University of North Carolina at Charlotte
College of Computing and Informatics

NAME Yaorong Ge

ACADEMIC TITLE Associate Professor

ADDRESS Department of Software and Information Systems
343B Woodward Hall
9201 University City Blvd.
Charlotte, NC 28223
(704) 687-1951

EDUCATION

B.S.	Computer Science	Zhejiang University	7/1984
M.S.	Computer Science	Vanderbilt University	12/1989
Ph.D.	Computer Science	Vanderbilt University	5/1995

M.S. Thesis: A Set of One-to-One Bi-quadratic Transformations
(Advisor: Dr. J. Michael Fitzpatrick)
Ph.D. Dissertation: Cortical Surface Maps and Euclidean Skeletons for Inter-subject Registration of Brain Images
(Advisor: Dr. J. Michael Fitzpatrick)

ACADEMIC APPOINTMENTS

Assistant Professor		8/1995 - 12/2000
Computer Science	Wake Forest University	
Medical Engineering	Wake Forest University School of Medicine	
Assistant Professor		9/2006 – 6/2011
Biomedical Engineering	Wake Forest University School of Medicine VT-WFU School of Biomedical Engineering and Sciences	
Associate Professor		6/2011 – 8/2012
Biomedical Engineering	Wake Forest University School of Medicine VT-WFU School of Biomedical Engineering and Sciences	
Associate Professor		8/2012 – present
Health Informatics	University of North Carolina at Charlotte College of Computing and Informatics	

EMPLOYMENT

Research Assistant	9/1986 – 5/1987

Radiology	Medical College of Virginia	
Research Assistant		5/1987 – 12/1989
Computer Science	Vanderbilt University	
Systems Software Specialist (Imaging)		1/1990 – 7/1995
Psychiatry/PET Center	Vanderbilt University	
Assistant Professor		8/1995 - 12/2000
Computer Science	Wake Forest University	
Medical Engineering	Wake Forest University School of Medicine	
Co-Founder, CTO, VP Engineering		1/2001 – 11/2004
	PointDx, Inc. (acquired by IDX)	
Founder, General Manager		9/2001 – 9/2005
	PointDx China, Inc. (acquired by IDX)	
Director of Software Engineering		11/2004 – 4/2006
	IDX Systems Corporation	
Assistant Professor		9/2006 – 6/2011
Biomedical Engineering	Wake Forest University School of Medicine	
Associate Professor		7/2011 – 8/2012
Biomedical Engineering	Wake Forest University School of Medicine	
Associate Program Leader		9/2009 – Present
	Center for Biomedical Informatics	
	Translational Science Institute	
	Wake Forest University School of Medicine	
Associate Professor		8/2012 – present
	University of North Carolina at Charlotte	

PROFESSIONAL APPOINTMENTS AND ACTIVITIES

Joint Faculty Member		1/2008 – 8/2012
Sticht Center on Aging	Wake Forest University School of Medicine	
Joint Faculty Member		9/2009 – present
Translational Science Inst.	Wake Forest University School of Medicine	

Reviewer

Journal of Computer Assisted Tomography
IEEE Transactions on Medical Imaging
IEEE Transactions on Pattern Analysis and Machine Intelligence
Medical Physics

Computer Methods and Programs in Biomedicine
American Medical Informatics Association

INSTITUTIONAL SERVICE

Member	Research Informatics Group	2009 – Present
Graduate Program Coordinator		1999 – 2000
	Computer Science Department	
Organizer, Brown Bag Lectures		1995 – 2000
	Computer Science Department	
Judge	Graduate and postdoctoral symposium	
Reviewer	Translational Science Institute Pilot Award	

PROFESSIONAL MEMBERSHIPS AND SERVICE

Institute of Electronics and Electrical Engineering	1995 – Present
American Medical Informatics Association	2007 – Present

HONORS AND AWARDS

Research assistantship, 1986 – 1987, Department of Radiology, Medical College of Virginia.

Research assistantship, 1987 – 1989, Department of Computer Science, Vanderbilt University.

Finalists, 1993 IEEE EMBS Whitaker Foundation Student Open Competition, San Diego, California.

Upsilon Pi Epsilon Honor Society in the Computing Sciences, 1996.

Pi Mu Epsilon National Honorary Mathematics Society, 1996.

Cum Laude Citation, infoRAD Exhibit, 87th Scientific Assembly and Annual Meeting of the Radiological Society of North America, 2001.

Finalists, Piedmont Triad Entrepreneurial Network Business Plan Competition, 2008

PROFESSIONAL INTERESTS

- Imaging Informatics
  - Imaging data management and communications
  - Ontological representation of imaging data and imaging protocols
  - Ontology driven software systems
- Medical Informatics
  - Data mining and clinical decision support
  - Data warehouse for translational research
- Medical Imaging

Image segmentation
Shape analysis
Pattern recognition and machine learning
Image registration

Research in progress:

Cardiovascular research grid: imaging informatics – NHLBI
Ontology development for cardiac imaging studies – NHLBI
Pattern learning in longitudinal cardiovascular imaging – NHLBI
Development of translational data warehouse (i2b2) – WFHS
Continuous surveillance for cardiotoxicity management – Datamax
Improved IMRT treatment planning using machine learning – NCI
Decision support for radiation therapy – NCI
Surgical ICU decision support (SIMON)
Semantic web of imaging protocols
Semantic query tools for biomedical research

GRANTS: CURRENT AND PENDING

R21 CA161389
Principle Investigator, Decision support for dose prescription in radiation treatment planning (Co-PI: Jackie Wu, PhD, Duke), NIH/NCI, $371,233, 7/2012 – 6/2014

R24 HL085343
Project Principle Investigator, The Cardiovascular Research Grid – Project 2 Imaging Informatics, NIH, $1,490,327, (Co-PI: Jeff Carr, MD, WFHS; Primary PI: Raimond Winslow, PhD, Johns Hopkins University), 1/2011 – 12/2015

Co-Investigator, Vascular Dysfunction after Cancer Therapy (PI: Gregory Hundley, MD, WFHS), NIH/NHLBI, $3,773,948, 1/2011 – 12/2015

PAST GRANT HISTORY

Co-Investigator, Longitudinal Studies of Coronary Heart Disease Risk Factors in Young Adults (CARDIA) – CT Reading Center (PI: Jeff Carr, MD, WFHS), NIH/NHLBI, $905,375, 4/2010 – 6/2013

Co-Investigator, Longitudinal Changes in Pericardial Adiposity and Subclinical Atherosclerosis (PI: Jeff Carr, MD, WFHS), NIH/NHLBI, $3,773,948, 2/2010 – 3/2014

Principle Investigator, Personally Controlled Sharing of Medical Images in Rural and Urban Southeast, NIH/NIBIB, $2,033,637, (Co-PI: Jeff Carr), 9/2009 – 8/2012

Principle Investigator, Cardiotoxicity Management for Cancer Survivors

Combining Advanced Imaging, Biomarkers and Continuous Surveillance, WFU Comprehensive Cancer Center/DataMax, $10,000, 5/2010 – 4/2011

Principle Investigator, Pediatric Heart Network Imaging Repository, s/Johns Hopkins University, $39,944, 2/2011 – 1/31/2012

Principle Investigator, Initial Analysis of the WFU Clinical Data Research Warehouse, WFU Translational Science Institute Ignition Award, $5,000, 6/2011 – 6/2012

Co-Investigator, Jackson Heart Study – MR Reading Center (PI: Jeff Carr, MD), NIH/NHLBI, $2,010,986, 7/2007 – 8/2012

Co-Investigator, Virtual Reality Imaging of the Colon (PI: David Vining, MD), NSF/Whitaker Foundation, $749,918, 20%, 8/1995 – 8/1999

Co-Investigator, Virtual Endoscopy (PI: David Vining, MD), ARPA/TRP, $4,008,870, 20%, 5/1996 – 4/1998

Co-Investigator, Improving Virtual Colonoscopy with Computer-Assisted Diagnosis (PI: David Vining, MD), NIH, $1,802,186, 20%, 4/1999 – 3/2002

Co-Investigator, Longitudinal Studies of Coronary Heart Disease Risk Factors in Young Adults Study – CARDIA CT Reading Center (PI: Jeff Carr, MD), NIH, 10%, 2006 – 2008

Principle Investigator, Informatics Grid: A Federated Approach, WFU Translational Science Institute Team Development Award, $50,000, 10%, 1/2008 – 12/2009

Co-Investigator, Jackson Heart Study – CT Reading Center (PI: Jeff Carr, MD), NIH/NHLBI, $733,081, 1/2006 – 2/2011

PATENTS

Method and apparatus for personally controlled sharing of medical image and other health data (Filed: June 2009)

Knowledge based optimal organ dose sparing prescription and evaluation of IMRT treatment (Filed: July 2010)

United States Patent No. 5,920,319/6,366,800: Automatic analysis in virtual endoscopy (Licensed to GE, Siemens, Philips, and Vital Images)

United States Patent No. 6,785,410/6,819,785: Image reporting method and system (Licensed to GE, Siemens, Philips, and Vital Images)

BIBLIOGRAPHY

Journal articles

1. **Y. Ge** and J. M. Fitzpatrick, "A set of one-to-one two dimensional biquadratic transformations", Computers & Mathematics with Applications, vol. 27, no. 11, pp. 13 – 25, 1994.

2. **Y. Ge** and J. M. Fitzpatrick, J. R. Votaw, S. Gadamsetty, R. J. Maciunas, R. M. Kessler, and R. A. Margolin, "Retrospective registration of PET and MR brain images: an algorithm and its stereotactic validation", Journal of Computer Assisted Tomography, vol. 18, no. 5, pp. 800 – 810, 1994.

3. **Y. Ge**, J. M. Fitzpatrick, B. M. Dawant, J. Bao, R. M. Kessler, and R. A. Margolin, "Accurate localization of cortical convolutions in MR brain images", IEEE Transactions on Medical Imaging, vol. 15, No. 4, pp. 418 – 428, 1996.

4. **Y. Ge** and J. M. Fitzpatrick, "On the generation of skeletons from discrete Euclidean distance maps", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 18, no. 11, pp. 1055 – 1066, 1996.

5. D. Vining, G. Ferretti, D. Stelts, D. Ahn, **Y. Ge**, E. Haponik, "Mediastinal lymph node mappinig using spiral CT and three dimentional reconstructions in patients with lung cancer", Journal of Bronchology, vol. 4, pp. 18 – 25, 1997.

6. J. Wang and **Y. Ge**, "An optimization problem in Virtual Endoscopy", Theoretical Computer Science, vol. 207, no.1, pp. 203 – 216, 1998.

7. **Y. Ge**, J. Wang, D. Stelts, and D. Vining, "Computing the centerline of a colon: a robust and efficient method based on 3D skeletons", Journal of Computer Assisted Tomography, vol. 23, no. 5, pp. 786 – 794, 1999.

8. C. Wyatt, **Y. Ge** and D. Vining, "Automatic segmentation of the colon for virtual colonoscopy", Computerized Medical Imaging and Graphics, vol. 24, no. 1, pp. 1 – 9, 2000.

9. E. Bayram, **Y. Ge**, C. Wyatt, "Confidence based anisotropic filtering of Magnetic Resonance Images", IEEE EMBS Magazine, September-October 2002.

10. C. Wyatt, **Y. Ge** and D. Vining, "Segmentation in virtual colonoscopy using a geometric deformable model", Computerized Medical Imaging and Graphics, vol. 30, no. 1, 17 – 30, 2006.

11. C. Wyatt, E. Bayram and **Y. Ge**, "A minimum reliable scale selection in 3D", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 28, no. 3, pp. 481 – 487, 2006.

12. X. Zhu, **Y. Ge**, T. Li, D. Thougphiew, F. Yin, and Q. Wu, "A planning quality evaluation tool for prostate adaptive IMRT based on machine learning", Medical Physics, vol. 38, no. 2, pp. 719-726, 2011.

13. J. Divers, C. Hugenschmidt, K. Sink, J. Williamson, **Y. Ge**, S. Smith, D. Bowden, C. Whitlow, J. Maldjian, and B. Freedman, "Cerebral white matter hyperintensity in African Americans and European Americans with type 2 diabetes", Journal Stroke and Cerebrovascular Diseases, May 16, 2012.

14. **Y. Ge**, D. Ahn, B. Unde, D. Gage, J. Carr, "Patient controlled sharing of medical imaging data across unaffiliated healthcare organizations", Journal of American Medical Informatics Association, [Epub August 11, 2012], 20(1), 157-63, 2013.

15. L. Yuan, **Y. Ge**, W. Lee, F. Ying, J. Kirkpatrick, Q. Wu, "Quantitative analysis of the factors which affect the interpatient organ-at-risk dose sparing variation in IMRT plans.", Medical Physics, 39(11), 6868-78, November 2012.

16. J. Sandberg, **Y. Ge,** H. Nguyen, T. Arcury, A. Johnson, W. Hwang, D. Gage, T. Reynolds, J. Carr, "Insight into the sharing of medical images: physician, other health care providers, and staff experience in a variety of medical settings", Applied Clinical Informatics, 3(4), 475-487, 2012.

17. X. Feng, T. Todd, C. R. Lintzenich, J. Ding, J. J. Carr, **Y. Ge**, J. D. Browne, S. B. Kritchevsky, S. G. Butler, "Aging-related geniohyoid muscle atrophy is related to aspiration status in healthy older adults", J. Gerontol A Biol Sci Med Sci. 2012 Oct 30. [Epub ahead of print]

18. A. L. Kuipers, J. M. Zmuda, J. J. Carr, J. G. Terry, A. L. Patrick, **Y. Ge**, R. C. Hightower, C. H. Bunker, I. Miljkovic, "Association of Volumetric Bone Mineral Density with Abdominal Aortic Calcification in African Ancestry Men", Osteoporosis International. 25(3) 1063-9, 2014.

19. Doshi-Velez, F**., Ge, Y.**, Kohane, I. , "Comorbidity clusters in autism spectrum disorders: an electronic health record time-series analysis", *Pediatrics,* 133 (1) 54-63, 2014.

20. Murphy, R., Register, T., Shively, C., Carr, J**., Ge, Y.**, Heilbrun, M. et al, "Adipose tissue density, a novel biomarker predicting mortality risk in older adults", *J Gerontol A Biol Sci Med Sci.,* 69 (1) 109-17, 2014.

21. Yuan, L., Wu, Q., Yin, F., Jiang, Y., Yoo, D**., Ge, Y.,** "Incorporating single-side sparing in models for predicting parotid dose sparing in head and neck IMRT", *Medical Physics,* 41 (2), 2014.

Abstracts/Scientific exhibits/Presentations at national conferences

1. J. M. Fitzpatrick, D. Pickens, J. M. Perry, and **Y. Ge**, "Experimental results of image registration in digital subtraction angiography with an in vivo phantom", SPIE Medical Imaging III, pp. 200 – 213, 1989.

2. J. M. Fitzpatrick, D. Pickens, H. Chang, **Y. Ge**, and M. Ozkan, "Geometrical transformation of density images", Proceedings of the SPIE Conference on Science and Engineering of Medical Images, pp. 12 – 21, 1989.

3. **Y. Ge**, J. R. Votaw, R. A. Margolin, J. M. Fitzpatrick, R. J. Maciunas, and R. M. Kessler, "Reformatting PET images by direct fitting of the proportional grid system: implementation and validation", SPIE Medical Imaging VI: Image Processing, vol. 1652, pp. 397 – 408, 1992.

4. **Y. Ge**, J. M. Fitzpatrick, R. A. Margolin, and R. M. Kessler, "Map projections for visualization of the cerebral cortex in Magnetic Resonance (MR) Images", Proceedings of the 15th Annual International Conference, IEEE EMBS, vol. 1, pp. 26 – 27, 1993.

5. **Y. Ge**, J. M. Fitzpatrick, B. M. Dawant, J. Bao, R. M. Kessler, and R. A. Margolin, "A new method for identifying cortical convolutions in MR brain images", SPIE Medical Imaging 1994: Image Processing, vol. 2167, pp. 484 – 496, 1994.

6. **Y. Ge**, J. M. Fitzpatrick, R. M. Kessler, and R. A. Margolin, "Intersubject brain image registration using both cortical and subcortical landmarks", SPIE Medical Imaging 1995: Image Processing, vol. 2434, pp. 81 – 95, 1995.

7. **Y. Ge**, C. R. Maurer, J. M. Fitzpatrick, "Surface-based 3D image registration using the iterative closest point algorithm with a closest point transform", SPIE Medical Imaging 1996: Image Processing, 1996.

8. **Y. Ge** and J. M. Fitzpatrick, "Extraction of maximal inscribed disks from discrete Euclidean distance maps", Proceedings of Computer Vision and Pattern Recognition (CVPR), pp. 556 – 561, 1996.

9. **Y. Ge**, D. R. Stelts, and D. J. Vining, "3D Skeleton for Virtual Colonoscopy", Proceedings of Visualization in Biomedical Computing, pp. 449 – 454, 1996.

10. D. Honea, **Y. Ge**, W. Snyder, P. Hemler, D. Vining, "Lymph node segmentation using active contours", SPIE Medical Imaging: Image Processing, vol. 3034, pp. 265 – 273, 1997.

11. D. J. Vining, D. R. Stelts, D. K. Ahn, P. Hemler, **Y. Ge**, G. Hunt, C. Siege, D. McCorquodale, "Freeflight: a virtual endoscopy system", CVRMed-MRCAS'97, Lecture Notes in Computer Science 1205 Springer, pp. 413 – 416, 1997.

12. D. J. Vining, P. Hemler, D. R. Stelts, D. K. Ahn, **Y. Ge**, G. Hunt, C. Siege, D. McCorquodale, "Virtual endoscopy: quicker and easier disease evaluation", SPIE Medical Imaging: Physiology and Function from Multidimentional Images, pp. 415 – 423, 1997.

13. J. Wang and **Y. Ge**, "A graph optimization problem in virtual colonoscopy", Computing and Combinatorics, 4th Annual International Conference (COCOON '98), Lecture Notes in Computer Science 1449, Springer, pp. 289 – 298, 1998.

14. **Y. Ge**, D. Stelts, X. Zha, J. Wang, D. Vining, "Computing the central path of colon lumen in helical CT images", SPIE Medical Imaging: Image Processing, vol. 3338, pp. 702 – 713, 1998.

15. D. Ahn, D. Vining, **Y. Ge**, D. Stelts, "Splitting a colon geometry with multiplanar clipping", SPIE Medical Imaging: Image Display, vol. 3335, pp. 498 – 508, 1998.

16. **Y. Ge**, D. Vining, D. Ahn and D. Stelts, "Colorectal cancer screening with virtual colonoscopy", SPIE Medical Imaging: Physiology and Function from Multidimensional Images, vol. 3660, pp. 94 – 105, 1999.

17. C. Wyatt, **Y. Ge** and D. Vining, "Automatic segmentation of the colon", SPIE Medical Imaging: SPIE Medical Imaging: Physiology and Function from Multidimensional Images, vol. 3660, pp. 139 – 148, 1999.

18. **Y. Ge**, C. Wyatt, E. Bayram, D. Vining, "Geometric deformable models in the confidence field", SPIE Mathematical Modeling, Estimation, and Imaging, vol. 4121, pp. 88-102, 2000.

19. C. Wyatt, **Y. Ge** and D. Vining, "Geometric deformable colon model for polyp detection", SPIE Medical Imaging: Image Processing, vol. 3978, pp. 172 – 182, 2000.

20. C. Wyatt, **Y. Ge** and D. Vining, "Improved conformal metrics for 3D geometric deformable models in medical images", SPIE Medical Imaging: Image Processing, vol. 4322, pp. 366 – 377, 2001.

21. C. Wyatt and **Y. Ge**, "An elliptic operator for constructing conformal metrics in geometric deformable models", Information Processing in Medical Imaging, 17th International Conference (IPMI 2001), Lecture Notes in Computer Science 2082, Springer, pp. 365 – 371, 2001.

22. E. Bayram, C. Wyatt, **Y. Ge**, "Automatic scale selection for medical image segmentation", SPIE Medical Imaging: Image Processing, vol. 4322, pp. 1399 – 1410, 2001.

23. E. Bayram, **Y. Ge**, C. Wyatt, "Confidence based anisotropic filtering of Magnetic Resonance Images", IEEE EMBS 23rd Annual Conference, October, 2001.

24. D. Vining and **Y. Ge**, "Comparison of conventional radiology reporting techniques to an integrated image analysis and structured reporting solution", Radiological Society of North America Annual Meeting 2003, Chicago, IL, November 2003.

25. C. Wyatt and **Y. Ge**, "A minimum reliable scale selection in 3D images", Proceedings of the 2004 IEEE International Symposium on Biomedical Imaging, pp. 808 – 811, 2004.

26. C. Wyatt, **Y. Ge** and D. Vining, "Segmentation in virtual colonoscopy using a geometric deformable model", SPIE Medical Imaging: Physiology, Function, and Structure from Medical Images, vol. 5369, pp. 268 – 279, February 2004.

27. D. Zhang, J. Carr and **Y. Ge**, "An ontology for population-based imaging studies", Society of Imaging Informatics in Medicine Annual Meeting 2009, Charlotte, NC, June 2009.

28. X. Zhu, T. Li, D. Thongphiew, **Y. Ge**, F. Yin, and Q. Wu, "A planning quality evaluation tool for adaptive IMRT treatment based on machine learning", 52nd Annual Meeting of AAPM, Philadelphia, PA, July 2010.

29. H. Xu, P. Santago, D. Gage, **Y.Ge**, "Colonic polyp segmentation based on geodesic active contours with a shape prior model", 13th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Beijing, China, September 2010

30. M. Zheng, J. Carr, **Y. Ge**, "Automatic measurement of calcium phantoms in MESA CT images", BMES 2010 Annual Meeting, Austin, TX, October 2010.

31. **Y. Ge**, Alex Kritchevsky, J. Carr, "Ontological representation of medical imaging protocols", AMIA 2010 Annual Symposium, Washington DC, November 2010.

32. **Y. Ge,** D. Ahn, B. Unde, W. Scott, J. Carr, "Personally controlled sharing of medical imaging data: The PCARE approach", Radiological Society of North America Annual Meeting 2010, Chicago, IL, November 2010.

33. R. Martin, D. Babcock, R. Peral, M. Horvath, J. Beal, P. Santago, **Y. Ge**, J. Carr, "Early detection of sepsis in severely injured patients: A mobile application for critical care physicians", mHealth 2010 Summit, Washington DC, November 8-9, 2010.

34. **Y. Ge,** D. Ahn, B. Unde, D. Gage, J. Carr, "Personally Controlled Image Sharing in the IHE Environment (PCARE-IHE)", Radiological Society of North America Annual Meeting 2011, Chicago, IL, November 2011.

35. **Y. Ge**, T. Minta, J. Kirkpatrick, L. Yuan, and Q. Wu, "Ontological representation of radiation treatment guidelines", 2011 Joint AAPM/COMP Meeting, Vancouver, Canada, July, 2011.

36. L. Yuan, **Y. Ge**, T. Li, X. Zhu, F. Yin, and Q. Wu, "Key anatomical factors influencing OAR dose-volume distribution in prostate IMRT plans", 2011 Joint AAPM/COMP Meeting, Vancouver, Canada, July, 2011.

37. L. Yuan, **Y. Ge**, T. Li, X. Zhu, F. Yin, and Q. Wu, "Modeling the correlation between OAR dose sparing and patient's anatomy in head and neck IMRT", 2011 Joint AAPM/COMP Meeting, Vancouver, Canada, July, 2011.

38. R. Winslow, J. Saltz, I. Foster, J. Carr, **Y. Ge,** M. Miller, L. Younes, D. Geman, S. Granite, T. Kurc, A. Post, R. Madduri, T. Ratnanather, D. Phil, J. Larkin, S. Ardekani, T. Brown, A. Kolasny, K. Reynolds, M. Shipway, "The cardiovascular research grid (CVRG) project", 2011 AMIA Summit on Translational Bioinformatics, San Francisco, CA, 2011.

39. **Y. Ge,** T. Minta, L. Yuan, and Q. Wu, "An ontology of normal tissue effects in radiation therapy", 2011 American Medical Informatics Association Annual Symposium, Washington DC, November 2011.

40. H. Xu, M. Zheng, Y. Yang, J. Carr, **Y. Ge,** "Coronary artery remodeling in non-contrast CT", SPIE Medical Imaging: Computer Aided Diagnosis, vol. 8315, February 2012.

41. J C Sandberg, A J Johnson, **Y. Ge**, PhD; H Nguyen, T Arcury; W Hwang, H. Gage, T. Reynolds, J. Carr, "Use of CDs to Share Imaging Studies: Patient Burden", Radiological Society of North America Annual Meeting 2012, Chicago, IL, November 2012.

42. M. Zheng, J. Carr, Y. Ge, "Model based detection and localization of calibration phantoms in CT images", SPIE Medical Imaging: Image Processing, February 2013.

INVITED PRESENTATIONS (List in chronologic order, including date, location and sponsor. Presentations for commercial entities should be listed separately.)

1. "Euclidean Distance Transform", Spring 1996, University of North Carolina at Greensboro, Sponsor: Jie Wang, PhD
2. "My Experience with a Medical Software Startup", 2/22/2006, Vanderbilt University, Sponsor: J. Michael Fitzpatrick, PhD
3. "Imaging Informatics", 4/9/2009, Public Health Science, Wake Forest University Health Sciences, Sponsor: Scott Rushing
4. "What is Biomedical Informatics?", 2/9/2010, Translational Science Institute, Wake Forest University Health Sciences, Sponsor: Charles McCall MD
5. "An Early Taste of WFUHS RDW", 2/16/2010, Translational Science Institute, Wake Forest University Health Sciences, Sponsor: Charles McCall MD
6. "Software IP from the Perspective of an Inventor and Entrepreneur", 3/5/2010, Wake Forest University Law School, Sponsor: Emile Thompson
7. "Personally Controlled Image Sharing: a Business Perspective", 2/22/2011, Wake Forest University Business School, Sponsor: Tom Clarkson
8. "Personally Controlled Sharing of Medical Images across Healthcare Facilities", 4/8/2011, University of North Carolina at Charlotte, Sponsor: Bei-Tseng, Chu, PhD
9. "Imaging Informatics in Cardiovascular Research Grid", 9/29/2012, iDash Workshop, University of California at San Diego, Sponsor: Brian Chapman, PhD
10. "Aggregating Medical Imaging Data from Multiple Sources: A Critical Capability for Patient Care and Clinical Research", 10/25/12, Biomedical Engineering Society 2012 Annual Meeting, Sponsor: Mia Markay and May Wang

GRADUATE STUDENTS/RESIDENTS/FELLOWS ADVISED (List dates and activity)

Ersin Bayram	2000	MS Thesis Advisor
Jianbin Xie	2001	MS Thesis Advisor
Christopher Wyatt	2002	PhD Dissertation Advisor
Hong Li	2004	PhD Advisory Committee
Dean Zhang	2008	Medical Student Summer Research Advisor
Shuai Zheng	2009	Summer Internship Advisor

	2010 MS Advisory Committee, Research Mentor
Alex Kritchevsky	2009, 2010 Summer Internship Advisor
Deepak Bharkhada	2010 PhD Advisory Committee
Haiyong Xu	2010 PhD Advisory Committee, Research Mentor
Tommy Minta	2011 MS Thesis Advisor
Mingna Zheng	PhD Advisor
Yi Zhen	PhD Advisor

TEACHING EXPERIENCE

Introduction to Computer Science	CS
Data Structure and Algorithms	CS
Object Oriented Software Engineering	CS
Introduction to Numerical Methods	CS
Computer Hardware Organization	CS
Introduction to Computer Graphics	CS
Foundations of Biomedical Informatics	BME
Digital Image Processing	BME
Medical Imaging	BME
Pattern Recognition	BME

ENTREPRENEURIAL EXPERIENCE

Co-founded and managed **PointDx, Inc.**, a medical software startup company
Founded and managed PointDx China Inc., a subsidiary firm in Shanghai
(Both were acquired by IDX Systems Corporation, which was later acquired by GE Healthcare IT)

Played a key role in formulating the vision and business plan of this company

Participated in fund raising from venture capitals and angels

Responsible for technical and operational aspects of the business
Recruited and managed a strong technical team of more than 40 engineers
- with broad skill sets that include Microsoft .NET, Visual C++, J2EE/JSP/Servlet, Oracle and SQL Server 2000, OpenGL, WebLogic; 3D graphics, PACS, DICOM, HL7, IHE, voice recognition and natural language processing

Lead the high-level design of the products using object-oriented (OO) methodology, design patterns, multi-tiered server architecture and normalized entity-relationships

Responsible for establishing the standard operating procedures (SOP) for an iterative full life-cycle software development process that conforms to FDA regulations (QSR/GMP)

Managed the planning, development, verification, validation and FDA clearance (510k) of all products

Managed the budget of the technical team including development, support and quality assurance that grew from $500K to $3M

Wrote white papers on a wide range of subjects including software development in the regulated industry, structured reporting design principles, integration principles and ontology development for radiology

Responsible for establishing and running a Shanghai subsidiary to design and develop quality components at low cost

Pursued OEM development and negotiations with industry leaders such as IDX, Stentor, Sectra, Vital Images, GE and Siemens