420: Biomedical Image Computing, Fall 2014
- CSE 313: Computer Graphics, Fall 2015
- CSE/BioE 320/420: Biomedical Image Computing, Fall 2015
- CSE 261: Discrete Structures, Spring 2016
- CSE 261: Discrete Structures, Spring 2017

Advising – Research Direction

Undergraduate Students

Doug Paul, 2006-07 (research project)
Christopher Hamilton, 2007-08 (senior project)
Samuel Wechsler, 2007-08 (senior project)
Abraham Jun, 2008 (summer project)
Derrek Harrison, 2009 (senior project)
Alex Thompson, 2009 (senior project)
Eric Wasserman, 2009-2010 (senior project)
Whitney Levine, 2009-2010 (senior project)
Jennifer Pysher, 2011 (senior project)
Daniel Ruthrauff, 2011 (senior project)
James J. Fix, 2012-13 (senior project)
Vikram Mehta, 2012-13 (senior project)
Yu Yu Aung, 2013 (senior project)
Amanda Debrot, 2013 (senior project)
Jacob Cohen, 2013 (senior project)
Tyler Holcombe, 2013 (senior project)
Curtis Giddings, 2013 (senior project)
Zachary Holliday, 2013 (summer project)
M. Reeve Groman, 2013-14 (senior project)
Dan Y. Shin, 2013-14 (senior project)
Greg Potter, 2013 (independent study)
Christina Catalano, 2014 (independent study)
Laurel Warrel, 2014 (senior project)
Shante Weeks-Monsanto, 2014 (senior project)
Shenchi Tian, 2014 (senior project)
Kevin Portillo-Ramirez, 2014 (senior project)

Robert Herguner, 2014 (senior project)
Luke Zhang, 2015 (senior project)
Spencer Costello, 2015-16 (senior project)
Jeffrey Mara, 2015-16 (senior project)
Christina Catalano, 2015-16 (senior project)
Ian Weiss, 2015-16 (senior project)
Nathaniel Gyory, 2016-17 (senior project)
Joachim Amoah, 2016-17 (senior project)

Master's Students

Thomas Boinot, 2006-2007 (independent study)
Yusuf Artan, 2007-2008 (independent study)
Nick Moukhine, 2007 (independent study)
Hisham Abu-Nabaa, 2007 (independent study)
Yu Tian, 2008 (research project)
Mayura Warge, 2008-2009 (research project)
Wei Wang, 2006 - 2009 (research project)
Dong Bin Lee, 2012 (research project)
Lin Huang, 2014 (research project)
Sunhua Wan, 2011-15 (research project, thesis)
Cheng Xin, 2014-15 (independent study, thesis)

Doctoral Students

- Tian Shen, 2007-2011 (graduated with Ph.D. in May 2011; currently CEO at ShenZhen Beishen Healthcare Technology Co., Ltd, ShenZhen, China)
- Hongsheng Li, 2008-2012 (graduated with Ph.D. in Sep. 2012; currently working as an associate professor at the University of Electronic Science and Technology, Chengdu, China)
- Edward Kim, 2008-2013 (graduated with Ph.D. in May 2013; currently working as a tenure-track assistant professor at Villanova university, Villanova, PA, USA)
- Yaoyao Zhu, 2007-2013 (graduated with Ph.D. in May 2013; currently working as a research engineer at Checkpoint Systems, Boston, MA, USA)
- Ting Xu, 2009-2016 (graduated with Ph.D. in August 2016; currently working as a data scientist at Konica Minolta Laboratory USA, San Mateo, CA)
- Tao Xu, 2013 - present
- Yuan Xue, 2015 - present

Doctoral Committee Member for Ph.D. Students

Lan Nie (completed in 2008)
Chao Gao (completed in 2010)
Sui-Yu Wang (completed in 2010)
Chang An (completed in 2011)
Matthew Smith (completed in 2012)
Dawei Yin (completed in 2013)
Dezhao Song (completed in 2013)
Burak Tuna (completed in 2014)
Jin Chen (completed in 2015)
Haosu Tang (completed in 2015)
Scott Kulp (completed in 2015)
Yang Yu (completed in 2015)
Qiong Wu (completed in 2015)
Ryan Cress (completed in 2016)
Dylan Schwesinger (completed in 2016)
Christopher Janneck
Ziyi Guo
Dawei Li

Advising – Other than Research Direction

- Advisor for Computer Science majors from College of Arts & Sciences and College of Engineering; advising approximately 10 undergraduate students each year.
- First year advisor for the Class of 2019: advising approximately 10 freshmen in 2015-16.

H. SERVICE

University

- Serving as a member of the University Graduate and Research Committee, 2013 - present

College

- Gave short talks on Candidate's day and Engineering Open House day, 2008-13
- Gave guest lectures in the Freshman Engineering5 classes, 2007-11

Interdisciplinary Programs

- Gave guest lectures in the BioE002 and BioE001 classes, 2007-16

Department

- Chair of a Faculty Search Committee, 2013-14, 2015-16
- Advisor for CS majors from College of Arts & Sciences, 2012-14
- Chair of the Department Colloquium Committee, 2011-12
- Member of the Graduate Admissions Committee, 2006-16
- Member of a Faculty Search Committee, 2008-13, 2016-17
- Member of the Publicity and Web Committee, 2008-11
- Member of the Curriculum Development Committee, 2006-08
- Member of the Community Committee, 2009-11
- Member of the Computer Facilities Committee, 2008-09

Professional Service

- Associate Editor for the Computer Vision and Image Understanding journal, since 2014.
- Handling Editor for the Computers in Biology and Medicine Journal, since 2013.
- Member of the Editorial Review Board for the Scientific World Journal: Signal Processing Section, since 2013.
- Regular reviewer for more than 6 journals including IEEE Trans. on Pattern Analysis and Machine Intelligence (TPAMI), Medical Image Analysis (MedIA), IEEE Trans. on Medical Imaging (TMI), International Journal of Computer Vision (IJCV), Computer Vision and Image Understanding (CVIU), IEEE Trans. on Image Processing (TIP), and Computerized Medical Imaging and Graphics (CMIG), since 2005.
- Session chair and program committee member for 6th International Conference on Functional Imaging and Modeling of the Heart (FIMH), 2011.
- Co-chair and co-organizer (with D. Terzopoulos and G. Tsechpenakis) for "Deformable Models: Theory and Applications," A Special Track at International Symposium on Visual Computing (ISVC), 2009.
- Session chair and program committee member for International Workshop on High-Performance Medical Image Computing for Image-Assisted Clinical Intervention and Decision-Making, 2010.
- Program committee member for international conferences: IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR), 2006-2016; International Conf. on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2007-2016; IEEE International Conf. on Computer Vision (ICCV), 2005, 2007, 2009, 2011, 2013; IEEE International Symposium on Biomedical Imaging (ISBI), 2008-2016; MICCAI workshop on High Performance Computing (HP-MICCAI), 2010-2014; IEEE International Conf. on Pattern Recognition (ICPR), 2010-2014; International Symposium on Computer-based Medical Systems (CBMS), 2010-2013; ACM Conference on Computer Graphics and Interactive Techniques (SIGGRAPH), 2011-2014; SIGGRAPH-ASIA 2011-2012; International Conf. on Computer Vision Theory and Applications, 2008, 2010; European Conf. on Computer Vision (ECCV), 2010; Asian Conf. on Computer Vision (ACCV), 2010; International Symposium on Visual Computing (ISVC), 2009, 2011; IEEE Computer Society Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA), 2009; IEEE International Conf. on Advanced Video and Signal Based Surveillance (AVSS), 2008; Graphic Interface 2008; Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR) 2005.
- Panelist and reviewer for proposals submitted to: NIHR NEAT (UK) 2008, NSF-IIS-Bio 2009, NSF-IIS-Robust Intelligence 2009, NSF-IIS-Human Centered Computing 2010, NMRC TDEP 2015.