Curriculum Vitae

Michael I. Miller

https://en.wikipedia.org/wiki/Michael_I._Miller

Bessie Darling Massey Professor and Director, Johns Hopkins Department of Biomedical Engineering
Director, Center for Imaging Science
Co-Director, Kavli Neuroscience Discovery Institute
Gilman Scholar
Professor of Electrical and Computer Engineering
(410) 516-3826 *(office)*
mim@cis.jhu.edu

Education

Ph.D. Biomedical Engineering, Johns Hopkins University, 1984

M.S. Electrical Engineering, Johns Hopkins University, 1979

B.S. Electrical Engineering, State University of New York at Stony Brook, 1976

Experience

- Bessie Darling Massey Professor and Director, Department of Biomedical Engineering. 2017 - Present
- Co-Director, Kavli Neuroscience Discovery Institute. 2015 – Present
- Director, Center for Imaging Science. 2000 - Present
- Gilman Scholar, Johns Hopkins University. 2011 – Present
- Herschel and Ruth Seder Chair in Biomedical Engineering, Johns Hopkins University. 2004 - 2017
- Professor, Johns Hopkins University. 1998 - Present
- Visiting Professor,École Normale Supérieure de Cachan, France. 2000, May 2002, May 2007, May 2009, May 2011, June 2014, June 2015
- Visiting Professor, Institute Henri Poincaré, France. November, 1998
- Visiting Professor, Brown University. 1990,1994,1995-2001
- Newton R. and Sarah L. Wilson Chair in Biomedical Engineering, Washington University. 1995-1998
- Professor, Washington University St. Louis. 1992 - 1998
- Visiting Professor, Université René Descartes. November. 1997
- Associate Professor, Washington University St. Louis. 1986 - 1992
- Assistant Professor, Washington University St. Louis. 1984 - 1986
- Research Associate, Washington University St. Louis. 1983 - 1984

Awards

- Bessie Darling Massey Professorship in Biomedical Engineering, Johns Hopkins University, 2017
- The John S. Laughlin 25th Anniversary Memorial Lecturer and Visiting Professor, Department of Medical Physics, Memorial Sloan Kettering Cancer Center, 2016
- Awarded "Best Lightning Talk" at the 2014 Annual Conference on Extreme Science and Engineering Discovery Environment, Atlanta, GA, USA,
- Awarded the Capers and Marion McDonald Award for Excellence in Mentoring and Advising, 2013
- Farrington Daniels Award for best paper published in Medical Physics, "Effect of Protocol and Obesity on Dose Conversion Factors in Adult Body CT", 2012
- Johns Hopkins University Gilman Scholar, 2011
- International Man of the Year, Warrant of Proclamation and Medal of Recognition from the International Biographical Centre, Cambridge England, 2003

- Honored Member Strathmore's Who's Who, 2002 - 2003
- 21st Century Award for Achievement, International Biographical Centre, Cambridge, England 2002
- ISI Essential Science Indicators: Highest Increase in Total Citations in the field of Engineering, 2002
- Herschel Ruth Seder Professorship in Biomedical Engineering, The Johns Hopkins University, 2003
- International Order of Merit October, 2003
- Universal Award of Accomplishment, 2003
- Outstanding Intellectuals of the 21st Century, 2000
- The Newton R. and Sarah Louisa Glasgow Wilson Professor in Biomedical Engineering, Washington University in St. Louis, 1995
- National Science Foundation Presidential Young Investigator Award, 1986
- Johns Hopkins Paul Ehrlich Graduate Student Thesis Award, 1983
- IEEE Biomedical Engineering Thesis Award, First Prize, Tau Beta Pi 1982

Professional Activities

1. Janelia Group Leader Review Meeting, September 13, 2018
2. Organizer 2nd International Brain Conference on Brain Health, Beidaihe, China, September 2018.
3. Review Committee Member, Tsinghua University, Department of Electronic and Computer Engineering, April 2018.
4. Review Committee Member, Department of Orthopaedic Surgery, Johns Hopkins School of Medicine, February 27, 2018.
5. Organizer 1st International Brain Conference on Neurodegenerative diseases, Beidaihe, China, August 2017.
6. Dean Search Committee Member, The Johns Hopkins University, School of Public Health, Spring 2017
7. Provost Search Committee Member, The Johns Hopkins University, Spring 2016
8. Review Committee Member, Johns Hopkins University Academic Council Departmental Review, Psychology and Brain Science, School of Arts and Sciences, Baltimore, December 9 – 10, 2015
9. Review Committee Member, Department of Biostatistics Site Review, Bloomberg School of Public Health at Johns Hopkins, two day site visit, December 16-17, 2014
10. Dean Search Committee Member, Krieger School of Arts & Sciences, four day candidate interview process, November and December 2014
11. Panelist, P41 PI Meeting, National Institutes of Health, June 2014
12. Review Committee Member, Singapore Department of BME Site Visit, three day site visit, March 2014
13. Dean Search Committee Member, The Johns Hopkins University, Whiting School of Engineering, four day candidate interview process, June and August 2013
14. Dean Search Committee Member, The Johns Hopkins University School of Medicine, four day candidate interview process, November and January 2011-2012
15. Fellow of the American Institute for Medical and Biological Engineering, 1998 – Present
16. Member, The Academy of Science of St. Louis
17. Senior Member, IEEE, 1995 – Present
18. Member, American Institute for Medical & Biological Engineering, 1998 – Present
19. Member, Association for Research in Otolaryngology, 1994 – Present
20. Member, Biomedical Engineering Society, 2003-Present
21. Panelist, Science of the Arts, Baltimore, MD, October 2010
22. Panelist, Rising to the Challenge, Johns Hopkins University, New York City, April 2010
23. Consultant, Texas Higher Education Coordinating Board, Review of proposed PhD program in BME at The University of Texas, one day site visit, April 200Panelist, BIRN All Hands Meeting, Lead Standards and Deliverables Session, October 2003
24. Panelist, P41 PI Meeting, National Institutes of Health, June 2003
25. Panelist, P41 PI Meeting, National Institutes of Health, June 2002
26. Co-Chair, session on ATR Characterization and Metrics, 3rd Workshop on Conventional Weapon ATR, November 1997
27. Workshop Organizer, "Pattern-Theoretic Knowledge Representation," NIH, April 1996
28. Visiting Scientist, Geometry Institute, University of Minnesota, August Review Panelist, "Computational Biology," NSF, September 1995
29. Visiting Scientist and Panelist, Office of Naval Research Workshop, "Acquisition and Tracking of Maneuvering Targets from Image Sequence Data," organized by J. Abrahams, May 1995
30. Organizer, Information Theory Society, session on Markov Random Fields, November 1994
31. Visiting Scientist and Panelist, "Speech Recognition and Their Image Processing Cousins", June 1994

32. Panelist, Army Science Board Meeting, "Target Recognition: Fundamental Metrics," Lincoln Laboratory, July 1994
33. Panelist, Army Research Office, ATR Working Group, organized by R. D. Guenther, May 1994
34. Panelist, Harvard-M.I.T.-Brown Center for Intelligent Control Pattern Theory Group, organized by U. Grenander, January 1994
35. Visiting Scientist, The Newton Institute, "A Year in Computational Vision," Cambridge, England, invited by D. Mumford, October 1993
36. Panelist, Army Research Office Workshop, "The Future of Automated Target Recognition," invited by J. Chandra, November 1993
37. Panelist, NSF Workshop, "Biology and Emerging Technologies," Washington, D.C., October 1992Panelist, DOD Tri-Service Workshop (ONR, ARO, AFOSR), Stochastic Methods in Image Analysis, "Deformable Templates," Adelphi, MD, May 1992
38. Visiting Scientist, Institút Mittag-Leffler, Stockholm, Sweden, invited by U. Grenander, July 1990
39. Visiting Scientist, Institutó de Calculo, "A Year in Statistics," Rome, Italy, invited by A. Frigessi, June 1990
40. Panelist, IBM-NSF-PYI Workshop, "Stochastic Optimization over Formal Languages on Massively Parallel Processors," IBM Thomas J. Watson Research Center, Yorktown Heights, NY, April 1989
41. NSF Computational Engineering Proposal Review Program, Washington, D.C., March 1988

Presentations (Invited)

1. Miller MI: Computational anatomy and diffeomorphometry: Embedding the brain at meso-scale into the soft-tissue condensed matter continuum, Bioengineering Department Seminar, Columbia , University October 2018.Miller MI: Coordinate Systems for Medial Temporal Lobe Human Anatomy. NIH. March 2018.
2. Miller MI: Diffeomorphometry and Computational Anatomy. Allen Institute. BICCN Review, NIH.March 2018.
3. Miller MI: Computational anatomy and diffeomorphometry: Embedding the brain at meso-scale into the soft-tissue condensed matter continuum, Bioengineering Department Seminar, George Washington, March 2, 2018, (invited by Dr. Igor Ebrimov).
4. Miller MI: Computational anatomy and diffeomorphometry: Embedding the brain at meso-scale into the soft-tissue condensed matter continuum, Bioengineering Department Seminar, Purdue University, February 2018, (invited by Dr. George Wadicka).
5. Miller MI: Computational anatomy and diffeomorphometry: Embedding the brain at meso-scale into the soft-tissue condensed matter continuum, Bioengineering Department Seminar, University of California, San Diego, December 8, 2017, (invited by Dr. Shankar Subramaniam).
6. Miller MI: *Brain Mapping, AI, and the Cloud*, Beijing Tiantan International Forum of Neurosurgery (BIFNS) Opening Ceremony, China National Convention Center, Beijing, November 4, 2017.
7. Miller MI: *Biomarkers for Huntington's Disease,* Huntington's Disease Biomarkers Workshop, National Institutes of Health, Bethesda, MD, October 13, 2017.
8. Miller MI: *Welcome Remarks* at the 2017 BMES Annual Meeting Welcome Reception, Phoeniz, AR, October 11, 2017.
9. Miller MI: Understanding the Brain in the Condensed Matter Continuum, Applications Driven Geometric Functional Data Analysis Workshop, Florida State University, Tallahassee, FL, October 9, 2017.
10. Miller MI: Computational Anatomy and Diffeomorphometry: A Dynamical Systems Model of Neuroanatomy in the Soft Condensed Matter Continuum, Yale Systems Biology Institute Seminar Series, September 26, 2017 (invited by Andre Levchenko).
11. Miller MI: Tracking Neurodegeneration measured with MRI across Brain Networks via Diffeomorphometry, High-field Atlasing, and Changepoint Modelling, First International Life Science Summer Summit, Beidaihe New District, China, August 2, 2017.
12. Miller MI: Understanding the Brain in the Condensed Matter Continuum, OneChemistry Symposium Chemistry's Role in the Brain Initiative Johns Hopkins University, Department of Chemistry, Baltimore, MD, March 28, 2017.
13. Miller MI: *Computational Anatomy and BrainClouds*, Computational Brain Mapping Meeting, IIT Madras, January 8, 2017 (invited by Dr. Partha Mitra of Cold Spring Harbor)
14. Miller MI: *Neurodegeneration and BrainClouds*, Windows Into the Mind, Duke University, December 8, 2016 (invited by Dr. Richard O'Brien, Chairman Neurology Duke Medicine)
15. Miller MI: *Computational Anatomy – Understanding Shape Change in the Human Brain*, Janelia Research Campus, November 28, 2016 (invited by Karel Svoboda)
16. Miller MI: *On a Theory of Shape and Form,* The Cold Spring Harbor Laboratory, October 21, 2016 (invited by Partha Mitra)
17. Miller MI: *BrainCloud: Data Intensive Neuroscience,* Mathematics of Shapes and Applications, Institute for Mathematical Sciences and Clinical Imaging Research Centre, Singapore, July, 25, 2016 (invited)
18. Miller MI: *BrainCloud and High Throughput Neuroinformatics*, 2016 Gordon Research Conference on Advanced Health Informatics, Hong Kong, July 17, 2016 (invited)
19. Miller MI: *BrainClouds, Big Data and Getting Older: Sure Beats the Alternative!* John S. Laughlin Visiting Professorship Memorial Sloan Kettering Cancer Center, Schwartz Building, New York, New York, May 12, 2016 (invited)

20. Miller MI: *BrainClouds and the Complexity of the Human Brain at the Morphome Scale*, 71st Annual Meeting of the ORAU Council of Sponsoring Institutions, Applications of Big Data Analytics: Medical-Imaging-Cyber, Oak Ridge National Laboratory, Oak Ridge, TN, March 8 – 10, 2016 (invited)
21. Miller MI: *BrainClouds and the Aging Brain*, Workshop, Royal Institute of Technology (KTH), Stockholm, December 3, 2015 (invited)
22. Miller MI: *Computational Anatomy and Diffeomorphometry*: 100 Years Since D'Arcy Thompson, Red Raider Mini Symposium, Texas Tech University, Lubbock, November 6 – 7, 2015 (invited)
23. Miller MI: *Panel 1: Neuroscience – Past, Present, and Future*, Kavli Foundation Mini-Symposium, Neuroscience in the 21st Century, Capitol Visitor Center, Washington, DC, October 1, 2015 (invited)
24. Miller MI: *Neuroinformatics, Computational Anatomy and Brain Clouds at the Morphome Scale*, Grand Opening and 10th Anniversary Celebration, Biomedical Research Imaging Center, University of North Carolina, September 30, 2015 (invited)
25. Miller MI: *Neuroinformatics and the Complexity of the Brain at 1mm Scale*, SAMSI Neuroscience Opening Workshop for the 2015-2016 SAMSI research program on Challenges in Computational Neuroscience (CCNS), North Carolina, August 17 -21, 2015 (invited)
26. Miller MI: *Bayesian Deformable Templates in Multi-Atlas Orbits in Computational Anatomy*, 3rd Biomedical Image Analysis Summer School: Modalities, Methodologies & Clinical Research, Institut Henri Poincare, Paris, France, July 6 – 10, 2015 (invited)
27. Miller MI: *Diffeomorphometry, Geodesic Positioning, and Hamiltonian Control for Estimating and Reconstructing Human Anatomy*, Advanced Study School on Imaging for Medial Applications (SSIMA), Sinaia, Romania, June 29 – July 4, 2015 (invited)
28. Miller MI: *MRICloud Use regarding Computational Anatomy Gateway*, XSEDE Science Gateway Community Call, Teleconference, May 29, 2015 (invited)
29. Miller MI: *Neuroinformatics, Computational Anatomy and Brain Clouds at the Morphome Scale,* Seventh International Workshop Statistical Analysis of Neuronal Data (SAND 7), University of Pittsburgh, Pittsburg, PA May 27-29, 2015 (invited)
30. Miller MI: *Bayesian Deformable Templates Nuerodegenerative Disease, and Brain Clouds at the Morphome Scale (1mm),* Joint Carnegie Mellon University Pittsburgh PhD Program in Computational Biology's Seminar Series, Carnegie Mellon University, April 5, 2015 (invited)
31. Miller MI: *Issues in Big Data and Healthcare*, Big Data, Big Changes, Big Impact: Improving your Health and your Healthcare, Booz Allen Hamilton, McLean, March 26, 2015 (Invited)
32. Miller MI: *Quantitative brain mapping in neurological disorders*, JHU-NIMHANS Translational Neuroscience Symposium, Johns Hopkins University, Baltimore, February 25 and 26, 2015 (Invited)
33. Miller MI: *Bayesian Deformable Templates in Computational Anatomy, BrainClouds and Neurodegenerative Diseases*, Erwin Schrodinger Institute, Workshop on Riemannian Geometry in Shape Analysis and Computational Anatomy, Vienna, February 16, 2015 (Invited)
34. Miller MI: *BrainClouds for High Throughput Radiological Workflows*, Dr. Fayad's Translational Research conference, Johns Hopkins University, Baltimore , January 29, 2015 (Invited)
35. Miller MI: *High throughput Neuroinformatics BrainClouds*, Johns Hopkins University, 4th Annual Hopkins Imaging Conference, Baltimore , November 5, 2014 (Invited)
36. Miller MI: *On a Theory of Shape and Form at the Morphome Scale*: 100 Years Since D'Arcy Thomson Hopkins BME Distinguished Lecture Series, Baltimore, November 3, 2014 (Invited)
37. Miller MI: *Diffeomorphometry, Geodesic Positioning and High Throughput Neuroinformatics*, University Pennsylvania, AMCS/PICS Colloquium, Baltimore, October 3, 2014 (Invited)
38. Miller MI: *Bayesian Deformable Templates in Multiple Atlas Orbits,* The Medical Image Computing and Computer Assisted Intervention Society, Boston, September 18, 2014 (Invited)
39. Miller MI: *Bayesian Deformable Templates in Multiple Atlas Orbits*, Keynote speaker at Johns Hopkins BME Ph.D. Retreat, Ocean City, Maryland, September 12 and 13, 2014 (Invited)
40. Miller MI: *Computational Anatomy Gateway: Leveraging XSEDE Computational Resources for Shape Analysis*, 2014 Annual Conference on Extreme Science and Engineering Discovery Environment, Atlanta, July 13 - 18, 2014 (Invited)
41. *Miller MI: Geodesic Positioning Systems for Biological Coordinate Systems and High Throughput Informatics National Research Council of the National Academies Workshop, Washington, D.C., May 17, 2014 (Invited)*
42. Miller MI: *Computational Anatomy and High throughput Neuroinformatics BrainClouds,* Vanderbilt University, Department of Electrical Engineering, Nashville, Tennessee , March 6, 2014 (Invited)
43. Miller MI: *Computational Anatomy and High throughput Neuroinformatics Brain Clouds*, National University of Singapore, Department of Biomedical Engineering, Singapore, March 11 and 12, 2014 (Invited)
44. Miller MI: *Computational Anatomy and High throughput Neuroinformatics BrainClouds,* Centre for Mathematics, CMLA, June 2013 (Invited)
45. Miller, MI: *The development of a population of 4D pediatric XCAT phantoms for CT imaging research and optimization,* Proc. SPIE 9033, Medical Imaging 2014: Physics of Medical Imaging, 90331V, San Diego, February 15-20, 2014 (Invited)
46. Miller MI & Mori S: *MRI as a Tool for Diagnosing Chronic Traumatic Encephalopathy* The Neuropathology of Chronic Traumatic Encephalopathy, Neuroscience Center, Bethesda, Maryland. December 2012 (Invited)
47. Miller MI: *Segmentation via the Random Multi-Atlas Orbit Model* MICCAI Conference, Nice, France. October 2012 (Invited)

48. Miller MI: *Computational Anatomy and High Throughput: Neuroinformatics at 1mm Scale* The Johns Hopkins Brain Science Institute, Brain Night, Baltimore, Maryland. September 2012 (Invited)
49. Miller MI: *The Random Atlas Model in Computational Anatomy and High Throughput Image Informatics* MITAS Conference, Mathematics of Brain Imaging, Simon Frasier University, Burnaby BC. June 2012 (Invited
50. Miller MI: *Diffeomorphic Shape Momentum and Neuroinformatics* ICM Distinguished Seminar Series, Johns Hopkins University, Baltimore, Maryland. September 2011 (Invited)
51. Miller MI: *Diffeomorphic Shape Momentum, Computational Anatomy, and Neuroinformatics at 1mm Scale* Mathematics of Medical Imaging Conference, Fields Institute, Toronto, Canada. June 2011 (Invited)
52. Miller MI: *Computational Anatomy and High Throughput Image Informatics* Lecture, INRIA Sophia, France. May 2011. (Invited)
53. Miller MI: *Anatomic Data Analysis: Comparing Populations (Subcortical Structures)* ISMRM Conference, Montreal, Quebec, Canada. May 2011. (Invited)
54. Miller MI: *Computational Functional Anatomy* Welcome Lecture, Oxford University, London, England. June 2010. (Invited)
55. Miller MI: *Neural Imaging, Signal Analysis, and Image Processing* NEBEC Conference, Columbia University, NY. March 2010. (Invited)
56. Miller MI: *Computational Functional Anatomy and the Diffeom Project* BME Seminar Series, Stony Brook University, NY. March 2010. (Invited)
57. Miller M: *Computational Functional Anatomy* CIS SHAPE Retreat, Johns Hopkins University, Baltimore, MD. January 2010. (Invited)
58. Miller M: *Computational Functional Anatomy* NAMIC Conference, Salt Lake City, UT. January 2010. (Invited)
59. Miller MI: *Computational Functional Anatomy* Distinguished Seminar Series on Vision, University of MD. College Park, MD. March 13, 2009. (Invited)
60. Miller MI: Mori S: *MRI/DTI Image Analysis Tools Based on Large Deformation Diffeomorphic Metric Mapping* NIH Seminar. NIH. April 01, 2008. (Invited)
61. Miller MI: *Image Co-Registration and Warping* FM Kirby Research Center for Functional Brain Imaging Research Retreat. Mt. Washington MD. May 30, 2008. (Invited)
62. Miller MI: *Computational Functional Anatomy* Mathematical Biosciences Institute. Ohio State University. June 10, 2008. (Invited)
63. Miller MI: *Computational Functional Anatomy* Dept of Psychiatry & Behavioral Sciences Speaker Series. Feinberg School of Medicine, Northwestern University. June 20, 2008. (Invited)
64. Miller MI: *Computational Anatomy of Shape using Pattern Theory* IPAMM Mathematics in Brain Imaging. UCLA. July 15, 2008. (Invited)
65. Miller MI: *Computational Functional Anatomy in Diseased Brain* NIH Blueprint for Neuroscience Research. NIH. September 23, 2008. (Invited)
66. Miller MI: *The Emergent Discipline of Computational Functional Anatomy* Inaugural Symposium AMCS at UPenn. September 27, 2008. (Invited)
67. Miller MI: *Computational Functional Anatomy on the TeraGrid* SuperComputing 2008 Conference. Austin, TX, November 19, 2008. (Invited)
68. Miller MI: *Computational Functional Anatomy* IEEE BioCAS Conference. Baltimore, MD. November 22, 2008 (Invited)
69. Miller MI: *Shapes in Medical Imaging: Computational Anatomy* SAMSI Workshop. Research Triangle Park, NC. July 08, 2007. Invited by Laurent Younes (Invited)
70. Miller MI: *Computational Functional Anatomy* IPAM Random Space Shapes Workshop. Los Angeles, CA. May 24, 2007. Invited by Paul Thompson (Invited)
71. Miller MI: *Computational Functional Anatomy* Mathematical Methods for Medical Image Analysis Conference. Banff, Canada. November 05, 2007. Invited by Ghassan Harnarneh (Invited)
72. Miller MI: *Project 4 Presentation* Cardiovascular Research Grid External Advisory Board Meeting. Johns Hopkins University. October 22, 2007. (Invited by Rai Winslow
73. Miller MI: *Integrative Image Analysis* Institute for Computational Analysis Presentation. Johns Hopkins University, Baltimore, MD. February 20, 2006. Raimond Winslow (Invited)
74. Miller MI: *Paths Towards Understanding the Shapes of the Whole Brain* IMA Workshop on Shape Spaces. Minneapolis, MN. April 03, 2006. David Mumford and Laurent Younes (Invited)
75. Miller MI: *Computational Anatomy and the Infinite Dimensional Diffeomorphisms* SIAM Annual Meeting. Boston, MA. July 13, 2006. Carlos Castillo-Chavez and Ricardo Cortez (Invited)
76. Miller MI: *Informal Talk* EP Differentials Workshop. Santa Fe, NM. July 26, 2006. Invited by Darryl Holm and Laurent Younes (Invited)
77. Miller MI: *The Emergent Discipline of Computational Anatomy* SCI Institute Seminar. Salt Lake City, UT. September 22, 2006. Invited by Chris Johnson (Invited)
78. Miller MI: *Computational Anatomy and the Infinite Dimensional Diffeomorphisms* MBI Workshop. Columbus, OH. September 26, 2006. Raimond Winslow (Invited)
79. Miller MI: *Concept of Biomedical Engineering* JHU Biomedical Engineering Retreat. Baltimore, MD. May 23, 2005. Eric Young (Invited)
80. Miller MI: *Plenary Talk* Morphometry Biomedical Informatics Research Network Spring Conference. Miami Beach, FL. March 02, 2005. Jorge Jovicich (Invited)

81. Miller MI: *Results/Challenges in 3D Medical Shape Analysis* Statistical Inferences on Shape Manifolds Workshop. Palo Alto, CA. May 06, 2005. David Mumford (Invited)
82. Miller MI: *Applications of Computational Anatomy to Mental Illness* The Whitaker Foundation Leadership Award Site Visit. Baltimore, MD. March 29, 2005. Murray Sachs (Invited)
83. Miller MI: *Informal Talk* Shape Analysis Retreat. Baltimore, MD. October 17, 2005. Laurent Younes (Invited)
84. Miller MI: *Advances in Imaging Sciences* The Whitaker Foundation Leadership Award Site Visit. Johns Hopkins University, Baltimore, MD. March 18, 2004. Murray Sachs (Invited)
85. Miller MI: *Emerging Field of Computational Anatomy* IPAM's Graduate Summer School: Mathematics in Brain Imaging. Los Angeles, CA. July 12, 2004. Invited by Paul Thompson (Invited)
86. Miller MI: *Going from Structural Maps to Functional Imagery: Initiatives in DTI and fMRI* F.M. Kirby Research Center for Functional Brain Imaging Retreat. Baltimore, MD. October 30, 2004. Dr. Peter van Zijl (Invited)
87. Miller MI: *Intel Technology for Imaging Science and Computational Anatomy* HPC Roundtable. Portland, OR. March 17, 2004. Dr. David Barkai (Invited)
88. Miller MI: *Clutter Metrics for ATR* Dayton, OH. December 01, 2004. (Invited)Miller MI: *Metrics and Euler-Lagrange Equations of Computational Anatomy* CAIP Center Seminar. Rutgers University. February 24, 2003. invited Dr. Ed Devinney (Invited)
89. Miller MI: *Technologies for a Center of Excellence in Homeland Security* Mt. Washington Valley Economic Council Talk. North Conway, NH. March 06, 2003. invited by John Bruni (Invited)
90. Miller MI: *Metrics and Euler-Lagrange Equations of Computational Anatomy* IPAM UCLA Seminar. Los Angeles, CA. April 08, 2003. invited by Song Chun Zhu (Invited)
91. Miller MI: *Computational Anatomy: An Emerging Discipline* GRASP Laboratory Seminar, Computer Science. University of Pennsylvania. April 10, 2003. invited by James Gee (Invited)
92. Miller MI: *Photo/Geo Metric Spaces for Image Analysis* ONR PI Meeting. University of Minnesota. May 09, 2003. invited by Dr. Guillermo Sapiro (Invited)
93. Miller MI: *The Emerging Discipline of Computational Anatomy* Conformal Brain Mapping Meeting. Townsend, TN. May 20, 2003. invited by Ken Stephenson (Invited)
94. Miller MI: *Image Analysis in the 21st Century* The JASONS Program. San Diego, CA. July 08, 2003. invited by Dr. Robert Henderson (Invited)
95. Miller MI: *Computational Anatomy and Models for Image Analysis* BC Inverse Problems and Medical Imaging Workshop. Vancouver, BC. August 06, 2003. invited by Dr. John Schotland (Invited)
96. Miller MI: *Computational Neuropsychiatry and Computer Vision: Some Applications to Psychiatry* JHU Department of Psychiatry Weekly Research Conference. Johns Hopkins University, Baltimore, MD. October 07, 2003. invited by Russell Margolis (Invited)
97. Miller MI: *Models for Image Analysis and Computational Anatomy* Computational Sciences Lecture Series. University of Wisconsin, Madison, WI. October 30, 2003. invited by Dr. Robert Nowak (Invited)
98. Miller MI: *Computational Anatomy and Models for Image Analysis* Institute for Systems Research, Seminar. University of Maryland, College Park, MD. November 05, 2003. invited by Dr. P.S. Krishnaprasad (Invited)
99. Miller MI: *I-3* Presentation to IBM representatives. Johns Hopkins University, Baltimore, MD. November 11, 2003. (Invited)
100. Miller MI: Plenary Speaker, Society for Mathematical Biology, Knoxville TN, June 2002 (Invited)
101. Miller MI: *On the Metrics and Variational Equations of Computational Anatomy* SIAM Life Sciences 2002. Boston, MA. March 06, 2002. (Invited)
102. Miller MI: *Information Theory of Automatic Target Recognition* Northrop Grumman Space System Division Seminar. Azusa, CA. January 22, 2002. (Invited)
103. Miller MI: Ratnanather JT: *Development and Validation of New Tools for Computational Anatomy* Conte Center Executive Committee Meeting. JHU. February 12, 2002. (Invited)
104. Miller MI: van Zijl P: *Overview of Resource for Quantitative Functional MRI* National Center for Research Resources PI Meeting. Bethesda, MD. June 24, 2002. (Invited)
105. Miller MI: *Computational Anatomy: An Emerging Discipline* Annual Meeting of the Society for Mathematical Biology and International Conference on Mathematics and Biology. Knoxville, TN. July 13, 2002. Plenary Speaker (Invited)
106. Miller MI: *The Euler-Lagrange Equations of Computational Anatomy* Reunion Conference for the Geometrically Based Motions IPAM Program. Lake Arrowhead, CA. September 16, 2002. (Invited)
107. Miller MI: *On the Metrics and Euler-Lagrange Equations of Computational Anatomy* Image Analysis and Understanding Data from Scientific Experiments. Los Alamos National Laboratory, Los Alamos, NM. December 02, 2002. (Invited)
108. Miller MI: *The Emerging Discipline of Computational Anatomy* Computer Surgery. The National Library of Medicine. January 16, 2001. (Invited)
109. Miller MI: *Image Understanding* NSF Science and Technology Center Site Review. Rutgers University, NJ. October 10, 2001. (Invited)
110. Miller MI: *Pattern Based Computing* Santa Rosa Darpa Meeting. Santa Rosa, CA. June 25, 2001. (Invited)
111. Miller MI: *Metric Spaces for Clutter Invariant ATR* Wright Patterson Air-Force Base. August 08, 2001. (Invited)
112. Miller MI: *Computational Anatomy* NIH/NIAA Workshop. Bethesda, MD. September 10, 2001. (Invited)
113. Miller MI: *The Information Theory for Optimal Aimpoint Selection via Multiple Sensors* Office of Naval Research (ONR), Marine Corps Review. Quantico, VA. March 02, 2001. (Invited)

114. Miller MI: *Impact of NPACI on Computational Anatomy* NPACI All hands Meeting. San Diego, CA. February 27, 2001. (Invited)
115. Miller MI: *The Future of Computational Imaging Science* Donald L. Snyder Workshop. Washington University. January 15, 2000. (Invited)
116. Miller MI: *Computational Anatomy: An Emerging Discipline* University of Minnesota's Symposium on Brain Imaging. IMA, University of Minnesota. October 13, 2000. (Invited)
117. Miller MI: *Pattern Based Computing* DARPA Workshop on Future of Pattern Based Computing. San Diego, CA. October 24, 2000
118. Miller MI: *Performance Analysis of Multiple Sensor Systems in Automatic Target Recognition* Office of Naval Research MURI Review. Johns Hopkins University, Baltimore, MD. November 10, 2000.
119. Miller MI: *Deformable Templates and Image Understanding* The Applied Physics Laboratory, JHU. March 03, 2000. (Invited)
120. Miller MI: *Computational Anatomy: An Emerging Discipline* Symposium on Inference for Stochastic Processes. University of Georgia, Athens, GA. May 12, 2000. (Invited)
121. Miller MI: *Information Theory, Image Understanding, Automated Target Recognition* DARPA Workshop on Future of Image Analysis. University of Colorado. August 06, 2000. (Invited
122. Miller MI: *The Information Theory of Imaging Science* Mathematics and Image Analysis 2000. Ecole Polytechnique, Paris, France. September 27, 2000. (Invited)
123. Miller MI: *ATR: Automated Target Recognition* Thomson-CSF Research Laboratory, Palaiseau, France. September 28, 2000. (Invited)
124. Miller MI: *CIS Meets Lincoln Lab ATR Group* MIT, Boston, MA. June 18, 1999. (Invited)
125. Miller MI: *Metrics and Performance Bounds for ATR* Automated Target Recognition Working Group. February, 1999. (Invited)
126. Miller MI: *The Future of Computational Imaging Science* Workshop on Computational Science and Information Technology. Florida State University. November 04, 1999. (Invited)
127. Miller MI: *The Future of Medical Imaging* Florida State University. March, 1999. (Invited)
128. Miller MI: *Computational Anatomy: An Emerging Discipline* The First F.M. Kirby Symposium on Functional Brain Imaging. Johns Hopkins University, Baltimore, MD. May, 1999. (Invited)
129. Miller MI: *Imaging Science and Engineering, Multi Sensor, Multi-Scale, Multi-Organ* JHU, Whitaker Institute, Baltimore, MD. September 08, 1998. (Invited)
130. Miller MI: *ATR and Image Understanding in the Center for Imaging Science* 1998 Annual Review Brown MURI/CIS. Brown University. April 21, 1998. (Invited)
131. Miller MI: *Inference in Parameter Spaces of Varying Dimension* Newton Institute, A Year in Computer Vision. Cambridge, England. October, 1993. Invited by D.B. Mumford
132. Miller MI: *Massively Parallel Computation for Hierarchical Imaging Systems* University of Minnesota. May, 1990. (Invited)

Published Books

1. Ulf Grenander and Michael I. Miller. *Pattern Theory From Representation to Inference*. Oxford University Press, 2006. (ISBN 0-19-850570-1) (*Published*)
2. Donald L. Snyder and Michael I Miller. *Random Point Processes in Time and Space*. Springer-Verlag New York, LLC, 1991. (ISBN 0-387-97577-2) (*Published*)

Published Book Chapters.

1. Miller, M.I., S. Mori, X. Tang, D. Tward, Y. Zhang. “Bayesian Multiple Atlas Deformable Templates”, Elsevier, Inc., pages 401-415, 2015, (ISBN: 9780123970251, 9780123973160).
2. Feng, J., Xiaoying Tang, Minh Tang, Carey Priebe, and Michael Miller. "Metric Space Structures for Computational Anatomy." Springer International Publishing, 2013. 123-130 (ISBN: 978-3-319-02266-6 (Print) 978-3-319-02267-3 (Online)
3. Srivastava A, Lanterman AD, Grenander U, Loizeaux M, Miller MI. "Monte Carlo Techniques for Automated Target Recognition." Sequential Monte Carlo Methods in Practice. Springer-Verlag New York, LLC, 2001. 533-552. (ISBN 0-387-95146-6) (*Published*)
4. Srivastava, A, Miller MI, Grenander U. "Bayesian Automated Target Recognition." Handbook of Video and Image Processing. Academic Press (Elsevier Science & Technology Books), 2000. 869-882. (ISBN 0-121-19790-5)

5. Miller MI, Joshi S, Christensen CE. "Large Deformation Fluid Diffeomorphisms for Landmark, Image Matching." Brain Warping. Academic Press (Elsevier Science & Technology Books), 1999. 115-132. (ISBN 0-126-92535-6)
6. Srivastava A, Miller MI, Grenander U. "Ergodic Algorithms on Special Euclidean Groups for ATR." System and Control in the 21st Century. Birkhauser Verlag, 1996. 327-350. (ISBN 0-817-63881-4)
7. Mark KE, Miller MI, Grenander U. "Constrained Stochastic Language Models." Image Models and their Speech Model Cousins. Springer-Verlag New York, LLC, 1996. 131-140. (ISBN 0-387-94806-6)
8. Schmich RM, Miller MI. "Stochastic Intensity of Neural Spike Discharge Based on Active Channel Dynamics. ." Computational Neuroscience: Trends in Research 1995. Academic Press (Elsevier Science & Technology Books), 1996. 125-130. (ISBN 0-121-21041-3)
9. Vannier MW, Miller MI, Grenander U. "Modeling and Data Structure for Registration to a Brain Atlas of Multidimensional Images." Functional Neuroimaging: Technical Foundations. Academic Press (Elsevier Science & Technology Books), 1994. 217-221. (ISBN 0-126-85845-4)
10. Wang J, Miller MI, Ogielski AT. "A Stochastic Model of Synaptic Transmission and Auditory Nerve Discharge (Part I)." Computation in Neurons and Neural Systems. Springer-Verlag New York, LLC, 1994. 147-152. (ISBN 0-792-39465-8)
11. Wang J, Miller MI, Ogielski AT. "A Stochastic Model of Synaptic Transmission and Auditory Nerve Discharge (Part II)." Computation in Neurons and Neural Systems. Springer-Verlag New York, LLC, 1994. 153-158. (ISBN 0-792-39465-8)
12. Miller MI, Joshi SC, Maffitt DR, McNally JG, Grenander U. "Membranes, Mitochondria, and Amoebae: 1, 2, and 3 Dimensional Shape Models." Advances in Applied Statistics (Statistics and Images: 2). Carfax Publishing Company, 1994. 141-163. (ISBN 0-902-87945-6)
13. Snyder DL,Politte DG, Miller MI."Case Study in Statistical Image Processing:Positron Tomography." Spatial Statistics and Imaging.Institute of Mathematical Statistics,1992.368-381.(ISBN 0-940-60027-7)
14. Miller MI, Fuhrmann DR, O'Sullivan JR, Snyder DL. "Maximum-Likelihood Methods for Toeplitz Covariance Estimation and Radar Imaging." Advances in Spectrum Analysis and Array Processing. Prentice Hall Professional Technical Reference, 1989. 145-172. (ISBN 0-130-08574-X)
15. Karamanos N, Miller MI. "A New Method for Estimating Stimulus and Refractory Related Functions from Auditory-Nerve Discharges." Basic Issues in Hearing: Proceedings of the Eighth International Symposium on Hearing. Academic Press (Elsevier Science & Technology Books), 1988. 185-195.(ISBN 0-122-23346-8)
16. Miller, MI. "Application of Likelihood and Entropy for Toeplitz Constrained Covariance Estimation." Maximum-Entropy and Bayesian Methods in Science and Engineering. Kluwer Academic Publishers, Dordrecht Boston, 1988. 357-362. (ISBN 9-02772-792-9) (*Published*)

Publications: Archival Journals

1. Tward DJ, Mitra P, and Miller MI, “Estimating diffeomorphic mappings between templates and noisy data: Variance bounds on the estimated canonical volume form,” Quarterly of Applied Mathematics, 2018, accepted, arXiv:1807.10834.
2. Albert M, Zhu Y, Moghekar A, Mori S, Miller MI, Soldan A, Pettigrew C, Selnes O, Li, S, Wang MC, 2018. Predicting progression from normal cognition to mild cognitive impairment for individuals at 5 years. Brain, doi:10.1093/brain/awx365.
3. Miller MI, Arguillère S, Tward DJ, Younes L. Computational anatomy and diffeomorphometry: A dynamical systems model of neuroanatomy in the soft condensed matter continuum. WIREs Syst Biol Med. 2018;e1425. https://doi.org/10.1002/wsbm.1425
4. Adler DH, Wisse LEM, Ittyerah R, Pluta JB, Ding SL, Xie L, Wang J, Kadivar S, Robinson JL, Schuck , Trojanowski JQ, Grossman M, Detre JA, Mark A. Elliott MA, Toledo JB, Liu W, Pickup S, Miller MI, Sandhitsu Das SR, Wolk DA, Yushkevich PA, Characterizing the human hippocampus in aging and Alzheimer’s disease using a computational atlas derived from ex vivo MRI and histology. Proceedings of the National Academy of Sciences Apr 2018, 115 (16) 4252-4257; DOI: 10.1073/pnas.1801093115.
5. Tward DJ and Miller MI, “On the complexity of human neuroanatomy at the millimeter morphome scale: Developing codes and characterizing entropy indexed to spatial scale,” Frontiers in Neuroscience, vol. 11, p. 577, October,2017.
6. Tward DJ, Sicat CS, Brown T, Bakker A, Gallagher AM, M. Albert M, Miller MI and for the Alzheimer’s Disease Neuroimaging Initiative, “Entorhinal and transentorhinal atrophy in mild cognitive impairment using longitudinal diffeomorphometry,” Alzheimer’s & Dementia: Diagnosis, Assessment & Disease Monitoring, vol. 9, pp. 41–50, August, 2017.
7. Tang X, Varma VR, Miller MI, Carlson MC. Brain Structure and Function. Education is associated with subregions of the hippocampus and the amygdala vulnerable to neuropathologies of Alzheimer’s disease. April 222 (3) 1469-1479: doi: 10.1007/s00429-016-1287-9. Epub 2016 August 17,2017.
8. Tang X, Miller MI, Younes, L. Biomarker Change-Point Estimation with Right Censoring in Longitudinal Studies. Ann. Appl. Stat. Volume 11, Number 3 (2017), 1738-1762.
9. Sakamoto R,Yakami M, Fujimoto K, Nakagomi K, Kubo T, Emoto Y, Akasaka T, Aoyama G, Yamamoto H, Miller MI, Mori S, Togashi K. Temporal Subtraction of Serial CT Images with Large Deformation Diffeomorphic Metric Mapping in the Identification of Bone Metastases. Radiology. 2017 Jul 3:16,1942.

10. Feng L, Jeon T, Yu Q, Ouyang M, Peng Q, Mishra V, Pletikos M, Sestan N, Miller MI, Mori S, Hsiao S, Liu S, Huang H. Population-averaged macaque brain atlas with high-resolution.Brain Structure Function 2017June 8.
11. D. J. Tward, M. Miller, A. Trouve, and L. Younes, “Parametric surface diffeomorphometry for low dimensional embeddings of dense segmentations and imagery,” IEEE transactions on pattern analysis and machine intelligence, vol. 39, no. 6, pp. 1195–1208,June, 2017.
12. Seymour K, Tang X, Crocetti D, Mostofsky S, Miller MI, Rosch K. Anomalous subcortical morphology in boys, but not girls, with ADHD compared to typically developing controls and correlates with emotion dysregulation Psychiatry Research Neuroimaging 2017 Mar 30 261: 20-2.
13. Tang X, Qin Y, Zhu W, Miller MI. Surface-based vertexwise analysis of morphometry and microstructural integrity for white matter tracts in diffusion tensor imaging: With application to the corpus callosum in Alzheimer's disease Human Brain Mapping 2017 Jan 13; 1-19.
14. Vogelstein J, Mensh B, Häusser M, Spruston N, Evans AC, Kording K, Amunts K, Ebell C, Muller J, Telefont M, Hill S, Koushika SP, Calì C, Valdés-Sosa PA, Littlewood PB, Koch C, Saalfeld S, Kepecs A, Peng H, Halchenko YO, Kiar G, Poo MM, Poline JB, Milham MP, Schaffer AP, Gidron R, Okano H, Calhoun VD, Chun M, Kleissas DM, Vogelstein RJ, Perlman E, Burns R, Huganir R, Miller MI. To the Cloud! A Grassroots Proposal to Accelerate Brain Science Discovery Neuron Volume 92, Issue 3, 2 November 2016, Pages 622–627.
15. Wu D, Ceritoglu C, Miller MI, Mori S. Direct Estimation of Patient Attributes from Anatomical MRI Based on Multi-Atlas Segmentation Framework. Neuroimage Clin. 2016 Sep 14;12:570-581.
16. Ceyhan E, Nishino T, Botteron KN, Miller MI, Ratnanather JT. Analysis of Cortical Morphometric Variability Using Labeled Cortical Distance Maps. Statistics and its Interface. 2016.
17. Tang X, Varma VR, Miller MI, Carlson MC. Education is associated with sub-regions of the hippocampus and the amygdala vulnerable to neuropathologies of Alzheimer's disease. Brain Struct Funct. 2016 Aug 17.
18. Tward D, Miller MI, Trouve A, Younes L, Parametric Surface Diffeomorphometry for Low Dimensional Embeddings of Dense Segmentations and Imagery IEEE Transactions on Pattern Analysis and Machine Intelligence Year 2016, Volume PP, Issue: 99 Pages: 1 – 10.
19. Tang X, Qin Y, Wu J, Zhang M, Zhu W, Miller MI. Shape and diffusion tensor imaging based integrative analysis of the hippocampus and the amygdala in Alzheimer's disease. Magn Reson Imaging 2016 May 20;34(8):1087-1099.
20. Ardekani S, Jain S, Sanzi A, Corona-Villalobos CP, Abraham TP, Abraham MR, Zimmerman SL, Wu KC, Winslow RL, Miller MI, Younes L. Shape analysis of hypertrophic and hypertensive heart disease using MRI-based 3D surface models of left ventricular geometry. Neuroimage Clin. 2016 Feb 26;11:450-60.
21. Faria AV, Ratnanather JT, Tward DJ, Lee DS, van den Noort F, Wu D, Brown T, Johnson H, Paulsen JS, Ross CA, Younes L, Miller MI. PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Linking white matter and deep gray matter alterations in premanifest Huntington disease.Neuroimage Clin. 2016 Feb 26;11:450-60.
22. Mori S., Wu D., Ceritoglu C., Li Y, Kolasny, A., Vaillant, MA, Faria, AV, Oishi, K, Miller MI. MRICloud: Delivering High-Throughput MRI Neuroinformatics as Cloud-Based Software as a Service, Computing in Science & Engineering, Volume 18, Issue: 5, Sept.-Oct. 2016.
23. Miller, M.I., Trouve, A., and Younes, L. (2015). Hamiltonian Systems and Optimal Control in Computational Anatomy: 100 Years Since D'Arcy Thompson. Annu Rev Biomed Eng *17*, 447-509.
24. Wu, D., Ma T, Ceritoglu, C., Li, Y., Chotiyanonta, J., Hou, Z., Hsu, J., Xu, X., Brown, T., Miller, M.I., and Mori, S. (2015). Resource atlases for multi-atlas brain segmentations with multiple ontology levels based on T1-weighted MRI. NeuroImage 2016 Jan 15;125:120-30.
25. Tang, X., Holland, D., Dale, A.M., and Miller, M.I. (2015). APOE Affects the Volume and Shape of the Amygdala and the Hippocampus in Mild Cognitive Impairment and Alzheimer's Disease: Age Matters. J Alzheimers Dis *47*, 645-660.
26. Miller, M.I., Ratnanather, J.T., Tward, D.J., Brown, T., Lee, D.S., Ketcha, M., Mori, K., Wang, M.C., Mori, S., Albert, M.S., Younes, L., and Team, B.R. (2015). Network Neurodegeneration in Alzheimer's Disease via MRI Based Shape Diffeomorphometry and High-Field Atlasing. Front Bioeng Biotechnol *3*, 54.
27. Segars, W.P., Norris, H., Sturgeon, G.M., Zhang, Y., Bond, J., Minhas, A., Tward, D.J., Ratnanather, J.T., Miller, M.I., Frush, D., and Samei, E. (2015). The development of a population of 4D pediatric XCAT phantoms for imaging research and optimization. Med Phys *42*, 4719-4726.
28. Liang, Z., He, X., Ceritoglu, C., Tang, X., Li, Y., Kutten, K.S., Oishi, K., Miller, M.I., Mori, S., and Faria, A.V. (2015). Evaluation of Cross-Protocol Stability of a Fully Automated Brain Multi-Atlas Parcellation Tool. PLoS One *10*, e0133533.
29. Soldan, A., Pettigrew, C., Lu, Y., Wang, M.C., Selnes, O., Albert, M., Brown, T., Ratnanather, J.T., Younes, L., Miller, M.I., and Team, B.R. (2015). Relationship of medial temporal lobe atrophy, APOE genotype, and cognitive reserve in preclinical Alzheimer's disease. Hum Brain Mapp *36*, 2826-2841.
30. Mahon, P.B., Lee, D.S., Trinh, H., Tward, D., Miller, M.I., Younes, L., Barta, P.E., and Ratnanather, J.T. (2015). Morphometry of the amygdala in schizophrenia and psychotic bipolar disorder. Schizophr Res *164*, 199-202.
31. Faria AV, Oishi K, Yoshida S, Hillis A, Miller MI, Mori S.Content-based imageretrieval for brain MRI: an image-searching engine and population-based analysis to utilize past clinical data for future diagnosis. NeuroImage. Clinical.2015;7:367-76.PMCID: Journal in progress

32. Tang, X., Holland, D., Dale, A.M., Younes, L., Miller, M.I., and Alzheimer's Disease Neuroimaging, I. (2015). The diffeomorphometry of regional shape change rates and its relevance to cognitive deterioration in mild cognitive impairment and Alzheimer's disease. Hum Brain Mapp *36*, 2093-2117.
33. Qiu, A., Mori, S., and Miller, M.I. (2015). Diffusion tensor imaging for understanding brain development in early life. Annu Rev Psychol *66*, 853-876.
34. Tang, X., Holland, D., Dale, A.M., Younes, L., and Miller, M.I. (2015). Baseline shape diffeomorphometry patterns of subcortical and ventricular structures in predicting conversion of mild cognitive impairment to Alzheimer's disease. J Alzheimers Dis *44*, 599-611.
35. Sato K, Ishigame K, Ying SH, Oishi K, Miller MI, Mori S.Macro- andmicrostructural changes in patients with spinocerebellar ataxia type 6:assessment of phylogenetic subdivisions of the cerebellum and the brainstem. AJNR. American journal of neuroradiology. 2015; 36(1):84-90.PMCID: Journal in progress
36. Tang X, Crocetti D, Kutten K, Ceritoglu C, Albert MS, Mori S, Mostofsky SH, Miller MI. Segmentation of brain magnetic resonance images based on multi-atlas likelihood fusion: testing using data with a broad range of anatomical and photometric profiles. Front Neurosci. 2015 Mar 3;9:61PMCID: PMC4347448
37. Ardekani S, Gunter G, Jain S, Weiss RG, Miller MI, Younes L. Estimating dense cardiac 3D motion using sparse 2D tagged MRI cross-sections. ConfProc IEEE Eng Med Biol Soc. 2014 Aug; 2014:5101-4.PMCID: Journal in progress
38. Tang X, Holland D, Dale AM, Younes L, Miller MI. Shape abnormalities of subcortical and ventricular structures in mild cognitive impairment and Alzheimer's disease: detecting, quantifying, and predicting. Hum Brain Mapp. 2014 Aug;35(8):3701-25, PMCID: Journal in progress
39. Faria AV, Sebastian R, Newhart M, Mori S, Hillis AE. Longitudinal Imaging and Deterioration in Word Comprehension in Primary Progressive Aphasia: Potential Clinical Significance. Aphasiology. 2014; 28(8-9):948-963.PMCID: PMC4243664
40. Tang X, Holland D, Dale AM, Younes L, Miller MI, and ADNI, “The diffeomorphometry of regional shape change rates in mild cognitive impairment and Alzheimer’s disease”, under review, Human Brain Mapping, 2014.
41. Tang X, Crocetti D, Kutten K, Ceritoglu C, Albert M, Mori S, Mostofsky S, and Miller MI, “Segmentation of brain magnetic resonance images based on multi-atlas likelihood fusion: testing using data with a broad range of anatomical and photometric profiles”, under review, Frontiers in Neuroinformatics, 2014.
42. Liang Z, He X, Ceritoglu C, Tang X, Li Y, Kutten KS, Oishi K, M.I. Miller MI, Mori S, "Evaluation of cross-protocol stability of a fully automated brain multi-atlas parcellation tool." PLoS ONE 10(7): e0133533. https://doi.org/10.1371/journal.pone.0133533
43. Michael I. Miller, Laurent Younes, J. Tilak Ratnanather, Timothy Brown, Huong Trinh, David S. Lee, Daniel Tward, Pamela B. Mahon, Susumu Mori, Marilyn Albert, and the BIOCARD Research Team, "Amygdalar atrophy in symptomatic Alzheimer's disease based on diffeomorphometry: the BIOCARD cohort," Neurobiology of Aging, In Press (2014)
44. Hannah Norris H, Yakun Zhang Y, Jason Bond J, Gregory M. Sturgeon, Anum Minhas, Daniel J. Tward, J. T. Ratnanather, M. I. Miller, D. Frush, E. Zhang Y, Chang L, Ceritoglu C, Skranes J, Ernst T, Mori S, Miller MI, Oishi K. "A Bayesian approach to the creation of a study-customized neonatal brain atlas." Neuroimage. 2014 Nov 1;101:256-67. Epub 2014 Jul 12.
45. Sato K, Ishigame K, Ying SH, Oishi K, Miller MI, Mori S. Macro- and Microstructural Changes in Patients with Spinocerebellar Ataxia Type 6: Assessment of Phylogenetic Subdivisions of the Cerebellum and the Brain Stem. AJNR Am J Neuroradiol *36*, 84-90 (2015). 2014 Aug 28. [Epub ahead of print] PubMed PMID: 25169926
46. Djamanakova A, Tang X, Li X, Faria AV, Ceritoglu C, Oishi K, Hillis AE, Albert M, Lyketsos C, Miller MI, Mori S. "Tools for multiple granularity analysis of brain MRI data for individualized image analysis." Neuroimage. 2014 Nov 1; 101:168-76. Epub 2014 June 27.
47. Xiaoying Tang, Shoko Yoshida, Thierry A.G.M Huisman, Andreia V. Faria, Kenichi Oishi, Kwame Kutten, Andrea Poretti, Michael I. Miller, Susumu Mori . "Multi-Contrast Multi-Atlas Parcellation of Diffusion Tensor Imaging of the Human Brain" PLoS Onr. 2014 May 8, 9 (5):e96985
48. Tang X, D. Holland, Dale AM, Younes L, Miller MI, and ADNI, “Baseline shape diffeomorphometry patterns of subcortical and ventricular structures in predicting conversion of mild cognitive impairment to Alzheimer’s disease”, in press, Journal of Alzheimer's Disease, 2014
49. Younes L, Albert M, Miller MI; BIOCARD Research Team. Inferring change point times of medial temporal lobe morphometric change in preclinical Alzheimer's disease. Neuroimage Clin. 2014 Apr 21;5:178-87. doi: 10.1016/j.nicl.2014.04.009. eCollection 2014. PubMed PMID: 25101236; PubMed Central PMCID: PMC4110355
50. Younes L, Ratnanather JT, Brown T, Aylward E, Nopoulos P, Johnson H, Magnotta VA, Paulsen JS, Margolis RL, Albin RL, Miller MI, Ross CA; PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Regionally selective atrophy of subcortical structures in prodromal HD as revealed by statistical shape analysis. Hum Brain Mapp. 2014 Mar;35(3):792-809. doi:10.1002/hbm.22214. Epub 2012 Dec 20. PubMed PMID: 23281100; PubMed Central PMCID: PMC3715588.

51. Norris H, Zhang Y, Bond J, Sturgeon GM, Minhas A, Tward DJ, Ratnanather JT, Miller MI, Frush D, Samei E, Segars WP. A set of 4D pediatric XCAT reference phantoms for multimodality research. Med Phys. 2014 Mar;41(3):033701. doi:10.1118/1.4864238. PubMed PMID: 24593745; PubMed Central PMCID: PMC3987726
52. M.I. Miller, S. Mori, X. Tang, D. Tward, and Y. Zhang, “3D Deformable templates in computational anatomy”. In: A.W. Toga, Eds. Brain Mapping: An Encyclopedic Reference, Elsevier, in press, 2014
53. Miller MI, Younes L, Trouvé A. Diffeomorphometry and geodesic positioning systems for human anatomy. Technology (Singap World Sci). 2014 Mar;2(1):36. PubMed PMID: 24904924; PubMed Central PMCID: PMC4041578.
54. Sakamoto R, Mori S, Miller MI, Okada T, Togashi K. Detection of time-varying structures by large deformation diffeomorphic metric mapping to aid reading of high-resolution CT images of the lung. PLoS One. 2014 Jan 13;9(1):e85580. doi:10.1371/journal.pone.0085580. eCollection 2014. PubMed PMID: 24454894; PubMed Central PMCID: PMC3890326.
55. Miller MI, Faria AV, Oishi K, Mori S. High-throughput neuro-imaging informatics. Front Neuroinform. 2013 Dec 17;7:31. doi: 10.3389/fninf.2013.00031. eCollection 2013. PubMed PMID: 24381556; PubMed Central PMCID: PMC3865387
56. Li M, Ratnanather JT, Miller MI, Mori S. Knowledge-based automated reconstruction of human brain white matter tracts using a path-finding approach with dynamic programming. Neuroimage. 2014 Mar;88:271-81. doi: 10.1016/j.neuroimage.2013.10.011. Epub 2013 Oct 14. PubMed PMID: 24135166; PubMed Central PMCID: PMC3944922.
57. Ratnanather JT, Lal RM, An M, Poynton CB, Li M, Jiang H, Oishi K, Selemon LD, Mori S, Miller MI. Cortico-cortical, cortico-striatal, and cortico-thalamic white matter fiber tracts generated in the macaque brain via dynamic programming. Brain Connect. 2013;3(5):475-90. doi: 10.1089/brain.2013.0143. Epub 2013 Sep 18. PubMed PMID: 23879573; PubMed Central PMCID: PMC3798182.
58. Zhang Y, Zhang J, Hsu J, Oishi K, Faria AV, Albert M, Miller MI, Mori S.Evaluation of group-specific, whole-brain atlas generation using Volume-based Template Estimation (VTE): application to normal and Alzheimer's populations. Neuroimage. 2014 Jan 1;84:406-19. doi: 10.1016/j.neuroimage.2013.09.011. Epub 2013 Sep 16. PubMed PMID: 24051356; PubMed Central PMCID: PMC3860098
59. Wang L, Kogan A, Cobia D, Alpert K, Kolasny A, Miller MI, Marcus D.Northwestern University Schizophrenia Data and Software Tool (NUSDAST). Front Neuroinform. 2013 Nov 7;7:25. doi: 10.3389/fninf.2013.00025. eCollection 2013.PubMed PMID: 24223551; PubMed Central PMCID: PMC3819522.
60. Miller MI, Younes L, Ratnanather JT, Brown T, Trinh H, Postell E, Lee DS, Wang MC, Mori S, O'Brien R, Albert M; BIOCARD Research Team. The diffeomorphometry of temporal lobe structures in preclinical Alzheimer's disease. Neuroimage Clin. 2013 Sep 16;3:352-60. doi: 10.1016/j.nicl.2013.09.001.eCollection 2013. PubMed PMID: 24363990; PubMed Central PMCID: PMC3863771
61. Ceritoglu C, Tang X, Chow M, Hadjiabadi D, Shah D, Brown T, Burhanullah MH, Trinh H, Hsu JT, Ament KA, Crocetti D, Mori S, Mostofsky SH, Yantis S, Miller MI, Ratnanather JT. Computational analysis of LDDMM for brain mapping. Front Neurosci. 2013 Aug 27;7:151. doi: 10.3389/fnins.2013.00151. eCollection 2013. PubMed PMID: 23986653; PubMed Central PMCID: PMC3753595.
62. Qin YY, Hsu JT, Yoshida S, Faria AV, Oishi K, Unschuld PG, Redgrave GW, Ying SH, Ross CA, van Zijl PC, Hillis AE, Albert MS, Lyketsos CG, Miller MI, Mori S, Oishi K. Gross feature recognition of Anatomical Images based on Atlas grid (GAIA): Incorporating the local discrepancy between an atlas and a target image to capture the features of anatomic brain MRI. Neuroimage Clin. 2013 Aug 14;3:202-11. doi: 10.1016/j.nicl.2013.08.006. eCollection 2013. PubMed PMID: 24179864; PubMed Central PMCID: PMC3791278.
63. Tang, X., Oishi, K., Faria, A.V., Hillis, A.E., Albert, M.S., Mori, S., Miller, M.I. Bayesian Parameter Estimation and Segmentation in the Multi-Atlas Random Orbit Model.(2013) PLoS One. 2013 Jun 18;8(6):e65591
64. Segars WP, Bond J, Frush J, Hon S, Eckersley C, Williams CH, Feng J, Tward DJ, Ratnanather JT, Miller MI, Frush D, Samei E. Population of anatomically variable 4D XCAT adult phantoms for imaging research and optimization. Med Phys. 2013 Apr;40(4):043701. doi: 10.1118/1.4794178. PubMed PMID: 23556927; PubMed Central PMCID: PMC3612121
65. Selemon, D., Ceritoglu, C., Ratnanather, J.T., Wang, L., Harms, M., Aldridge, K., Begovic, A., Csernansky, J.G., Miller, M.I., Rakick, P. (2013) Distinct abnormalities of the primate prefrontal cortex caused by ionizing radiation in early or midgestation. J Comp Neurol. 2013 Apr 1;521(5):1040-53. doi: 10.1002/cne.23217
66. Tward DJ, Ma J, Miller MI, Younes L. Robust Diffeomorphic Mapping via Geodesically Controlled Active Shapes. Int J Biomed Imaging. 2013;2013:205494. doi: 10.1155/2013/205494. Epub 2013 Apr 3. PubMed PMID: 23690757; PubMed Central PMCID: PMC3638714.
67. Mori S, Oishi K, Faria AV, Miller MI. Atlas-based neuroinformatics via MRI: harnessing information from past clinical cases and quantitative image analysis for patient care. Annu Rev Biomed Eng.

2013;15:71-92. doi:10.1146/annurev-bioeng-071812-152335. Epub 2013 Apr 29. Review. PubMed PMID:23642246; PubMed Central PMCID: PMC3719383
68. Ceritoglu C, Tang X, Chow M, Hadjiabadi D, Shah D, Brown T, Burhanullah MH, Trinh H, Hsu JT, Ament KA, Crocetti D, Mori S, Mostofsky SH, Yantis S, Miller MI, Ratnanather JT. "Computational analysis of LDDMM for brain mapping." Frontiers in Brain Imaging Methods. 2013 7, 151
69. Suzuki, H., Botteron, K., Luby, J., Belden, A., Gaffrey, M., Babb, C., Nishino, T., Miller, MI. (2013). Structural-functional correlations between hippocampal volume and cortico-limbic emotional responses in depressed children. Cogn Affect Behav Neurosci. 13:135-151. doi: 10..3758/s13415-012-01210y.
70. Li, X., Samei, E., Williams, C.H., Segars, W.P., Tward, D., Miller, M.I., Ratnanather, J.T., Paulson, E.K., Frush, D.P. (2012).Effects of Protocol and Obesity on Dose Conversion Factors in Adult Body CT. Med Phys. 39(11):6550-71 doi:10.1118/1.4754584. 2012.11. (Awarded Farrington Daniels prize for best paper).
71. Winslow, R.L., Trayanova, N., Geman., Miller, M.I. (2012). Computational Medicine: Translating Models to Clinical Care. Sci Transl Med. 2012 Oct 21;4(158): 158rv11. doi: 10.1126/scitranslmed 3003528.
72. Suzuki, H., Botteron. K.N., Luby, J.L., Belden, A.C., Gaffrey, M.S., Babb, C.M., Nishino, T., Miller, M.I., Ratnanather, J.T., Barch, D.M. (2012). Structural-Functional Correlations Between Hippocampal Volume and Cortico-limbic Emotional Responses in Depressed Children. Cogn Affect Behav Neurosci. 2012 Oct 5. [Epub ahead of print]
73. Djamanakova, A., Faria, A.V., Hsu, J., Ceritoglu, C., Oishi, K., Miller, M.I., Hillis, A.E., Mori, S. (2012). Diffeomorphic Brain Mapping Based on T1-weighted Images: Improvement of Registration Accuracy by Multichannel Mapping. J Magn Reson Imaging. 2012 Sep 12. doi: 10.1002/jmri.23790. [Epub ahead of print]
74. Selemon, L.D., Ceritoglu, C., Ratnanather, J.T., Wang, L., Harms, M.P., Aldridge, K., Begovic, A., Csernansky, J.G., Miller, M.I., Rakic, P. (2012) .Distinct Abnormalities of the Primate Prefrontal Cortex caused by Ionizing Radiation in Early or Midgestation. J Comp Neurol. 2012 Aug 22. doi: 10.1002/cne.23217. [Epub ahead of print]
75. Faria, A.V., Joel, S.E., Zhang, Y., Oishi, K., van Zjil, P.C., Miller, M.I., Pekar, J.J., Mori, S. (2012). Atlas-based Analysis of Resting-state Functional Connectivity: Evaluation for Reproducibility and Multi-modal Anatomy-function Correlation Studies. Neuroimage. 2012 Jul 2;61(3):613-21. doi: 10.1016/j.neuroimage.2012.03.078. Epub 2012 Apr 3.
76. Steinert-Threlkeld, S., Ardekani, S., Mejino, J.L., Detwiler, L.T., Brinkley, J.F., Halle, M., Kikinis, R., Winslow, R.L., Miller, M.I., Ratnanather, J.T. (2012). Ontological Labels for Automated Location of Anatomical Shape Differences. J Biomed Inform. 2012 Jun;45(3):522-7. doi: 10.1016/j.jbi.2012.02.013. Epub 2012 Apr 3.
77. Mielke, M.M., Okonkwo, O.C., Oishi, K., Mori, S., Tighe. S., Miller, M.I., Ceritoglu, C., Brown, T., Albert. M., Lyketsos, C.G. (2012). Fornix Integrity and Hippocampal Volume Predict Memory Decline and Progression to Alzheimer's Disease. Alzheimers Dement. 2012;8(2):105-13. doi: 10.1016/j.jalz.2011.05.2416.
78. Aggarwal, M., Duan, W., Hou, Z., Rakesh, N., Peng, Q., Ross, C.A., Miller, M.I., Mori, S., Zhang, J. (2012). Spatiotemporal Mapping of Brain Atrophy in Mouse Models of Huntington's Disease Using Longitudinal in vivo Magnetic Resonance imaging. Neuroimage. 2012 May 1;60(4):2086-95. doi: 10.1016/j.neuroimage.2012.01.141. Epub 2012 Feb 9.
79. Ceyhan, E., Beg, M.F., Ceritoglu, C., Wang, L., Morris, J.C., Csernansky, J.G., Miller, M.I., Ratnanather, J.T. (2012). Metric Distances between Hippocampal Shapes Indicate Different Rates of Change over Time in Nondemented and Demented Subjects. Curr Alzheimer Res. 2012 Oct 1;9(8):972-81.
80. Qiu, A., Younes, L., Miller, M.I. (2012). Principal Component Based Diffeomorphic Surface Mapping. IEEE Transactions on Medical Imaging. Volume 31, Number 2. 302-311. 2012.02.
81. Reading SA, Oishi K, Redgrave GW, McEntee J, Shanahan M, Yoritomo N, Younes L, Mori S, Miller MI, van Zijl P, Margolis RL, Ross CA. (2011) Diffuse abnormality of low to moderately organized white matter in schizophrenia. Brain Connect. 2011;1(6):511-9. doi: 0.1089/brain. 2011.0041.
82. Oishi K, Akhter K, Mielke M, Ceritoglu C, Zhang J, Jiang H, Li X, Younes L, Miller MI, van Zijl PC, Albert M, Lyketsos CG, Mori S. (2011). Multi-modal MRI analysis with disease-specific spatial filtering: initial testing to predict mild cognitive impairment patients who convert to Alzheimer's disease. Front Neurol. 2011;2:54. doi: 10.3389/fneur.2011.00054. Epub 2011 Aug 24.
83. Oishi, K., Mori, S., Donohue, P.K., Ernst, T., Anderson, L., Buchthal, S., Faria, A., Jiang, H.Y., Li, X., Miller, M.I., Van Zijl, P.C.M., Chang, L.D. (2011). Multi-contrast human neonatal brain atlas: Application to normal neonate development analysis. Neuroimage. 56(1). 8-20. DOI:DOI 10.1016/j.neuroimage.2011.01.051.
84. Huang, H., Prince, J.L., Mishra, V., Carass, A., Landman, B., Park, D.C., Tamminga, C., King, R., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2011). A framework on surface-based connectivity quantification for the human brain. Journal of Neuroscience Methods. 197(2). 324-332. DOI:DOI 10.1016/j.jneumeth.2011.02.017.
85. Faria, A.V., Hoon, A., Stashinko, E., Li, X., Jiang, H., Mashayekh, A., Akhter, K., Hsu, J., Oishi, K., Zhang, J., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2011). Quantitative analysis of brain pathology based

on MRI and brain atlases-Applications for cerebral palsy (vol 54, pg 1854, 2011). Neuroimage. 55(4). 1912-1913. DOI:DOI 10.1016/j.neuroimage.2011.01.037.
86. Faria, A.V., Hoon, A., Stashinko, E., Li, X., Jiang, H.Y., Mashayekh, A., Akhter, K., Hsu, J., Oishi, K., Zhang, J.Y., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2011). Quantitative analysis of brain pathology based on MRI and brain atlases-Applications for cerebral palsy. Neuroimage. 54(3). 1854-1861. DOI:DOI 10.1016/j.neuroimage.2010.09.061.
87. Chuang, N., Mori, S., Yamamoto, A., Jiang, H.Y., Ye, X., Xu, X., Richards, L.J., Nathans, J., Miller, M.I., Toga, A.W., Sidman, R.L., Zhang, J.Y. (2011). An MRI-based atlas and database of the developing mouse brain. Neuroimage. 54(1). 80-89. DOI:DOI 10.1016/j.neuroimage.2010.07.043.
88. Ceyhan, E., Beg, M.F., Ceritoglu, C., Wang, L., Morris, J.C., Csernansky, J.G., Miller, M.I., Ratnanather, J.T. (2011). Quantization and analysis of hippocampal morphometric changes due to dementia of Alzheimer type using metric distances based on large deformation diffeomorphic metric mapping. Computerized Medical Imaging and Graphics. 35(4). 275-293. DOI:DOI 10.1016/j.compmedimag.2011.01.005.
89. Ceyhan, E., Hosakere, M., Nishino, T., Alexopoulos, J., Todd, R.D., Botteron, K.N., Miller, M.I., Ratnanather, J.T. (2011). Statistical Analysis of Cortical Morphometrics Using Pooled Distances Based on Labeled Cortical Distance Maps. Journal of Mathematical Imaging and Vision. 40(1). 20-35. DOI:DOI 10.1007/s10851-010-0240-4.
90. Zhang, Y.J., Zhang, J.Y., Oishi, K., Faria, A.V., Jiang, H.Y., Li, X., Akhter, K., Rosa-neto, P., Pike, G.B., Evans, A., Toga, A.W., Woods, R., Mazziotta, J.C., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2010). Atlas-guided tract reconstruction for automated and comprehensive examination of the white matter anatomy. Neuroimage. 52(4). 1289-1301. DOI:DOI 10.1016/j.neuroimage.2010.05.049.
91. Qiu, A.Q., Adler, M., Crocetti, D., Miller, M.I., Mostofsky, S.H. (2010). Basal Ganglia Shapes Predict Social, Communication, and Motor Dysfunctions in Boys With Autism Spectrum Disorder. Journal of the American Academy of Child and Adolescent Psychiatry. 49(6). 539-551. DOI:DOI 10.1016/j.jaac.2010.02.012.
92. Zhang, J.Y., Peng, Q., Li, Q., Jahanshad, N., Hou, Z.P., Jiang, M.L., Masuda, N., Langbehn, D.R., Miller, M.I., Mori, S., Ross, C.A., Duan, W.Z. (2010). Longitudinal characterization of brain atrophy of a Huntington's disease mouse model by automated morphological analyses of magnetic resonance images. Neuroimage. 49(3). 2340-2351. DOI:DOI 10.1016/j.neuroimage.2009.10.027.
93. Qiu, A.Q., Oishi, K., Miller, M.I., Lyketsos, C.G., Mori, S., Albert, M. (2010). Surface-Based Analysis on Shape and Fractional Anisotropy of White Matter Tracts in Alzheimer's Disease. Plos One. 5(3). DOI:Artn E9811 Doi 10.1371/Journal.Pone.0009811.
94. Qiu, A.Q., Brown, T., Fischl, B., Ma, J., Miller, M.I. (2010). Atlas Generation for Subcortical and Ventricular Structures With Its Applications in Shape Analysis. Ieee Transactions on Image Processing. 19(6). 1539-1547. DOI:Doi 10.1109/Tip.2010.2042099.
95. Mielke, M.M., Haughey, N.J., Bandaru, V.V.R., Schech, S., Carrick, R., Carlson, M.C., Mori, S., Miller, M.I., Ceritoglu, C., Brown, T., Albert, M., Lyketsos, C.G. (2010). Plasma ceramides are altered in mild cognitive impairment and predict cognitive decline and hippocampal volume loss. Alzheimers & Dementia. 6(5). 378-385. DOI:DOI 10.1016/j.jalz.2010.03.014.
96. Harms, M.P., Wang, L., Campanella, C., Aldridge, K., Moffitt, A.J., Kuelper, J., Ratnanather, J.T., Miller, M.I., Barch, D.M., Csernansky, J.G. (2010). Structural abnormalities in gyri of the prefrontal cortex in individuals with schizophrenia and their unaffected siblings. British Journal of Psychiatry. 196(2). 150-157. DOI:DOI 10.1192/bjp.bp.109.067314.
97. Faria, A.V., Zhang, J.Y., Oishi, K., Li, X., Jiang, H.Y., Akhter, K., Hermoye, L., Lee, S.K., Hoon, A., Stashinko, E., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2010). Atlas-based analysis of neurodevelopment from infancy to adulthood using diffusion tensor imaging and applications for automated abnormality detection. Neuroimage. 52(2). 415-428. DOI:DOI 10.1016/j.neuroimage.2010.04.238.
98. Ceritoglu, C., Wang, L., Selemon, L.D., Csernansky, J.G., Miller, M.I., Ratnanather, J.T. (2010). Large deformation diffeomorphic metric mapping registration of reconstructed 3D histological section images and in vivo MR images. Frontiers in Human Neuroscience. 4. DOI:Artn 43 Doi 10.3389/Fnhum.2010.00043.
99. Zhang, J.Y., Jones, M., Deboy, C.A., Reich, D.S., Farrell, J.A.D., Hoffman, P.N., Griffin, J.W., Sheikh, K.A., Miller, M.I., Mori, S., Calabresi, P.A. (2009). Diffusion Tensor Magnetic Resonance Imaging of Wallerian Degeneration in Rat Spinal Cord after Dorsal Root Axotomy. Journal of Neuroscience. 29(10). 3160-3171. DOI:Doi 10.1523/Jneurosci.3941-08.2009.
100. Zhang, W.H., Li, X., Zhang, J.Y., Luft, A., Hanley, D.F., Van Zijl, P., Miller, M.I., Younes, L., Mori, S. (2009). Landmark-referenced voxel-based analysis of diffusion tensor images of the brainstem white matter tracts Application in patients with middle cerebral artery stroke. Neuroimage. 44(3). 906-913. DOI:DOI 10.1016/j.neuroimage.2008.09.013.
101. Vadakkumpadan F, Arevalo H, Ceritoglu C, Miller MI, Trayanova P. (2009) “Image-Based Estimation of Myocardial Fiber Orientations for Patient-Specific Models of Cardiac Electrophysiology”. Heart Rhythm, 6(11): 1688.
102. Ardekani, S., Weiss, R.G., Lardo, A.C., George, R.T., Lima, J.A.C., Wu, K.C., Miller, M.I., Winslow, R.L., Younes, L. (2009). Computational Method for Identifying and Quantifying Shape Features of

Human Left Ventricular Remodeling. Annals of Biomedical Engineering. 37(6). 1043-1054. DOI:DOI 10.1007/s10439-009-9677-2.
103. Wang, L., Miller, M.I., Csernansky, J.G. (2009). Multiple-Structure Analysis of Longitudinal Shape Change in Schizophrenia. Schizophrenia Bulletin. 35. 200-200.
104. Younes, L., Arrate, F., Miller, M.I. (2009). Evolutions equations in computational anatomy. Neuroimage. 45(1). DOI:DOI 10.1016/j.neuroimage.2008.10.050.
105. Wang, L., Khan, A., Csernansky, J.G., Fischl, B., Miller, M.I., Morris, J.C., Beg, M.F. (2009). Fully-Automated, Multi-Stage Hippocampus Mapping in Very Mild Alzheimer Disease. Hippocampus. 19(6). 541-548. DOI:Doi 10.1002/Hipo.20616.
106. Thompson, P.M., Miller, M.I., Poldrack, R.A., Nichols, T.E., Taylor, J.E., Worsley, K.J. (2009). Special Issue on Mathematics in Brain Imaging. Neuroimage. 45(1). DOI:DOI 10.1016/j.neuroimage.2008.10.033.
107. Ceritoglu, C., Oishi, K., Li, X., Chou, M.C., Younes, L., Albert, M., Lyketsos, C., Van Zijl, P.C.M., Miller, M.I., Mori, S. (2009). Multi-contrast large deformation diffeomorphic metric mapping for diffusion tensor imaging. Neuroimage. 47(2). 618-627. DOI:DOI 10.1016/j.neuroimage.2009.04.057.
108. Qiu, A.Q., Fennema-notestine, C., Dale, A.M., Miller, M.I., Neuroimaging, A.D. (2009). Regional shape abnormalities in mild cognitive impairment and Alzheimer's disease. Neuroimage. 45(3). 656-661. DOI:DOI 10.1016/j.neuroimage.2009.01.013
109. Qiu, A.Q., Taylor, W.D., Zhao, Z., Macfall, J.R., Miller, M.I., Key, C.R., Payne, M.E., Steffens, D.C., Krishnan, K.R.R. (2009). APOE related hippocampal shape alteration in geriatric depression. Neuroimage. 44(3). 620-626. DOI:DOI 10.1016/j.neuroimage.2008.10.010.
110. Qiu, A.Q., Albert, M., Younes, L., Miller, M.I. (2009). Time sequence diffeomorphic metric mapping and parallel transport track time-dependent shape changes. Neuroimage. 45(1). DOI:DOI 10.1016/j.neuroimage.2008.10.039.
111. Qiu, A.Q., Wang, L., Younes, L., Harms, M.P., Ratnanather, J.T., Miller, M.I., Csernansky, J.G. (2009). Neuroanatomical asymmetry patterns in individuals with schizophrenia and their non-psychotic siblings. Neuroimage. 47(4). 1221-1229. DOI:DOI 10.1016/j.neuroimage.2009.05.054.
112. Qiu, A.Q., Crocetti, D., Adler, M., Mahone, E.M., Denckla, M.B., Miller, M.I., Mostofsky, S.H. (2009). Basal Ganglia Volume and Shape in Children With Attention Deficit Hyperactivity Disorder. American Journal of Psychiatry. 166(1). 74-82. DOI:DOI 10.1176/appi.ajp.2008.08030426.
113. Oishi, K., Faria, A., Jiang, H.Y., Li, X., Akhter, K., Zhang, J.Y., Hsu, J.T., Miller, M.I., Van Zijl, P.C.M., Albert, M., Lyketsos, C.G., Woods, R., Toga, A.W., Pike, G.B., Rosa-neto, P., Evans, A., Mazziotta, J., Mori, S. (2009). Atlas-based whole brain white matter analysis using large deformation diffeomorphic metric mapping: Application to normal elderly and Alzheimer's disease participants. Neuroimage. 46(2). 486-499. DOI:DOI 10.1016/j.neuroimage.2009.01.002.
114. Miller, M.I., Qiu, A.Q. (2009). The emerging discipline of Computational Functional Anatomy. Neuroimage. 45(1). DOI:DOI 10.1016/j.neuroimage.2008.10.044.
115. Miller, M.I., Priebe, C.E., Qiu, A., Fischl, B., Kolasny, A., Brown, T., Park, Y., Ratnanather, J.T., Busa, E., Jovicich, J., Yu, P., Dickerson, B.C., Buckner, R.L., Birn, M. (2009). Collaborative Computational Anatomy: An MRI Morphometry Study of the Human Brain Via Diffeomorphic Metric Mapping. Human Brain Mapping. 30(7). 2132-2141. DOI:Doi 10.1002/Hbm.20655.
116. Huang, H., Xue, R., Zhang, J.Y., Ren, T.B., Richards, L.J., Yarowsky, P., Miller, M.I., Mori, S. (2009). Anatomical Characterization of Human Fetal Brain Development with Diffusion Tensor Magnetic Resonance Imaging. Journal of Neuroscience. 29(13). 4263-4273. DOI:Doi 10.1523/Jneurosci.2769-08.2009.
117. Aggarwal, M., Zhang, J., Miller, M.I., Sidman, R.L., Mori, S. (2009). Magnetic Resonance Imaging and Micro-Computed Tomography Combined Atlas of Developing and Adult Mouse Brains for Stereotaxic Surgery. Neuroscience. 162(4). 1339-1350. DOI:DOI 10.1016/j.neuroscience.2009.05.070.
118. Younes, L., Qiu, A.Q., Winslow, R.L., Miller, M.I. (2008). Transport of relational structures in groups of diffeomorphisms. Journal of Mathematical Imaging and Vision. 32(1). 41-56. DOI:DOI 10.1007/s10851-008-0074-5.
119. Wang, L., Mamah, D., Harms, M.P., Karnik, M., Price, J.L., Gado, M.H., Thompson, P.A., Barch, D.M., Miller, M.I., Csernansky, J.G. (2008). Progressive Deformation of Deep Brain Nuclei and Hippocampal-Amygdala Formation in Schizophrenia. Biological Psychiatry. 64(12). 1060-1068. DOI:DOI 10.1016/j.biopsych.2008.08.007.
120. Trosset, M.W., Priebe, C.E., Park, Y., Miller, M.I. (2008). Semisupervised learning from dissimilarity data. Computational Statistics & Data Analysis. 52(10). 4643-4657. DOI:DOI 10.1016/j.csda.2008.02.030.
121. Qiu, A., Younes, L., Miller, M.I. (2008). Intrinsic and extrinsic analysis in computational anatomy. Neuroimage. 39(4). 1803-1814. DOI:DOI 10.1016/j.neuroimage.2007.08.043.
122. Qiu, A., Younes, L., Miller, M.I., Csemansky, J.G. (2008). Parallel transport in diffeomorphisms distinguishes the time-dependent pattern of hippocampal surface deformation due to healthy aging and the dementia of the Alzheimer's type. Neuroimage. 40(1). 68-76. DOI:DOI 10.1016/j.neuroimage.2007.11.041.
123. Qiu, A.Q., Miller, M.I. (2008). Multi-structure network shape analysis via normal surface momentum maps. Neuroimage. 42(4). 1430-1438. DOI:DOI 10.1016/j.neuroimage.2008.04.257.

124. Qiu, A.Q., Vaillant, M., Barta, P., Ratnanather, J.T., Miller, M.I. (2008). Region-of-interest-based analysis with application of cortical thickness variation of left planum temporale in schizophrenia and psychotic bipolar disorder. Human Brain Mapping. 29(8). 973-985. DOI:Doi 10.1002/Hbm.20444.
125. Park, Y., Priebe, C.E., Miller, M.I., Mohan, N.R., Botteron, K.N. (2008). Statistical analysis of twin populations using dissimilarity measurements in hippocampus shape space. Journal of Biomedicine and Biotechnology. DOI:Artn 694297 Doi 10.1155/2008/694297.
126. Oishi, K., Zilles, K., Amunts, K., Faria, A., Jiang, H.Y., Li, X., Akhter, K., Hua, K.G., Woods, R., Toga, A.W., Pike, G.B., Rosa-neto, P., Evans, A., Zhang, J.Y., Huang, H., Miller, M.I., Van Zijl, P.C.M., Mazziotta, J., Mori, S. (2008). Human brain white matter atlas: Identification and assignment of common anatomical structures in superficial white matter. Neuroimage. 43(3). 447-457. DOI:DOI 10.1016/j.neuroimage.2008.07.009.
127. Mori, S., Oishi, K., Jiang, H.Y., Jiang, L., Li, X., Akhter, K., Hua, K.G., Faria, A.V., Mahmood, A., Woods, R., Toga, A.W., Pike, G.B., Neto, P.R., Evans, A., Zhang, J.Y., Huang, H., Miller, M.I., Zijl, P., Mazziotta, J. (2008). Stereotaxic white matter atlas based on diffusion tensor imaging in an ICBM template. Neuroimage. 40(2). 570-582. DOI:DOI 10.1016/j.neuroimage.2007.12.035.
128. Mamah, D., Harms, M.P., Wang, L., Barch, D., Thompson, P., Kim, J., Miller, M.I., Csernansky, J.G. (2008). Basal ganglia shape abnormalities in the unaffected siblings of schizophrenia patients. Biological Psychiatry. 64(2). 111-120. DOI:DOI 10.1016/j.biopsych.2008.01.004.
129. Ma, J., Miller, M.I., Trouve, A., Younes, L. (2008). Bayesian template estimation in computational anatomy. Neuroimage. 42(1). 252-261. DOI:DOI 10.1016/j.neuroimage.2008.03.056.
130. Lee, N.A., Priebe, C.E., Miller, M.I., Ratnanather, J.T. (2008). Validation of alternating Kernel mixture method: Application to tissue segmentation of cortical and subcortical structures. Journal of Biomedicine and Biotechnology. DOI:Artn 346129 Doi 10.1155/2008/346129.
131. Huang, H., Ceritoglu, C., Li, X., Qiu, A.Q., Miller, M.I., Van Zijl, P.C.M., Mori, S. (2008). Correction of B0 susceptibility induced distortion in diffusion-weighted images using large-deformation diffeomorphic metric mapping. Magnetic Resonance Imaging. 26(9). 1294-1302. DOI:DOI 10.1016/j.mri.2008.03.005.
132. Glaunes, J., Qiu, A.Q., Miller, M.I., Younes, L. (2008). Large deformation diffeomorphic metric curve mapping. International Journal of Computer Vision. 80(3). 317-336. DOI:DOI 10.1007/s11263-008-0141-9.
133. Calabrese, D.R., Wang, L., Harms, M.P., Ratnanather, J.T., Barch, D.M., Cloninger, C.R., Thompson, P.A., Miller, M.I., Csernansky, J.G. (2008). Cingulate gyrus neuroanatomy in schizophrenia subjects and their non-psychotic siblings. Schizophrenia Research. 104(3-Jan). 61-70. DOI:DOI 10.1016/j.schres.2008.06.014.
134. Munn, M.A., Alexopoulos, J., Nishino, T., Babb, C.M., Flake, L.A., Singer, T., Ratnanather, J.T., Huang, H., Todd, R.D., Miller, M.I., Botteron, K.N. (2007). Amygdala volume analysis in female twins with major depression. Biological Psychiatry. 62(5). 415-422. DOI:DOI 10.1016/j.biopsych.2006.11,031.
135. Zhang, J.Y., Evans, A., Hermoye, L., Lee, S.K., Wakana, S., Zhang, W.H., Donohue, P., Miller, M.I., Huang, H., Wang, X.Q., Van Zijl, P.C.M., Mori, S. (2007). Evidence of slow maturation of the superior longitudinal fasciculus in early childhood by diffusion tensor imaging. Neuroimage. 38(2). 239-247. DOI:DOI 10.1016/j.neuroimage.2007.07.033.
136. Wang, L., Lee, D.Y., Bailey, E., Hartlein, J.M., Gado, M.H., Miller, M.I., Black, K.J. (2007). Validity of large-deformation high dimensional brain mapping of the basal ganglia in adults with Tourette syndrome. Psychiatry Research-Neuroimaging. 154(2). 181-190. DOI:DOI 10.1016/j.pscyshresns.2006.08.006.
137. Wang, L., Hosakere, M., Trein, J.C.L., Miller, A., Ratnanather, J.T., Barch, D.M., Thompson, P.A., Qiu, A., Gado, M.H., Miller, M.I., Csernansky, J.G. (2007). Abnonnalities of cingulate gyrus neuroanatomy in schizophrenia. Schizophrenia Research. 93(3-Jan). 66-78. DOI:DOI 10.1016/j.schres.2007.02.021.
138. Wang, L., Hosakere, M., Trein, J.C.L., Miller, A., Ratnanather, J.T., Barch, D.M., Thompson, P.A., Qiu, A.Q., Gado, M.H., Miller, M.I., Csernansky, J.G. (2007). Abnormalities of cingulate gyrus neuroanatomy in schizophrenia (vol 93, pg 66, 2007). Schizophrenia Research. 94(3-Jan). 380-380. DOI:DOI 10.1016/j.schres.2007.05.016.
139. Wang, L., Beg, F., Ratnanather, T., Ceritoglu, C., Younes, L., Morris, J.C., Csernansky, J.G., Miller, M.I. (2007). Large deformation diffeomorphism and momentum based hippocampal shape discrimination in dementia of the Alzheimer type. Ieee Transactions on Medical Imaging. 26(4). 462-470. DOI:Doi 10.1109/Tmi.2006.887380.
140. Vaillant, M., Qiu, A.Q., Glaunes, J., Miller, M.I. (2007). Diffeomorphic metric surface mapping in subregion of the superior temporal gyrus. Neuroimage. 34(3). 1149-1159. DOI:DOI 10.1016/j.neuroimage.2006.08.053.
141. Ratnanather, J.T., Younes, L., Zweck, J., Wang, L., Hosakere, M., Csernansky, J.G., Miller, M.I. (2007). Statistical analysis of surface roughness via local area maps: Application to the cingulate in healthy and schizophrenic subjects. Schizophrenia Bulletin. 33(2). 353-353.
142. Qiu, A., Younes, L., Wang, L., Ratnanather, J.T., Gillepsie, S.K., Kaplan, G., Csemansky, J., Miller, M.I. (2007). Combining anatomical manifold information via diffeomorphic metric mappings for studying

cortical thinning of the cingulate gyrus in schizophrenia. Neuroimage. 37(3). 821-833. DOI:DOI 10.1016/j.neuroimage.2007.05.007.
143. Qiu, A., Younes, L., Wang, L., Ratnanather, J.T., Csernansky, J.G., Miller, M.I. (2007). Cortical thinning of the cingulate gyrus in schizophrenia. Schizophrenia Bulletin. 33(2). 352-352.
144. Qiu, A.Q., Miller, M.I. (2007). Cortical hemisphere registration via large deformation diffeomorphic metric curve mapping. Medical Image Computing and Computer-Assisted Intervention - MICCAI 2007, Pt 1, Proceedings. 4791. 186-193.
145. Kirwan, C.B., Jones, C.K., Miller, M.I., Stark, C.E.L. (2007). High-resolution fMRI investigation of the medial temporal lobe. Human Brain Mapping. 28(10). 959-966. DOI:Doi 10.1002/Hbm.20331.
146. Wang, L., Miller, J.P., Gado, M.H., Mckeel, D.W., Rothermich, M., Miller, M.I., Morris, J.C., Csernansky, J.G. (2006). Abnormalities of hippocampal surface structure in very mild dementia of the Alzheimer type. Neuroimage. 30(1). 52-60. DOI:DOI 10.1016/j.neuroimage.2005.09.017.
147. Qiu, A.Q., Rosenau, B.J., Greenberg, A.S., Hurdal, M.K., Barta, P., Yantis, S., Miller, M.I. (2006). Estimating linear cortical magnification in human primary visual cortex via dynamic programming. Neuroimage. 31(1). 125-138. DOI:DOI 10.1016/j.neuroimage.2005.11.049.
148. Qiu, A.Q., Bitouk, D., Miller, M.I. (2006). Smooth functional and structural maps on the neocortex via orthonormal bases of the Laplace-Beltrami operator. Ieee Transactions on Medical Imaging. 25(10). 1296-1306. DOI:Doi 10.1109/Tmi.2006.882143.
149. Priebe, C.E., Miller, M.I., Ratnanather, J.T. (2006). Segmenting magnetic resonance images via hierarchical mixture modelling. Computational Statistics & Data Analysis. 50(2). 551-567. DOI:DOI 10.1016/j.csda.2004.09.003.
150. Miller, M.I., Trouve, A., Younes, L. (2006). Geodesic shooting for computational anatomy. Journal of Mathematical Imaging and Vision. 24(2). 209-228. DOI:DOI 10.1007/s10851-005-3624-0.
151. Helm, P.A., Younes, L., Beg, M.F., Ennis, D.B., Leclercq, C., Faris, O.P., Mcveigh, E., Kass, D., Miller, M.I., Winslow, R.L. (2006). Evidence of structural remodeling in the dyssynchronous failing heart. Circulation Research. 98(1). 125-132. DOI:Doi 10.1161/01.Res.0000199396.30688.Eb.
152. Zhang, J.Y., Miller, M.I., Plachez, C., Richards, L.J., Yarowsky, P., Van Zijl, P., Mori, S. (2005). Mapping postnatal mouse brain development with diffusion tensor microimaging. Neuroimage. 26(4). 1042-1051. DOI:DOI 10.1016/j.neuroimage.2005.03.009.
153. Zhang, J.Y., Chen, Y.B., Hardwick, J.M., Miller, M.I., Plachez, C., Richards, L.J., Yarowsky, P., Van Zijl, P., Mori, S. (2005). Magnetic resonance diffusion tensor microimaging reveals a role for Bcl-x in brain development and homeostasis. Journal of Neuroscience. 25(8). 1881-1888. DOI:Doi 10.1523/Jneurosci.4129-04.2005.
154. Barta, P., Miller, M.I., Qiu, A.Q. (2005). A stochastic model for studying the laminar structure of cortex from MRI. Ieee Transactions on Medical Imaging. 24(6). 728-742. DOI:Doi 10.1109/Tmi.2005.846861.
155. Beg, M.F., Miller, M.I., Trouve, A., Younes, L. (2005). Computing large deformation metric mappings via geodesic flows of diffeomorphisms. International Journal of Computer Vision. 61(2). 139-157. DOI:10.1023/B:VISI.0000043755.93987.aa.
156. Miller, M.I., Beg, M.F., Ceritoglu, C., Stark, C. (2005). Increasing the power of functional maps of the medial temporal lobe by using large deformation diffeomorphic metric mapping. Proceedings of the National Academy of Sciences of the United States of America. 102(27). 9685-9690. DOI:DOI 10.1073/pnas.0503892102.
157. Huang, H., Zhang, J.Y., Jiang, H.Y., Wakana, S., Poetscher, L., Miller, M.I., Van Zijl, P.C.M., Hillis, A.E., Wytik, R., Mori, S. (2005). DTI tractography based parcellation of white matter: Application to the mid-sagittal morphology of corpus callosum. Neuroimage. 26(1). 195-205. DOI:DOI 10.1016/j.neuroimage.2005.01.019.
158. Helm, P., Beg, M.F., Miller, M.I., Winslow, R.L. (2005). Measuring and mapping cardiac fiber and laminar architecture using diffusion tensor MR imaging. Communicative Cardiac Cell. 1047. 296-307. DOI:DOI 10.1196/annals.1341.026.
159. Cao, Y., Miller, M.I., Winslow, R.L., Younes, L. (2005). Large deformation diffeomorphic metric mapping of vector fields. Ieee Transactions on Medical Imaging. 24(9). 1216-1230. DOI:Doi 10.1109/Tmi.2005.853923.
160. Bitouk, D., Miller, M.I., Younes, L. (2005). Clutter invariant ATR. Ieee Transactions on Pattern Analysis and Machine Intelligence. 27(5). 817-821. DOI:10.1109/TPAMI.2005.97.
161. Beg, M.F., Helm, P.A., Mcveigh, E., Miller, M.I., Winslow, R.L. (2004). Computational cardiac anatomy using MRI. Magnetic Resonance in Medicine. 52(5). 1167-1174. DOI:Doi 10.1002/Mrm.20255.
162. Thompson, P.M., Miller, M.I., Ratnanather, J.T., Poldrack, R.A., Nichols, T.E. (2004). Preface to the special issue. Neuroimage. 23. DOI:DOI 10.1016/j.neuroimage.2004.07.009.
163. Ratnanather, J.T., Lei, W., Nebel, M.B., Hosakere, M., Xiao, H., Csernansky, J.G., Miller, M.I. (2004). Validation of semiautomated methods for quantifying cingulate cortical metrics in schizophrenia. Psychiatry Research-Neuroimaging. 132(1). 53-68. DOI:DOI 10.1016/j.pscychresns.2004.07.003.
164. Miller, M.I. (2004). Computational anatomy: shape, growth, and atrophy comparison via diffeomorphisms. Neuroimage. 23. DOI:DOI 10.1016/j.neuroimage.2004.07.021.

165. Glaunes, J., Vaillant, M., Miller, M.I. (2004). Landmark matching via large deformation diffeomorphisms on the sphere. Journal of Mathematical Imaging and Vision. 20(2-Jan). 179-200. DOI:10.1023/B:JMIV.0000011326.88682.e5.
166. Csernansky, J.G., Wang, L., Swank, J., Ting, C.C., Miller, J.P., Miller, M.I., Morris, J.C. (2004). Hippocampal volume and shape variation predicts cognitive decline in nondemented elder subjects. Neurobiology of Aging. 25(2). 267-268.
167. Csernansky, J.G., Wang, L., Miller, J.P., Gado, M., Mckeel, D., Miller, M.I., Morris, J.C. (2004). Hippocampal shape and volume predicts the onset of dementia in the elderly. Neurobiology of Aging. 25. DOI:10.1016/S0197-4580(04)80913-8.
168. Csernansky, J.G., Wang, L., Joshi, S.C., Ratnanather, J.T., Miller, M.I. (2004). Computational anatomy and neuropsychiatric disease: probabilistic assessment of variation and statistical inference of group difference, hemispheric asymmetry, and time-dependent change. Neuroimage. 23. DOI:DOI 10.1016/j.neuroimage.2004.07.025.
169. Csernansky, J.G., Schindler, M.K., Splinter, N.R., Wang, L., Selemon, L.D., Rastogi-cruz, D., Posener, J.A., Thompson, P.A., Miller, M.I. (2004). Abnormalities of thalamic volume and shape in schizophrenia. American Journal of Psychiatry. 161(5). 896-902. DOI:10.1176/appi.ajp.161.5.896.
170. Bitouk, D., Miller, M.I., Younes, L. (2003). Asymptotic performance analysis for object recognition in clutter. Automatic Target Recognition Xiii. 5094. 101-108. DOI:10.1117/12.487051.
171. Wang, L., Swank, J.S., Glick, I.E., Gado, M.H., Miller, M.I., Morris, J.C., Csernansky, J.G. (2003). Changes in hippocampal volume and shape across time distinguish dementia of the Alzheimer type from healthy aging. Neuroimage. 20(2). 667-682. DOI:Doi 10.1016/S1053(03)00361-6.
172. Tepest, R., Wang, L., Miller, M.I., Falkai, P., Csernansky, J.G. (2003). Hippocampal deformities in the unaffected siblings of schizophrenia subjects. Biological Psychiatry. 54(11). 1234-1240. DOI:Doi 10.1016/S0006-3223(03)00702-9.
173. Ceritoglu, C., Bitouk, D., Miller, M.I., Schmitt, H.A. (2003). Asymptotic performance of ATR in infrared images. Automatic Target Recognition Xiii. 5094. 109-118. DOI:10.1117/12.487383.
174. Ratnanather, J.T., Priebe, C.E., Miller, M.I. (2003). Semi-automated segmentation of cortical subvolumes via hierarchical mixture modelling. Medical Imaging 2003: Image Processing, Pts 1-3. 5032. 1602-1612. DOI:10.1117/12.481363.
175. Ratnanather, J.T., Barta, P.E., Honeycutt, N.A., Lee, N., Morris, H.M., Dziorny, A.C., Hurdal, M.K., Pearlson, G.D., Miller, M.I. (2003). Dynamic programming generation of boundaries of local coordinatized submanifolds in the neocortex: application to the planum temporale. Neuroimage. 20(1). 359-377. DOI:Doi 10.1016/S1053-8119(03)00238-6.
176. Miller, M.I., Hosakere, M., Barker, A.R., Priebe, C.E., Lee, N., Ratnanather, J.T., Wang, L., Gado, M., Morris, J.C., Csernansky, J.G. (2003). Labeled cortical mantle distance maps of the cingulate quantify differences between dementia of the Alzheimer type and healthy aging. Proceedings of the National Academy of Sciences of the United States of America. 100(25). 15172-15177. DOI:DOI 10.1073/pnas.2136624100.
177. Hosakere, A., Ratnanather, J.T., Miller, M.I., Wang, L., Csernansky, J.G. (2003). Cortical metrics of the cingulate gyrus: gray matter volume, area, and thickness derived from co-occurrence analysis. Schizophrenia Research. 60(1). 197-198.
178. Posener, J.A., Wang, L., Price, J.L., Gado, M.H., Province, M.A., Miller, M.I., Babb, C.M., Csernansky, J.G. (2003). High-dimensional mapping of the hippocampus in depression. American Journal of Psychiatry. 160(1). 83-89.
179. Bitouk, D., Miller, M.I., Younes, L. (2002). Empirically generated metric spaces for ATR in clutter. Thirty-Sixth Asilomar Conference on Signals, Systems & Computers - Conference Record, Vols 1 and 2, Conference Record. 1407-1410.
180. Winslow, R.L., Helm, P., Baumgartner, W., Peddi, S., Ratnanather, T., Mcveigh, E., Miller, M.I. (2002). Imaging-based integrative models of the heart: closing the loop between experiment and simulation. In Silico Simulation of Biological Processes. 247. 129-143.
181. Miller, M.I., Trouve, A., Younes, L. (2002). On the metrics and Euler-Lagrange equations of computational anatomy. Annual Review of Biomedical Engineering. 4. 375-405. DOI:DOI 10.1146/annurev.bioeng.4.092101.125733.
182. Jain, A., Moulin, P., Miller, M.I., Ramchandran, K. (2002). Information-theoretic bounds on target recognition performance based on degraded image data. Ieee Transactions on Pattern Analysis and Machine Intelligence. 24(9). 1153-1166. DOI:10.1109/TPAMI.2002.1033209.
183. Csernansky, J.G., Wang, L., Jones, D., Rastogi-cruz, D., Posener, J.A., Heydebrand, G., Miller, J.P., Miller, M.I. (2002). Hippocampal deformities in schizophrenia characterized by high dimensional brain mapping. American Journal of Psychiatry. 159(12). 2000-2006. DOI:10.1176/appi.ajp.159.12.2000.
184. Srivastava, A., Grenander, U., Jensen, G.R., Miller, M.I. (2002). Jump-diffusion Markov processes on orthogonal groups for object pose estimation. Journal of Statistical Planning and Inference. 103(2-Jan). 15-37. DOI:10.1016/S0378-3758(01)00195-1.
185. Ratnanather, J.T., Botteron, K.N., Nishino, T., Massie, A.B., Lal, R.M., Patel, S.G., Peddi, S., Todd, R.D., Miller, M.I. (2001). Validating cortical surface analysis of medial prefrontal cortex. Neuroimage. 14(5). 1058-1069. DOI:10.1006/nimg.2001.0906.

186. Bitouk, D., Grenander, U., Miller, M.I., Tyagi, P. (2001). Fisher information in transported generator clutter models. Automatic Target Recognition Xi. 4379. 560-573. DOI:10.1117/12.445407.
187. Wang, L., Joshi, S.C., Miller, M.I., Csernansky, J.G. (2001). Statistical analysis of hippocampal asymmetry in schizophrenia. Neuroimage. 14(3). 531-545. DOI:10.1006/nimg.2001.0830.
188. Wang, L., Joshi, S.C., Miller, M.I., Csernansky, J.G. (2001). Quantifying hippocampal asymmetry in schizophrenia. Schizophrenia Research. 49(2-Jan). 170-170.
189. Van Essen, D.C., Lewis, J.W., Drury, H.A., Hadjikhani, N., Tootell, R.B.H., Bakircioglu, M., Miller, M.I. (2001). Mapping visual cortex in monkeys and humans using surface-based atlases. Vision Research. 41(11-Oct). 1359-1378. DOI:10.1016/S0042-6989(01)00045-1.
190. O'sullivan, J.A., Devore, M.D., Kedia, V., Miller, M.I. (2001). SAR ATR performance using a conditionally Gaussian model. Ieee Transactions on Aerospace and Electronic Systems. 37(1). 91-108. DOI:10.1109/7.913670.
191. Miller, M.I., Younes, L. (2001). Group actions, homeomorphisms, and matching: A general framework. International Journal of Computer Vision. 41(2-Jan). 61-84. DOI:10.1023/A:1011161132514.
192. Csernansky, J.G., Wang, L., Joshi, S., Miller, J.P., Gado, M., Kido, D., Mckeel, D., Morris, J.C., Miller, M.I. (2001). Early dementia of the Alzheimer type is distinguished from healthy aging by high dimensional mapping of the hippocampus. Neurobiology of Aging. 22(2). 336-336.
193. Van Essen, D.C., Drury, H.A., Joshi, S., Miller, M.I. (2000). Functional and structural mapping of human cerebral cortex: Solutions are in the surfaces. Neocortical Epilepsies. 84. 23-34.
194. Shusterman, E., Miller, M.I., Rimoldi, B. (2000). Rate-distortion theory applied to automatic object recognition. Ieee Transactions on Information Theory. 46(5). 1921-1927. DOI:10.1109/18.857801.
195. Miller, M.I., Massie, A.B., Ratnanather, J.T., Botteron, K.N., Csernansky, J.G. (2000). Bayesian construction of geometrically based cortical thickness metrics. Neuroimage. 12(6). 676-687. DOI:10.1006/nimg.2000.0666.
196. Lanterman, A.D., Grenander, U., Miller, M.I. (2000). Bayesian segmentation via asymptotic partition functions. Ieee Transactions on Pattern Analysis and Machine Intelligence. 22(4). 337-347. DOI:10.1109/34.845376.
197. Joshi, S.C., Miller, M.I. (2000). Landmark matching via large deformation diffeomorphisms. Ieee Transactions on Image Processing. 9(8). 1357-1370. DOI:10.1109/83.855431.
198. Jain, A., Moulin, P., Miller, M.I., Ramchandran, K. (2000). Information-theoretic bounds on target recognition performance. Automatic Target Recognition X. 4050. 347-358. DOI:10.1117/12.395580.
199. Hogan, R.E., Mark, K.E., Wang, L., Joshi, S., Miller, M.I., Bucholz, R.D. (2000). Mesial temporal sclerosis and temporal lobe epilepsy: MR imaging deformation-based segmentation of the hippocampus in five patients. Radiology. 216(1). 291-297.
200. Hogan, R.E., Mark, K.E., Choudhuri, I., Wang, L., Joshi, S., Miller, M.I., Bucholz, R.D. (2000). Magnetic resonance imaging deformation-based segmentation of the hippocampus in patients with mesial temporal sclerosis and temporal lobe epilepsy. Journal of Digital Imaging. 13(2). 217-218. DOI:10.1007/BF03167670.
201. Grenander, U., Srivastava, A., Miller, M.I. (2000). Asymptotic performance analysis of Bayesian target recognition. Ieee Transactions on Information Theory. 46(4). 1658-1665. DOI:10.1109/18.850712.
202. Csernansky, J.G., Wang, L., Joshi, S., Miller, J.P., Gado, M., Kido, D., Mckeel, D., Morris, J.C., Miller, M.I. (2000). Early DAT is distinguished from aging by high-dimensional mapping of the hippocampus. Neurology. 55(11). 1636-1643.
203. Cooper, M.L., Miller, M.I. (2000). Information measures for object recognition accommodating signature variability. Ieee Transactions on Information Theory. 46(5). 1896-1907.
204. Srivastava, A., Miller, M.I., Grenander, U. (1999). Jump-diffusion processes on matrix Lie groups for Bayesian inference. Proceedings of the Ieee Signal Processing Workshop on Higher-Order Statistics. 126-129. DOI:10.1109/HOST.1999.778708.
205. Joshi, M., Cui, J., Doolittle, K., Joshi, S., Van Essen, D., Wang, L., Miller, M.I. (1999). Brain segmentation and the generation of cortical surfaces. Neuroimage. 9(5). 461-476. DOI:10.1006/nimg.1999.0428.
206. Bakircioglu, M.M., Joshi, S., Miller, M.I. (1999). Landmark matching on brain surfaces via large deformation diffeomorphisms on the sphere. Medical Imaging 1999: Image Processing, Pts 1 and 2. 3661. 710-715. DOI:10.1117/12.348628.
207. Lanterman, A.D., O'sullivan, J.A., Miller, M.I. (1999). Kullback-Leibler distances for quantifying clutter and models. Optical Engineering. 38(12). 2134-2146. DOI:10.1117/1.602323.
208. Loizeaux, M., Srivastava, A., Miller, M.I. (1999). Estimation of pose and location of ground-targets for ATR. Signal Processing, Sensor Fusion, and Target Recognition Viii. 3720. 140-151. DOI:10.1117/12.357153.
209. Lanterman, A.D., Cooper, M.L., Miller, M.I. (1999). Efficient estimation of thermodynamic state incorporating Bayesian model order selection. Automatic Target Recognition Ix. 3718. 2-13. DOI:10.1117/12.359939.

210. Kostakis, J., Cooper, M., Green, T.J., Miller, M.I., O'sullivan, J.A., Shapiro, J.H., Snyder, D.L. (1999). Multispectral sensor fusion for ground-based target orientation estimation: FLIR, LADAR, HRR. Automatic Target Recognition Ix. 3718. 14-24. DOI:10.1117/12.359949.
211. Hogan, R.E., Mark, K.E., Wang, L., Joshi, S., Miller, M.I., Bertrand, M.E., Bucholz, R.D. (1999). MR imaging deformation-based segmentation of the hippocampus in patients with mesial temporal sclerosis and temporal lobe epilepsy. Epilepsia. 40. 192-192.
212. Bakircioglu, M., Grenander, U., Khaneja, N., Miller, M.I. (1998). Curve matching on brain surfaces using frenet distances. Human Brain Mapping. 6(6-May). 329-333. DOI:10.1002/(SICI)1097-0193(1998)6:5/6<329::AID-HBM1>3.3.CO;2-O.
213. Wang, L., Miller, M.I. (1998). Large deformation image matching via volume imagery. Vision Geometry Vii. 3454. 317-323. DOI:10.1117/12.323268.
214. Van Essen, D.C., Drury, H.A., Joshi, S., Miller, M.I. (1998). Functional and structural mapping of human cerebral cortex: Solutions are in the surfaces. Proceedings of the National Academy of Sciences of the United States of America. 95(3). 788-795. DOI:10.1073/pnas.95.3.788.
215. Moulin, P., Miller, M.I. (1998). Detection bounds for automatic target recognition in compressed domain. 1998 Ieee International Symposium on Information Theory - Proceedings. 143-143.
216. Khaneja, N., Miller, M.I., Grenander, U. (1998). Dynamic programming generation of curves on brain surfaces. Ieee Transactions on Pattern Analysis and Machine Intelligence. 20(11). 1260-1265. DOI:10.1109/34.730559.
217. Kostakis, J., Cooper, M., Green, T.J., Miller, M.I., O'sullivan, J.A., Shapiro, J.H., Snyder, D.L. (1998). Multispectral active-passive sensor fusion for ground-based target orientation estimation. Automatic Target Recognition Viii. 3371. 500-507. DOI:10.1117/12.323868.
218. Grenander, U., Miller, M.I. (1998). Computational anatomy: An emerging discipline. Quarterly of Applied Mathematics. 56(4). 617-694.
219. Grenander, U., Miller, M.I., Srivastava, A. (1998). Hilbert-Schmidt lower bounds for estimators on matrix Lie groups for ATR. Ieee Transactions on Pattern Analysis and Machine Intelligence. 20(8). 790-802. DOI:10.1109/34.709572.
220. Dupuis, P., Grenander, U., Miller, M.I. (1998). Variational problems on flows of diffeomorphisms for image matching. Quarterly of Applied Mathematics. 56(3). 587-600.
221. Csernansky, J.G., Joshi, S., Wang, L., Haller, J.W., Gado, M., Miller, J.P., Grenander, U., Miller, M.I. (1998). Hippocampal morphometry in schizophrenia by high dimensional brain mapping. Proceedings of the National Academy of Sciences of the United States of America. 95(19). 11406-11411. DOI:10.1073/pnas.95.19.11406.
222. Joshi, S.C., Miller, M.I., Grenander, U. (1997). On the geometry and shape of brain sub-manifolds. International Journal of Pattern Recognition and Artificial Intelligence. 11(8). 1317-1343. DOI:10.1142/S0218001497000615.
223. Ivastava, A., Miller, M.I., Grenander, U., Byrnes, C.I., Datta, B.N., Gilliam, D.S., Martin, C.F. (1996). Ergodic Algorithms on Special Euclidean Groups for ATR. System and Control in the 21st Century. 22. 327-350.
224. Haller, J.W., Christensen, G.E., Joshi, S.C., Newcomer, J.W., Miller, M.I., Csernansky, J.G., Vannier, M.W. (1996). Hippocampal MR imaging morphometry by means of general pattern matching. Radiology. 199(3). 787-791.
225. Christensen, G.E., Rabbitt, R.D., Miller, M.I. (1996). Deformable templates using large deformation kinematics. Ieee Transactions on Image Processing. 5(10). 1435-1447. DOI:10.1109/83.536892.
226. Christensen, G.E., Joshi, S.C., Miller, M.I. (1996). Individualizing anatomical atlases of the head. Visualization in Biomedical Computing. 1131. 343-348.
227. Christensen, G.E., Miller, M.I., Vannier, M.W., Grenander, U. (1996). Individualizing neuroanatomical atlases using a massively parallel computer. Computer. 29(1). 32. DOI:10.1109/2.481434.
228. Schaewe, T.J., Miller, M.I. (1995). Parallel Algorithms for Maximum a-Posteriori Estimation of Spin-Density and Spin-Spin Decay in Magnetic-Resonance-Imaging. Ieee Transactions on Medical Imaging. 14(2). 362-373. DOI:10.1109/42.387717.
229. Srivastava, A., Miller, M.I., Grenander, U. (1995). Multiple-Target Direction-of-Arrival Tracking. Ieee Transactions on Signal Processing. 43(5). 1282-1285. DOI:10.1109/78.382418.
230. Joshi, S.C., Miller, M.I., Christensen, G.E., Banerjee, A., Coogan, T., Grenander, U. (1995). Hierarchical brain mapping via a generalized Dirichlet solution for mapping brain manifolds. Vision Geometry Iv. 2573. 278-289. DOI:10.1117/12.216420.
231. Miller, M.I., Schaewe, T.J., Bosch, C.S., Ackerman, J.J.H. (1995). Model-Based Maximum-Likelihood-Estimation for Phase-Encoded and Frequency-Encoded Magnetic-Resonance-Imaging Data. Journal of Magnetic Resonance Series B. 107(3). 210-221. DOI:10.1006/jmrb.1995.1081.
232. Miller, M.I., Srivastava, A., Grenander, U. (1995). Conditional-Mean Estimation Via Jump-Diffusion Processes in Multiple-Target Tracking Recognition. Ieee Transactions on Signal Processing. 43(11). 2678-2690. DOI:10.1109/78.482117.
233. Lanterman, A.D., Miller, M.I., Snyder, D.L. (1995). The unification of detection, tracking, and recognition for millimeter wave and infrared sensors. Radar/Ladar Processing and Applications. 2562. 150-161. DOI:10.1117/12.216951.

234. Lanterman, A.D., Miller, M.I., Snyder, D.L. (1995). Implementation of jump-diffusion algorithms for understanding FLIR scenes. Automatic Object Recognition V. 2485. 309-320. DOI:10.1117/12.213096.
235. Joshi, S.C., Wang, J., Miller, M.I., Vanessen, D.C., Grenander, U. (1995). On the differential geometry of the Cortical surface. Vision Geometry Iv. 2573. 304-311. DOI:10.1117/12.216422.
236. Haller, J.W., Christensen, G.E., Joshi, S., Miller, M.I., Vannier, M.W. (1995). Digital atlas-based segmentation of the hippocampus. Computer Assisted Radiology. 152-157.
237. Haller, J.W., Christensen, G.E., Miller, M.I., Joshi, S., Gado, M., Csernansky, J., Vannier, M.W. (1995). A Comparison of Automated and Manual Segmentation of Hippocampus Mr Images. Medical Imaging 1995: Image Processing. 2434. 206-215. DOI:10.1117/12.208692.
238. Foltz, M.A., Srivastava, A., Miller, M.I., Grenander, U. (1995). Detection of multiple airborne targets from multi-sensor data. Radar/Ladar Processing and Applications. 2562. 162-171. DOI:10.1117/12.216952.
239. Christensen, G.E., Rabbitt, R.D., Miller, M.I., Joshi, S.C., Grenander, U., Coogan, T.A., Vanessen, D.C. (1995). Topological properties of smooth anatomic maps. Information Processing in Medical Imaging. 3. 101-112.
240. Christensen, G.E., Miller, M.I., Marsh, J.L., Vannier, M.W. (1995). Automatic analysis of medical images using a deformable textbook. Computer Assisted Radiology. 146-151.
241. Turmon, M.J., Miller, M.I. (1994). Maximum-Likelihood-Estimation of Complex Sinusoids and Toeplitz Covariances. Ieee Transactions on Signal Processing. 42(5). 1074-1086. DOI:10.1109/78.295210.
242. Osullivan, J.A., Miller, M.I., Srivastava, A., Snyder, D.L. (1994). Tracking Using a Random Sampling Algorithm. Automatic Control - World Congress 1993, Vol 5. 361-364.
243. Lanterman, A.D., Miller, M.I., Snyder, D.L., Miceli, W.J. (1994). Jump-Diffusion Processes for the Automated Understanding of Flir Scenes. Automatic Object Recognition Iv. 2234. 416-427. DOI:10.1117/12.181039.
244. Grenander, U., Miller, M.I. (1994). Representations of Knowledge in Complex-Systems. Journal of the Royal Statistical Society Series B-Methodological. 56(4). 549-603.
245. Christensen, G.E., Rabbitt, R.D., Miller, M.I. (1994). 3d Brain Mapping Using a Deformable Neuroanatomy. Physics in Medicine and Biology. 39(3). 609-618. DOI:10.1088/0031-9155/39/3/022.
246. Butler, C.S., Miller, M.I., Miller, T.R., Wallis, J.W. (1994). Massively-Parallel Computers for 3d Single-Photon-Emission Computed-Tomography. Physics in Medicine and Biology. 39(3). 575-582. DOI:10.1088/0031-9155/39/3/019.
247. Wallis, J.W., Miller, M.I., Butler, C.S., Miller, T.R. (1993). Application of a Massively-Parallel Computer for 3-Dimensional Maximum a Posteriori Reconstruction in Spect. Journal of Nuclear Medicine. 34(5).
248. Joshi, S.C., Banerjee, A., Christensen, G.E., Csernansky, J.G., Haller, J.W., Miller, M.I., Wang, L. (1997). Gaussian random fields on sub-manifolds for characterizing brain surfaces. Information Processing in Medical Imaging. 1230. 381-386.
249. Schmich, R.M., Miller, M.I. (1997). Stochastic threshold characterization of the intensity of active channel dynamical action potential generation. Journal of Neurophysiology. 78(5). 2616-2630.
250. Miller, M.I., Grenander, U., Osullivan, J.A., Snyder, D.L. (1997). Automatic target recognition organized via jump-diffusion algorithms. Ieee Transactions on Image Processing. 6(1). 157-174. DOI:10.1109/83.552104.
251. Levy, A.L., Schaewe, T.J., Miller, M.I., Smith, K.R., Hammoud, A.M., Henderson, J.M., Joshi, S., Mark, K.E., Sturm, C.D., Mcdurmont, L.L., Bucholz, R.D. (1997). An Internet-connected, patient-specific, deformable brain atlas integrated into a surgical navigation system. Journal of Digital Imaging. 10(3). 231-237. DOI:10.1007/BF03168712.
252. Lanterman, A.D., Miller, M.I., Snyder, D.L. (1997). Representations of shape for structural inference in infrared scenes. Automatic Target Recognition Vii. 3069. 257-268. DOI:10.1117/12.277113.
253. Lanterman, A.D., Miller, M.I., Snyder, D.L. (1997). General Metropolis-Hastings jump diffusions for automatic target recognition in infrared scenes. Optical Engineering. 36(4). 1123-1137. DOI:10.1117/1.601302.
254. Haller, J.W., Banerjee, A., Christensen, G.E., Gado, M., Joshi, S., Miller, M.I., Sheline, Y., Vannier, M.W., Csernansky, J.G. (1997). Three-dimensional hippocampal MR morphometry with high-dimensional transformation of a neuroanatomic atlas. Radiology. 202(2). 504-510.
255. Christensen, G.E., Williamson, J.F., Chao, K.S.C., Miller, M.I., So, F.B., Vannier, M.W. (1997). Deformable anatomical templates for brachytherapy treatment planning in radiotherapy of cervical cancer. Vision Geometry Vi. 3168. 147-154. DOI:10.1117/12.292779.
256. Christensen, G.E., Joshi, S.C., Miller, M.I. (1997). Volumetric transformation of brain anatomy. Ieee Transactions on Medical Imaging. 16(6). 864-877. DOI:10.1109/42.650882.
257. Lanterman, A.D., Miller, M.I., Snyder, D.L. (1996). Representations of thermodynamic variability in the automated understanding of FLIR scenes. Automatic Object Recognition Vi. 2756. 26-37. DOI:10.1117/12.241154.
258. Preza, C., Miller, M.I., Conchello, J.A. (1993). Image-Reconstruction for 3-D Light-Microscopy with a Regularized Linear Method Incorporating a Smoothness Prior. Biomedical Image Processing and Biomedical Visualization, Pts 1 and 2. 1905. 129-139. DOI:10.1117/12.148627.

259. O'Sullivan, J.A., Jacobs, S.P., Miller, M.I., Snyder, D.L. (1993). A Likelihood-Based Approach to Joint Target Tracking and Identification. Conference Record of the Twenty-Seventh Asilomar Conference on Signals, Systems & Computers, Vols 1 and 2. 290-294.
260. O'Sullivan, J.A., Du, K.C., Teichman, R.S., Miller, M.I., Snyder, D.L., Vannicola, V.C. (1993). Reflectivity Models for Radar Target Recognition. Automatic Object Recognition Iii. 1960. 152-161. DOI:10.1117/12.160588.
261. Miller, M.I., Wang, J. (1993). A New Stochastic-Model for Auditory-Nerve Discharge. Journal of the Acoustical Society of America. 94(4). 2093-2107. DOI:10.1121/1.407482.
262. Miller, M.I., Teichman, R., Srivastava, A., Osullivan, J.A., Snyder, D.L. (1993). Jump-Diffusion Processes for Automated Tracking-Target Recognition. Proceedings of the Twenty-Seventh Annual Conference on Information Sciences and Systems. 617-622.
263. Miller, M.I., Chen, S.C., Kuefler, D.A., Davignon, D.A. (1993). Maximum-Likelihood and the Em Algorithm for 2d Nmr-Spectroscopy. Journal of Magnetic Resonance Series A. 104(3). 247-257. DOI:10.1006/jmra.1993.1221.
264. Miller, M.I., Christensen, G.E., Amit, Y., Grenander, U. (1993). Mathematical Textbook of Deformable Neuroanatomies. Proceedings of the National Academy of Sciences of the United States of America. 90(24). 11944-11948. DOI:10.1073/pnas.90.24.11944.
265. Miller, M.I., Butler, C.S. (1993). 3-D Maximum a Posteriori Estimation for Single-Photon Emission Computed-Tomography on Massively-Parallel Computers. Ieee Transactions on Medical Imaging. 12(3). 560-565. DOI:10.1109/42.241884.
266. Joshi, S., Miller, M.I. (1993). Maximum a Posteriori Estimation with Good Roughness for 3-Dimensional Optical-Sectioning Microscopy. Journal of the Optical Society of America a-Optics Image Science and Vision. 10(5). 1078-1085. DOI:10.1364/JOSAA.10.001078.
267. Christensen, G.E., Rabbitt, R.D., Miller, M.I. (1993). A Deformable Neuroanatomy Textbook Based on Viscous-Fluid Mechanics. Proceedings of the Twenty-Seventh Annual Conference on Information Sciences and Systems. 211-216.
268. Chen, S.C., Schaewe, T.J., Teichman, R.S., Miller, M.I., Nadel, S.N., Greene, A.S. (1993). Parallel Algorithms for Maximum-Likelihood Nuclear-Magnetic-Resonance Spectroscopy. Journal of Magnetic Resonance Series A. 102(1). 16-23. DOI:10.1006/jmra.1993.1062.
269. Butler, C.S., Miller, M.I. (1993). Maximum a-Posteriori Estimation for Spect Using Regularization Techniques on Massively-Parallel Computers. Ieee Transactions on Medical Imaging. 12(1). 84-89. DOI:10.1109/42.222671.
270. Roysam, B., Maffitt, D.R., Miller, M.I., Saffitz, J.E., Thomas, L.J. (1992). A Personal-Computer Based Implementation of the Maximum-Likelihood Method of Analysis of Electron-Microscope Autoradiographs. Microscopy Research and Technique. 20(1). 73-86. DOI:10.1002/jemt.1070200108.
271. Smith, K.R., Miller, M.I. (1992). An Iterative Bayesian Method for Segmenting Images That Have Undergone a Gray-Level Degradation. Sensor Fusion Iv : Control Paradigms and Data Structures. 1611. 555-563. DOI:10.1117/12.57964.
272. Miller, M.I., Tai, L., Mark, K., Jing, W., Bosch, W.R., Ogielski, T. (1992). Statistics of and Physiological-Mechanisms for Self-Exciting Point-Process Models of Auditory-Nerve Discharge. Auditory Physiology and Perception. 83. 133-140.
273. Miller, M.I., Osullivan, J.A. (1992). Entropies and Combinatorics of Random Branching-Processes and Context-Free Languages. Ieee Transactions on Information Theory. 38(4). 1292-1310. DOI:10.1109/18.144710.
274. Miller, M.I., Mark, K.E. (1992). A Statistical Study of Cochlear Nerve Discharge Patterns in Response to Complex Speech Stimuli. Journal of the Acoustical Society of America. 92(1). 202-209. DOI:10.1121/1.404284.
275. Mark, K.E., Miller, M.I. (1992). Bayesian Model Selection and Minimum Description Length Estimation of Auditory-Nerve Discharge Rates. Journal of the Acoustical Society of America. 91(2). 989-1002. DOI:10.1121/1.402504.
276. Preza, C., Miller, M.I., Thomas, L.J., Mcnally, J.G. (1992). Regularized Linear Method for Reconstruction of 3-Dimensional Microscopic Objects from Optical Sections. Journal of the Optical Society of America a-Optics Image Science and Vision. 9(2). 219-228. DOI:10.1364/JOSAA.9.000219.
277. Amit, Y., Miller, M.I. (1992). Large Deviations for the Asymptotics of Ziv-Lempel Codes for 2-D Gibbs Fields. Ieee Transactions on Information Theory. 38(4). 1271-1275. DOI:10.1109/18.144707.
278. Miller, M.I., Roysam, B., Smith, K.R., Osullivan, J.A. (1991). Representing and Computing Regular Languages on Massively Parallel Networks. Ieee Transactions on Neural Networks. 2(1). 56-72. DOI:10.1109/72.80291.
279. Miller, M.I., Roysam, B. (1991). Bayesian Image-Reconstruction for Emission Tomography Incorporating Good Roughness Prior on Massively Parallel Processors. Proceedings of the National Academy of Sciences of the United States of America. 88(8). 3223-3227. DOI:10.1073/pnas.88.8.3223.
280. Mccarthy, A.W., Miller, M.I. (1991). Maximum-Likelihood Spect in Clinical Computation Times Using Mesh-Connected Parallel Computers. Ieee Transactions on Medical Imaging. 10(3). 426-436. DOI:10.1109/42.97593.

281. Butler, C.S., Miller, M.I. (1991). Maximum a-Posteriori Estimation for Spect Using Regularization Techniques on Massively-Parallel Computers. Conference Record of the 1991 Ieee Nuclear Science Symposium and Medical Imaging Conference, Vols 1-3. 2001-2005. DOI:10.1109/NSSMIC.1991.259267.
282. Smith, K.R., Miller, M.I. (1990). A Bayesian-Approach Incorporating Rissanen Complexity for Learning Markov Random Field Texture Models. Icassp 90, Vols 1-5. 2317-2320. DOI:10.1109/ICASSP.1990.116044.
283. Schaewe, T.J., Miller, M.I. (1990). A Maximum-Likelihood Reconstruction Algorithm for Magnetic-Resonance-Imaging. Medical Imaging Iv : Image Formation. 1231. 188-194. DOI:10.1117/12.18796.
284. Miller, M.I., Fuhrmann, D.R. (1990). Maximum-Likelihood Narrow-Band Direction Finding and the Em Algorithm. Ieee Transactions on Acoustics Speech and Signal Processing. 38(9). 1560-1577. DOI:10.1109/29.60075.
285. Chornoboy, E.S., Chen, C.J., Miller, M.I., Miller, T.R., Snyder, D.L. (1990). An Evaluation of Maximum-Likelihood Reconstruction for Spect. Ieee Transactions on Medical Imaging. 9(1). 99-110. DOI:10.1109/42.52987.
286. Roysam, B., Miller, M.I. (1990). Stochastic Representation of Memoryless Boolean Functions - Application to Boundary Estimation at Low Contrast. Icassp 90, Vols 1-5. 2333-2336. DOI:10.1109/ICASSP.1990.116050. Snyder, D.L., Osullivan, J.A., Miller, M.I. (1989). The Use of Maximum-Likelihood Estimation for Forming Images of Diffuse Radar Targets from Delay-Doppler Data. Ieee Transactions on Information Theory. 35(3). 536-548. DOI:10.1109/18.30975.
287. Miller, M.I., Greene, A.S. (1989). Maximum-Likelihood Estimation for Nuclear Magnetic-Resonance Spectroscopy. Journal of Magnetic Resonance. 83(3). 525-548. DOI:10.1016/0022-2364(89)90347-8.
288. Fuhrmann, D.R., Miller, M.I. (1988). On the Existence of Positive-Definite Maximum-Likelihood Estimates of Structured Covariance Matrices. Ieee Transactions on Information Theory. 34(4). 722-729. DOI:10.1109/18.9771.
289. Snyder, D.L., Miller, M.I., Thomas, L.J., Politte, D.G. (1987). Noise and Edge Artifacts in Maximum-Likelihood Reconstructions for Emission Tomography. Ieee Transactions on Medical Imaging. 6(3). 228-238. DOI:10.1109/TMI.1987.4307831.
290. Miller, M.I., Snyder, D.L. (1987). The Role of Likelihood and Entropy in Incomplete-Data Problems - Applications to Estimating Point-Process Intensities and Toeplitz Constrained Covariances. Proceedings of the Ieee. 75(7). 892-907. DOI:10.1109/PROC.1987.13825.
291. Miller, M.I., Roysam, B., Saffitz, J.E., Larson, K.B., Fuhrmann, D., Thomas, L.J. (1987). A New Method for the Analysis of Electron-Microscopic Autoradiographs. Biotechniques. 5(4). 322-328.
292. Miller, M.I., Barta, P.E., Sachs, M.B. (1987). Strategies for the Representation of a Tone in Background-Noise in the Temporal Aspects of the Discharge Patterns of Auditory-Nerve Fibers. Journal of the Acoustical Society of America. 81(3). 665-679. DOI:10.1121/1.394835.
293. Fuhrmann, D.R., Brown, M.A., Miller, M.I., Roysam, B., Saffitz, J.E., Thomas, L.J. (1987). Data Acquisition-System for Maximum-Likelihood Analysis of Electron-Microscopic Autoradiographs. Journal of Electron Microscopy Technique. 7(3). 199-204. DOI:10.1002/jemt.1060070309.
294. Miller, M.I., Snyder, D.L., Moore, S.M. (1986). An Evaluation of the Sieves for Producing Estimates of Radioactivity Distributions with the Em Algorithm for Pet. Ieee Transactions on Nuclear Science. 33(1). 492-495. DOI:10.1109/TNS.1986.4337150.
295. Snyder, D.L., Miller, M.I. (1985). The Use of Sieves to Stabilize Images Produced with the Em Algorithm for Emission Tomography. Ieee Transactions on Nuclear Science. 32(5). 3864-3872. DOI:10.1109/TNS.1985.4334521.
296. Snyder, D.L., Miller, M.I. (1985). Maximum-Likelihood Reconstruction of Biological Images. Ieee Transactions on Biomedical Engineering. 32(10). 886-886.
297. Miller, M.I., Snyder, D.L., Miller, T.R. (1985). Maximum-Likelihood Reconstruction for Single-Photon Emission Computed-Tomography. Ieee Transactions on Nuclear Science. 32(1). 769-778. DOI:10.1109/TNS.1985.4336939.
298. Miller, M.I., Larson, K.B., Saffitz, J.E., Snyder, D.L., Thomas, L.J. (1985). Maximum-Likelihood-Estimation Applied to Electron-Microscopic Autoradiography. Journal of Electron Microscopy Technique. 2(6). 611-636. DOI:10.1002/jemt.1060020612.
299. Miller, M.I. (1985). Algorithms for Removing Recovery-Related Distortion from Auditory-Nerve Discharge Patterns. Journal of the Acoustical Society of America. 77(4). 1452-1464. DOI:10.1121/1.392040.
300. Miller, M.I., Sachs, M.B. (1984). Representation of Voice Pitch in Discharge Patterns of Auditory-Nerve Fibers. Hearing Research. 14(3). 257-279. DOI:10.1016/0378-5955(84)90054-6.
301. Sachs, M.B., Young, E.D., Miller, M.I. (1983). Speech Encoding in the Auditory-Nerve - Implications for Cochlear-Implants. Annals of the New York Academy of Sciences. 405. 94-113. DOI:10.1111/j.1749-6632.1983.tb31622.x.hippocampal
302. Miller, M.I., Sachs, M.B. (1983). Representation of Stop Consonants in the Discharge Patterns of Auditory-Nerve Fibers. Journal of the Acoustical Society of America. 74(2). 502-517. DOI:10.1121/1.389816

Publications: Conference Proceedings and Posters

1. D. J. Tward, M. Miller, and for the Alzheimer's Disease Neuroimaging Initiative, "Unbiased diffeomorphic mapping of longitudinal data with simultaneous subject specific template estimation," in Graphs in Biomedical Image Analysis, Computational Anatomy and Imaging Genetics, Springer, Cham, 2017, pp. 125–136
2. D. J. Tward, B. Lee, P. Mitra, and M. I. Miller, "Performance of image matching in the computational anatomy gateway: Cpu and gpu implementations in opencl," in Proceedings of the Practice and Experience in Advanced Research Computing 2017 on Sustainability, Success and Impact, ACM, 2017, p. 46
3. Sturgeon GM, Tward DJ, Ketcha M, Ratnanather JT, Miller MI, Park S, Segars WP, Lo JY. "Eigenbreasts for statistical breast phantoms", Proceedings of SPIE 2016;9783, 2016
4. Kutten KS, Eacker SM, Dawson VL, Dawson TM, Ratnanather JT, Miller MI, An image registration pipeline for analysis of transsynaptic tracing in mice. Proc. SPIE Medical Imaging Volume 9788 (2016).
5. Kutten KS, Vogelstein JT, Charon N, Ye L, Deisseroth K, Miller MI. Deformably registering and annotating whole CLARITY brains to an atlas via masked LDDMM. Proc. SPIE Optics, Photonics and Digital Technologies for Imaging Applications IV Volume 9896 (2016).
6. Wu D, Faria AV, Younes L, Ross CA, Mori S, Miller MI. Mapping temporal order of whole brain volumetric changes using change point analysis in premanifest Hungtington Disease. 24th Annual Meeting of International Society of Magnetic Resonance in Imaging, 2016.
7. Tward DJ, Sicat CC, Brown T, Miller EA, Ratnanather JT, Younes L, Bakker A, Albert M, Gallagher M, Mori S, Miller MI. Local Atrophy of entorhinal and trans-entorhinal cortex in mild cognitive impairment measured via diffeomorphometry. Society for Neuroscience Annual Meeting, San Diego CA, 2016.
8. Kulason S, Ishizuka K, Banerjee A, CeyhanE, Barta P, Sawa A, Miller MI, Ratnanather T. Quantitative Cortical Shape Measures in Schizophrenia. Human Brain Mapping, Geneva, Switzerland (June 2016).
9. D. J. Tward, A. Kolasny, C. S. Sicat, T. Brown, and M. I. Miller, "Tools for studying populations and timeseries of neuroanatomy enabled through gpu acceleration in the computational anatomy gateway," in Proceedings of the XSEDE16 Conference on Diversity, Big Data, and Science at Scale, ACM, 2016, p. 15.
10. Wu D, Faria AV, Younes L, Ross CA, Mori S, Miller MI. Mapping temporal order of whole brain volumetric changes using change point analysis in premanifest Hungtington Disease. *24th Annual Meeting of International Society of Magnetic Resonance in Imaging*, (2016).
11. Pettigrew, C., Soldan, A., Zhu, Y., Wang, M.-C., Brown, M., Miller, MI, Albert, M. Cortical thickness and cognitive reserve in relation to clinical symptom onset in preclinical Alzheimer's disease. International Neuropsychological Society, Boston, MA, (2016).
12. Pettigrew, C., Soldan, A., Lu, Y., Wang, MC., Brown, T., Selnes, O., Mori, S., Younes, L., Ratnanather, J. T., Miller MI, Albert, M. Cortical regions are associated with risk of clinical symptom onset during preclinical Alzheimer's disease. Poster presented at The Dallas Aging and Cognition Conference, Dallas, TX, (2015).
13. Soldan, A., Pettigrew, C., Cai, Q., Wang, M.-C., Moghekar, A., Miller MI, Albert, M. Relationship of CSF tau and ß-amyloid to hippocampal atrophy rates. Poster presented at the Alzheimer's Association International Conference, Washington, DC, (2015).
14. Daniel Tward, Saurabh Jain, Tilak Ratnanather, Laurent Younes, and Michael Miller, "OpenCL acceleration of Large Deformation Diffeomorphic Metric Mapping", The 7th International Workshop on High Performance Computing for Biomedical Image Analysis, HPC-MICCAI 2014, Held in Conjunction with MICCAI 2014, Boston, MA, USA, September 14, 2014. Proceedings 2014.
15. Norris H, Zhang Y, Frush J, Sturgeon GM, Minhas A, Tward DJ, Ratnanather JT, Miller MI, Samei E, Segars WP. 2014. "The development of a population of 4D pediatric XCAT phantoms for CT imaging research and optimization", Proceedings of SPIE 2014;9033, 2014.
16. Daniel Tward, Jorge Jovicich, Andrea Soricelli, Giovanni Frisoni, Alain Trouve, Laurent Younes, and Michael Miller, "Improved Reproducibility of Neuroanatomical Definitions through Diffeomorphometry and Complexity Reduction", 5th International Workshop, MLMI 2014, Held in Conjunction with MICCAI 2014, Boston, MA, USA, September 14, 2014. Proceedings, 223 – 230,2014.
17. S. Jain, D. J. Tward, D. S. Lee, A. Kolasny, T. Brown, J. T. Ratnanather, M. I. Miller, and L. Younes, "Computational anatomy gateway: Leveraging xsede computational resources for shape analysis," in Proceedings of the 2014 Annual Conference on Extreme Science and Engineering Discovery Environment, ACM, 2014, p. 54.
18. Albert M, Miler MI, "Article: Amygdalar Atrophy in Symptomatic AD Based on Diffeomorphometry: The BIOCARD Cohort". Journal: Neurobiology of Aging Our reference: NBA9024 PII: S0197 4580(14)00551-X DOI: 10.1016/j.neurobiolaging.2014.06.032
19. Pettigrew, C., Soldan, A., Selnes, O., Albert, M., Wang, M.-C., Lu, Y., Younes, L., Ratnanather, J. T., Brown, T., Mori, S., Miller MI. Medial temporal lobe atrophy, APOE status, cognitive reserve, and risk of clinical symptom onset during preclinical AD. International Neuropsychological Society, Seattle, WA, (2014).

20. Ardekani S, Jain A, Jain S, Abraham TP, Abraham MR, Zimmerman S, Winslow RL, Miller MI, Younes L. "Matching Sparse Sets of Cardiac Image Cross-sections Using LDDMM". MICCAI Statistical Atlases and Computational Models of the Heart: Imaging and Modeling Challenges (2011) (*Submitted*)
21. Tward DJ, Ceritoglu C, Segars WP, Miller MI, Ratnanather JT. "Generating Patient Specific Dosimetry Phantoms with Whole-Body Diffeomorphic Image Registration". Proc. 37th Annual Northeast Bioengineering Conference. (2011) 1-2. *(Published)*
22. Steinert-Threlkeld S, Ardekani S, Mejino JV, Detwiler LT, Brinkley JF, Halle M, Kikinis R, Winslow RL, Miller MI, Ratnanather JT. "Ontological Labels for Automated Location of Left Ventricular Remodeling". Fifth IEEE International Conference on Semantic Computing (2011) 572-573 *(Published)*
23. Winslow R, Saltz J, Foster I, Carr JJ, Ge Y, Miller MI,Younes L, Geman D, Granite S, Kurc T, Post A, Madduri R, Ratnanather JT, Larkin J, Ardekani S, Brown T, Kolasny A, Reynold K, Shipway M. The CardioVascular Research Grid (CVRG) Project.. March 2011 AMIA Summit on Translational Bioinformatics. (2011) *(Published*)
24. Mielke M, Okonkwo O, Mori S, Oishi K, Miller MI, Ceritoglu C, Brown T, Albert M, Lyketsos CG. "Fornix fractional anisotropy and hippocampal volume, alone and in combination, predict conversion from MCI to AD". The Alzheimer's Association International Conference on Alzheimer's Disease, (2010).
25. Botteron L, Xu T, Potter E, Lake L, Kienstra C, Nishino T, Ratnanather JR, Miller MI, Botteron K. "Insular Cortex in Early Onset Major Depression: A Twin MRI Investigation". Human Brain Mapping, Barcelona, 2010.
26. Ardekani S, Weiss RG, Lardo AC, Miller MI, Winslow RL, Younes L. "Cardiac Motion Analysis in Ischemic and Non-Ischemic Cardiomyopathy Using Parallel Transport". Proc IEEE Int Symp Biomed Imaging (2009) (*Published*)
27. Segars WP, Sturgeon G, Li X, Cheng L, Ceritoglu C, Ratnanather JT, Miller MI, Tsui BMW, Frish D, Samei E. "Patient specific computerized phantoms to estimate dose in pediatric CT". Proceedings of the SPIE in Medical Imaging 7258 (2009).
28. Csernansky JG, Harms M, Wang L, Cronenwett W, Ratnanather JT, Miller MI, Barch DM. "Associations Among Neurobiological Endophenotypes in the Siblings of Schizophrenia Patients". Am. Coll. Neuropsychopharmacology, Hollywood FL, 2009.
29. Hennessey J, Bowers M, Kolasny A, Brown T, Ratnanather T, Miller MI. "Computational Anatomy Works: Enhancing Paraview for Medical Imaging". TeraGrid'09, Arlington VA, 2009.
30. Ceritoglu C, Wang L, Trachtenberg M, Selemon LD, Csernansky JG, Miller MI, Ratnanather JT. "Large Deformation Diffeomorphic Metric Mapping Registration of in-vivo MR Images and Reconstructed 3D Images of Histological Sections", Human Brain Mapping, San Francisco, 2009.
31. Ceritoglu C, Wang L, Trachtenberg M, Selemon LD, Csernansky JG, Miller MI, Ratnanather JT. "Mapping of cortical area 46 laminar boundaries in MRI volumes: a method developed to study the prenatally irradiated macaque." International Congress on Schizophrenia Research, San Diego. 2009.
32. Ceritoglu C, Oishi K, Mori S, Miller MI. "Multi-contrast large deformation diffeomorphic metric mapping for diffusion tensor imaging". Human Brain Mapping, San Francisco, (2009).
33. Harms MP, Campanella C, Wang L, Aldridge K, Moffitt AJ, Keulper J, Ratnanather J, Miller MI, Barch DM, Csernansky JG. "Abnormalities of Prefrontal Cortex Neuroanatomy in Siblings at Risk for Schizophrenia". Society for Neuroscience Annual Meeting, Washington DC (2008) (*Published*)
34. Selemon LD, Ceritoglu C, Wang L, Ratnanather JT, Csernansky JG, Miller MI, Rakic P. "The Pathologic Effects of Prenatal Irradiation on Cortical Area 46 in the Macaque: Morphometric Analysis of MR Images with Cytoarchitectonic Borders Transferred from Matching Histology Sections". Society for Biological Psychiatry, Washington DC (2008) (*Published*)
35. Zhong J, Buckner RL, Fischl B, Miller MI, Qiu A. "Differences in Corpus Callosum Area and Shape in Advanced Aging and Alzheimer's Disease". Human Brain Mapping, Jun 2008, Australia. (2008) (Published)
36. Qiu A, Miller MI. "Subcortical Network Shape Analysis via Segmentation Denoising and Random Surface Momentum Maps". Human Brain Mapping, Jun 2008, Australia (2008) (*Published*)
37. Qiu A, Brown T, Fischl B, Kolasny A, Ma J, Buckner RL, Miller MI. "Subcortical Structure Template Generation with its Applications in Shape Analysis". Human Brain Mapping, Jun 2008, Australia. (2008) (*Published*)
38. Crocetti D, Qiu A, Adler M, Miller MI, and Mostofsky S. "Analysis of Basal Ganglia Morphometry in Autism Using Large Deformation Diffeomorphic Metric Mapping (LDDMM)". May 2008, London (2008) (*Published*)
39. Qiu A, Miller MI. "Cortical Hemisphere Registration via Diffeomorphic Curve Mapping". MICCAI (2007) (*Published)*
40. Qiu A, Miller MI. "Computational Functional Anatomy". Asilomar Conference on Signals, Systems, and Computers, Nov 2007, Montery, CA (2007) (*Published*)
41. Qiu A, Younes L, Wang L, Ratnanather JT, Csernansky JG, Miller MI. "Cortical Thinning of Cingulate Gyrus in Schizophrenia". International Congress on Schizophrenia Research, Apr 2007, Colorado Springs. (2007) (*Published*)

42. Priebe CE, Park Y, Miller MI, Botteron KN, Mohan N. "Hippocampus shape-space analysis of clinically depressed, high-risk, and control twin populations". Frontiers in the Convergence of Bioscience and Information Technologies (2007) (*Published*)
43. Ceritoglu C, Wang L, Malhotra N, Ratnanather JT, Selemon LD, Csernansky JG, Miller MI. "Delineation of a cytoarchitectonically defined macaque cortical area (46) in MRI via large deformation diffeomorphic metric mapping". Society for Neuroscience Annual Meeting, San Diego, (2007)
44. Ratnanather JT, Younes L, Zweck J, Wang L, Hosakere M, Csernansky JG, and Miller MI. "Statistical analysis of the surface roughness via local area maps: Application to the cingulate in healthy and schizophrenia subjects". Schizophrenia Bulletin 33 (2007):353 (*Published*)
45. Zhang J, Richards LJ, Miller MI, Yarowsky P, van Zijl P. "Characterization of Mouse Brain and Its Development using Diffusion Tensor Imaging and Computational Techniques". 28th Annual Conference of IEEE Engineering in Medicine and Biology Society (2006) (*Submitted)*
46. Wang L, Ceritoglu C. Ratnanather JT, Beg MF, Morris JC, Csernansky JG, Miller MI. "Initial Velocity and Large-Deformation Diffeomorphic Metric Mapping of Hippocampal Change in Dementia of Alzheimer Type (DAT)". Human Brain Mapping, Florence, (2006).
47. Jovicich J, Beg MF, Pieper S, Priebe C, Miller MI, Buckner R, Rosen B. "Biomedical Informatics Research Network: Integrating Multi-site Neuroimaging Data Acquisition, Data Sharing and Brain Morphometric Processing". Proceedings of the 18th IEEE Symposium on Computer-Based Medical Systems, 2005 (2005):288-293 (*Published*)
48. Harms MP, Wang L, Kim J, Thompson PA, Miller MI, Csernansky JG. "Thalamic shape abnormalities in siblings at risk for schizophrenia". Society for Neuroscience Annual Meeting (2006) (*Submitted*)
49. Zhang J, Evans AC, Hermoye L, Donohue P, Wakana S, Zhang W, Miller MI, van Zijl PC, Mori S. "Late Development of the Superior Longitudinal Fasciculus Revealed by Diffusion Tensor Imaging (DTI)". International Society for Magnetic Resonance in Medicine Annual Meeting 2006 (2006) (*Accepted*)
50. Zhang J, Sheikh KA, Miller MI, Mori S. "Quantitative Characterization of Mouse Calf Muscle Degeneration after Left Sciatic Nerve Axotomy with". International Society for Magnetic Resonance in Medicine Annual Meeting 2006 (2006) (*Accepted*)
51. Cao Y, Miller MI, Winslow RL, Younes L. "Large Deformation Diffeomorphic Metric Mapping of Fiber Orientations". Tenth IEEE International Conference on Computer Vision, 2005. ICCV 2005. 2 (2005):1379-1386 (*Published)*
52. Qiu A, Rosenau BJ, Greenberg AS, Barta P, Yantis S, Miller MI. "Localizing Retinotopic fMRI Activation in Human Primary Visual Cortex via Dynamic Programming". Proceedings of the 27nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Shanghai (2005) (*Published*)
53. Beg MF, Buckner RL, Fischl B, Park Y, Ceyhan E, Priebe CE, Ceritoglu C, Kolasny AE, Brown T, Quinn B, Yu P, Gold B, Ratnanather JT, Miller MI. "BIRN Brain Morphometry. Pattern classification of hippocampal shape analysis in a study of Alzheimer's Disease". Human Brain Mapping, Toronto, (2005)
54. Beg MF, Ratnanather JT, Wang L, Ceyhan E, Priebe CE, Ceritoglu C, Khan A, Lee N, Csernansky JG, Morris JC, Miller MI. "Metric distances between hippocampal shapes predict different rates of shape changes in dementia of Alzheimer type and nondemented subjects: a validation study". Human Brain Mapping, Toronto, (2005).
55. Wang L, Miller P, Gado MH, McKeel D, Miller MI, Morris JC, Csernansky JG. "Hippocampal shape abnormalities in early AD: A replication study". Alzheimer's and Dementia 1. 1 Suppl 1 (2005):52-53 (*Published*)
56. Wang L, Trein JC, Gado JM, Hosakere M, Miller MI, Csernansky JG. "Volume, Area and Thickness Abnormalities of the Anterior Cingulate in Schizophrenia Subjects". Annual Meeting of the Society for Neuroscience (2004) (*Published)*
57. Csernansky JG, Wang L, Miller P, Gado MH, McKeel D, Miller MI, Morris JC. "P2-166 Hippocampal shape and volume predicts the onset of dementia in the elderly". International Conference on Alzheimer's Disease and Related Disorders, 2004 Jul. Neurobiology of Aging 25. Suppl 2 (2004):S273 (*Published*)
58. Beg MF, Ceritoglu C, Kolasny AE, Priebe CE, Ratnanather JT, Yashinski R, Younes L, Yu P, Jovicich J, Buckner RL, Pieper S, Fischl B, Miller MI. "Biomedical Informatics Research Network: Multi-Site Processing Pipeline for Shape Analysis of Brain Structures". Human Brain Mapping, Budapest, (2004).
59. Csernansky JG, Wang L, Ngo C, Miller MI, Morris JC. "P3-064 Hippocampal shape predicts response to donepezil". International Conference on Alzheimer's Disease and Related Disorders, 2004 Jul. Neurobiology of Aging 25. Suppl 2 (2004):S370 (*Published*)
60. Barker, A.R., C.E. Priebe, M.I. Miller, M. Hosakare, J.T. Ratnanather, L. Wang, M. Gado, J.C. Morris, and J.G. Csernansky. "Statistical Testing on Labelled Cortical Depth Maps to Identify Dementia Progression". Proceedings of Joint Statistical Meetings (2003) (*Published*)
61. Ceritoglu C, Bitouk D, Miller MI, Schmitt HA. "Asymptotic performance of ATR in infrared images". Proceedings of the SPIE International Society of Optical Engineering 5094 (2003):109-118 (*Published*)
62. Miller MI, Trouve A, Younes L. "The Metric Spaces, Euler Equations, and Normal Geodesic Image Motions of Computational Anatomy". Proceedings of the 2003 International Conference on Image Processing, 2003. ICIP 2003. 2 (2003):635-638 (*Published*)

63. Valliant M, Miller MI, Younes L, Ceritoglu C. "Initial Value Diffeomorphic Landmark Matching and its Application Shape Statistics". IEEE Workshop on Statistical Signal Processing, 2003 Sep (2003):306 (*Published*)
64. Hosakere M, Ratnanather JT, Miller MI, Wang L, Csernansky JG. "Cortical metrics of the cingulate gyrus: Gray matter volume, area, and thickness derived from co-occurrence analysis". International Congress on Schizophrenia Research, 2003 Apr. Schizophrenia Research 60. 1 Suppl 1 (2003):197-198 (*Published*)
65. Splinter NR, Wang L, Schindler MS, Selemon LD, Miller MI, Csernansky JG. "Volume and shape abnormalities of the thalamus in schizophrenia subjects". International Congress on Schizophrenia Research, 2003 Apr. Schizophrenia Research 60. 1 Suppl 1 (2003):207 (*Published*)
66. Bitouk D, Miller MI, Younes L. "Asymptotic performance analysis for object recognition in clutter". Proceedings of the SPIE International Society of Optical Engineering 5094 (2003):101-108 (*Published*)
67. Ratnanather JT, Priebe CE, Miller MI. "Semi-automated segmentation of cortical subvolumes via hierarchical mixture modeling". Proceedings of the SPIE International Society of Optical Engineering 5032 (2003):1602-1612 (*Published*)
68. Ceritoglu C, Bitouk D, Miller MI, Schmitt HA "Asymptotic performance of ATR in infrared images". Proceedings of the SPIE 5094 (2003)
69. Csernansky JG, Wang L, Swank J, Ting CC, Miller JP, Miller MI, Morris JC. "Hippocampal Volume and Shape Variation Predicts Cognitive Decline in Nondemented Elder Subjects". World Alzheimer Congress, 2002 Jul; Stockholm, Sweden (2002) (*Published*)
70. Bitouk D, Miller MI, Younes L. "Empirically Generated Metric Spaces for ATR in Clutter". 36th Asilomar Conference on Signals, Systems and Computers, 2002 Oct 2 (2002):1407-1410 (*Published*)
71. Beg, M.F., Miller, M.I., Trouve, A., Younes, L. (2002). Computational anatomy: Computing metrics on anatomical shapes. 2002 IEEE International Symposium on Biomedical Imaging, Proceedings. 341-344.
72. Beg MF, Miller MI, Trouve A, Younes L. "Computing Metrics on Anatomical Shapes in Computational Anatomy". Proceedings of the Second Joint EMBS/BMES Conference, 2002 Oct 2 (2002):989-990 (*Published*)
73. Beg MF, Miller MI, Trouve A, Younes L. "Computational Anatomy: Computing Metrics on Anatomical Shapes". Proceedings of the 2002 IEEE International Symposium on Biomedical Imaging, 2002 (2002):341-344 (*Published*)
74. Wang L, Swank JS, Miller MI, Morris JC, Csernansky JG. "Progressive Hippocampal Atrophy Distinguishes DAT and Healthy Aging". Annual Meeting of the Society for Neuroscience (2002) (*Published*)
75. Csernansky JG, Wang L, Swank J, Ting CC, Miller JP, Gado M, McKeel D, Miller MI, Morris JC. "Hippocampal Volume and Shape Predicts Cognitive Decline in the Elderly". World Alzheimer Congress, 2002 Jul; Stockholm, Sweden (2002) (*Published*)
76. Winslow RL, Helm P, Baumgartner Jr W, Ratnanather JT, Peddi S, McVeigh E, Miller MI. "Imaging-based Integrative Models of the Heart: Closing the Loop between Experiment and Simulation". The Novartis Foundation Symposium on In Silico Simulation of Biological Processes, 2001; University College London, Edited by G. Bock, and J.A. Goode. "In Silico" Simulation of Biological Processes (2001) (*Published*)
77. Wang L, Joshi SC, Miller MI, Csernansky JG. "Quantifying Hippocampal Assymetry in Schizophrenia". International Congress on Schizophrenia Research, 2001 Apr; Whistler, British Columbia, Canada. Schizophrenia Research (2001):170 (*Published*)
78. Bitouk D, Grenander U, Miller MI, Tyagi P. "Fisher information in transported generator clutter models". Proceedings of the SPIE International Society of Optical Engineering 4379 (2001):560-573 (PDF) (*Published*)
79. Jain A, Moulin P, Miller MI, Ramchandran K. "Information-theoretic bounds on target recognition performance". Proceedings of the SPIE International Society of Optical Engineering 4050 (2000):347-358 (*Published*)
80. Wang L, Joshi SC, Miller MI, Grenander U, Csernansky JG. "Statistical Analysis of Hippocampal Assymetry in Schizophrenia". Annual Meeting of the Society for Neuroscience, 2000 Nov; New Orleans, LA (2000) (*Published*)
81. Csernansky JG, Wang L, Joshi S, Miller JP, Gado M, Kido D, McKeel D, Morris J, Miller MI. "Early DAT is Distinguished from Aging by High Dimensional Mapping of the Hippocampus". First International Meeting of Alzheimer's Imaging Consortium, 2000 Jul; Washington, DC (2000) (*Published*)
82. Hogan RE, Mark KE, Wang L, Joshi S, Miller MI, Bertrand ME, Bucholz RD. "MR Imaging Deformation-Based Segmentation of the Hippocampus in Patients with Mesial Temporal Sclerosis and Temporal Lobe Epilepsy". Epilepsia 40. Suppl 7 (1999):192 (*Published*)
83. Csernansky JG, Wang L, Joshi S, Gado MH, Morris J, Miller MI. "Hippocampal deformities detected in schizophrenia and Alzheimer's disease by high dimensional brain mapping". European Neuropsychopharmacology 9. Suppl 5 (1999):268 (*Published*)
84. Srivastava A, Miller MI, Grenander U. "Jump-diffusion Processes on Matrix Lie Groups for Bayesian Inference". Proceedings of the IEEE Signal Processing Workshop on Higher-Order Statistics, 1999 Jun; Caesares, Israel (1999):126-129 (*Published*)

85. Koksal AE, Shapiro JH, Miller MI. "Performance Analysis for Ground-based Target Orientation Estimation: FLIR/LADAR Sensor Fusion". 33rd Asilomar Conference on Signals, Systems, and Computers, 1999. 2 (1999):1240-1244 (*Published*)
86. Lanterman AD, Cooper ML, Miller MI. "Efficient estimation of thermodynamic state incorporating Bayesian model order selection". Proceedings of the SPIE International Society of Optical Engineering 3718 (1999):2-13 (*Published*)
87. Kostakis J, Cooper ML, Green Jr TJ, Miller MI, O'Sullivan JA, Shapiro JH, Snyder DL. "Multispectral sensor fusion for ground-based target orientation estimation: FLIR, ladar, HRR". Proceedings of the SPIE International Society of Optical Engineering 3718 (1999):14-24 (*Published*)
88. Loizeaux M, Srivastava A, Miller MI. "Estimation of pose and location of ground targets for ATR". Proceedings of the SPIE International Society of Optical Engineering 3720 (1999):140-151 (*Published*)
89. Bakircioglu MM, Joshi SC, Miller MI. "Landmark matching on brain surfaces via large deformation diffeomorphisms on the sphere". Proceedings of the SPIE International Society of Optical Engineering 3661 (1999):710-715 (*Published*)
90. Cooper ML, Srivastava A, Miller MI. "Quadratic analysis of information measures for object recognition". Proceedings of the SPIE International Society of Optical Engineering 3721 (1999):819-827 (*Published*)
91. Miller MI, Cooper M, Kostakis J. "The Information Theory of Sensor Fusion". Second ONR/GTRI Workshop on Target Tracking and Sensor Fusion, 1999 Jun; Atlanta, GA (1999) (*Published*)
92. Cooper M, Srivastava A, Miller MI. "Information Measures for Object Recognition". Proceedings of the Thirty-third Annual Conference on Information Sciences and Systems, 1999 Mar; Johns Hopkins University, Baltimore, MD, Edited by J.L. Prince, and T.D. Tran (1999):179-183 (*Published*)
93. Moulin P, Miller MI. "Detection Bounds for Automatic Target Recognition in Compressed Domain". IEEE International Symposium on Information Theory, 1998 Aug; Cambridge, MA (1998):143 (*Published*)
94. Wang L, Miller MI. "Large deformation image matching via volume imagery". Vision Geometry VII, 1998 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.A. Melter, A.Y. Wu, and L.J. Latecki 3454 (1998):317-323 (*Published*)
95. Kostakis J, Cooper ML, Green Jr TJ, Miller MI, O'Sullivan JA, Shapiro JH, Snyder DL. "Multispectral active-passive sensor fusion for ground-based target orientation estimation". Automatic Object Recognition VIII, 1998 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by F.A. Sadjadi 3371 (1998):500-507 (*Published*)
96. Cooper ML, Miller MI. "Information Measures for Object Recogntion". Algorithms for Synthetic Aperture Radar Imagery V, 1998 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by E.G. Zelnio 3370 (1998):637-645 (*Published*)
97. Jain A, Moulin P, Miller MI, Ramchandran K. "Performance Bounds for ATR based on Compressed Data". Ninth Army Compression Workshop, 1998 Dec; Huntsville, AL (1998) (*Published*)
98. Wang L, Cui J, Miller MI. "Validating High-Dimensional Transformations of the Hippocampus". Fourth International Conference on Functional Mapping of the Human Brain, 1998 Jun; Montreal, Canada (1998) (*Published*)
99. Zhu SC, Lanterman A, Miller MI. "Clutter Modelling and Performance Analysis in Automatic Target Recognition". Workshop on Detection and Classification of Difficult Targets, 1998 Jun; Redstone Arsenal, AL (1998) (*Published*)
100. Srivastava A, Cooper M, Miller MI, Grenander U. "Multi-Sensor Fusion and Performance Analysis of ATR". First International Conference on Multisource-Multisensor Information Fusion, 1998 Jul; Las Vegas, NV, Edited by H.R. Arabnie, and D. Zhu (1998) (*Published*)
101. Cooper M, Miller MI. "Information Gain in Object Recognition via Sensor Fusion". First International Conference on Multisource-Multisensor Information Fusion, 1998 Jul; Las Vegas, NV, Edited by H.R. Arabnie, and D. Zhu (1998) (*Published*)
102. Zhu SC, Miller MI. "Clutter, Occlusion and Performance Analysis in Target Detection". Workshop on target Detection in Heavy Clutter (1998) (*Published*)
103. Bucholz RD, Levy AL, Christensen GE, Frank KJ, Hammoud A, Henderson JM, Joshi S, McDurmont LL, Mark KE, Miller MI. "An internet-connected, patient-specific, deformable brain atlas integrated into a surgical navigation system". Clinical Neurology and Neurosurgery 99. Suppl 1 (1997):S32-S33 (*Published*)
104. Csernansky JG, Haller JW, Banerjee A, Wang L , Joshi S, Christensen GE, Gado M, Vannier MW, Miller MI. "A comparison of the hippocampus in schizophrenia and control subjects using automated methods for neuromorphometry". Schizophrenia Research 24. 1-2 (1997):141 (*Published*)
105. Christensen GE, Williamson JF, Chao KSC, Miller MI, So FB, Vannier MW. "Deformable anatomical templates for brachytherapy treatment planning in radiotherapy of cervical cancer". Vision Geometry VI, 1997 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.A. Melter, A.Y. Wu, and L.J. Latecki 3168 (1997):147-154 (*Published*)
106. Cooper ML, Grenander U, Miller MI, Srivastava A. "Accommodating geometric and thermodynamic variability for forward-looking infrared sensors". Algorithms for Synthetic Aperture Radar Imagery IV, 1997 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by E.G. Zelnio 3070 (1997):162-172 (*Published*)

107. Lanterman AD, Miller MI, Snyder DL. "Representations of shape for structural inference in infrared scenes". Automatic Object Recognition VII, 1997 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by F.A. Sadjadi 3069 (1997):257-268 (*Published*)
108. Wang L, Miller MI. "Construction of Statistical Templates for Cross-Modality Mapping". First Aachen Conference on Neuropsychology in Neurosurgery, Psychiatry and Neurology, 1997 Dec; Aachen, Germany (1997) (*Published*)
109. Bucholz, Levy, Marzouk, Schaewe TJ, Miller MI, Smith KR, Henderson, Abed. "The Determination of an Ideal Pallidotomy Target by the Incorporation of Intraoperative Physiological recordings Deformed into a Patient Specific Brain Atlas". AANS Annual Meeting, 1997 Aug (1997) (*Published*)
110. Bucholz, Levy, Marzouk, Abed, Miller MI, and Henderson. "A Patient Specific Deformable Brain Atlas Accounting for Structural Variability Between Individual Patients". AANS Annual Meeting, 1997 Aug (1997) (*Published*)
111. Schmich RM, Miller MI. "Stochastic Models of the Fast and Slow Components of Synaptic Recovery and Post-Synaptic Action Potential Generation". 20th Annual Midwinter Research Meeting of the Association for Research in Otolaryngology, 1997 Feb; St. Petersburg Beach, FL, Edited by G.F. Popelka (1997):153 (*Published*)
112. Yang F, Miller MI, Boyle RD, Highstein M, Rabbitt RD, Schmich RM. "Stochastic Representation of Action Potential Generation of Avian and Toad Fish Vestibular Semicircular Neurons". 20th Annual Midwinter Research Meeting of the Association for Research in Otolaryngology, 1997 Feb; St. Petersburg Beach, FL, Edited by G.F. Popelka (1997):35 (*Published*)
113. Miller MI, Sachs MB. "Temporal representation of CV syllables in populations of auditory-nerve fibers". Journal of the Acoustical Society of America 70. Suppl 1 (1981):S9 (*Published*
114. Lanterman AD, Miller MI, Snyder DL. "Representations of thermodynamic variability in the automated understanding of FLIR scenes". Automatic Object Recognition VI, 1996 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by F.A. Sadjadi 2756 (1996):26-37 (*Published*)
115. Haller JW, Banerjee A, Christensen GE, Snyder AZ, Miller MI, Raichle ME. "High Dimensional Transformation of PET and MRI to Atlas Space". 2nd International Conference on Functional Mapping of the Human Brain, 1996 Jun 21; Boston, MA (1996) (*Published*)
116. Csernansky JG, Haller JW, Banerjee A, Wang L, Joshi SC, Christensen GE, Gado M, Vannier MW, Miller MI. "A Comparison of the Hippocampus in Schizophrenia and Control Subjects using Automated Methods for Neuromorphometry". 35th Annual Meeting of the ACNP, 1996 Dec; San Juan, Puerto Rico (1996) (*Published*)
117. Christensen GE, Joshi SC, Miller MI. "Individualizing Anatomical Atlases of the Head". 4th International Conference on Visualization in Biomedical Computing, 1996 Sep; Hamburg, Germany, Edited by K.H. Höhne, and R. Kikinis (1996):343-348 (*Published*)
118. Cooper M, Lanterman AD, Joshi SC, Miller MI. "Representing the Variation of Thermodynamic State via Principal Components Analysis". 3rd workshop on Conventional Weapon ATR, 1996 Nov; Huntsville, AL (1996):479-490 (*Published*)
119. Banerjee A, Christensen GE, Haller J, Joshi SC, Miller MI, Raichle M. "Accomodationg Anatomical Variability in Functional Imaging via Deformable Templates". 33rd Annual Allerton Conference on Communication, Control and Computing, 1995 Oct; Monticello, IL (1995):212 (*Published*)
120. Mark KE, Miller MI, Grenander U. "Markov Random Field Models for Natural Language". IEEE International Symposium on Information Theory, 1995 Sep; British Columbia, Canada (1995):392 (*Published*)
121. Foltz MA, Srivastava A, Miller MI, Grenander U. "Detection of multiple airborne targets from multisensor data". Radar/Ladar Processing, 1995 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by W.J. Miceli 2562 (1995):162-171 (*Published*)
122. Lanterman AD, Miller MI, Snyder DL. "Unification of detection, tracking, and recognition for millimeter wave and infrared sensors". Radar/Ladar Processing, 1995 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by W.J. Miceli 2562 (1995):150-161 (*Published*)
123. Joshi SC, Wang J, Miller MI, Van Essen DC, Grenander U. "Differential geometry of the cortical surface". Vision Geometry IV, 1995 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.A. Melter, A.Y. Wu, F.L. Bookstein, and W.D.K. Green 2573 (1995):304-311 (*Published*)
124. Joshi SC, Miller MI, Christensen GE, Banerjee A, Coogan T, Grenander U. "Hierarchical brain mapping via a generalized Dirichlet solution for mapping brain manifolds". Vision Geometry IV, 1995 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.A. Melter, A.Y. Wu, F.L. Bookstein, and W.D.K. Green 2573 (1995):278-289) (*Published*)
125. Rabbitt RD, Weiss JA, Christensen GE, Miller MI. "Mapping of hyperelastic deformable templates using the finite element method". Vision Geometry IV, 1995 Jul; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.A. Melter, A.Y. Wu, F.L. Bookstein, and W.D.K. Green 2573 (1995):252-265 (*Published*)
126. Lanterman AD, Miller MI, Snyder DL. "Implementation of jump-diffusion algorithms for understanding FLIR scenes". Automatic Object Recognition V, 1995 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by F.A. Sadjadi 2485 (1995):309-320 (*Published*)

127. Haller JW, Christensen GE, Miller MI, Joshi SC, Gado M, Csernansky JG, Vannier MW. "Comparison of automated and manual segmentation of hippocampus MR images". Medical Imaging 1995: Image Processing, 1995 Feb; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by M.H. Loew 2434 (1995):206-215 (*Published*)
128. Haller JW, Christensen GE, Joshi SC, Gado M, Miller MI, Vannier MW. "Precision and Accuracy of a High Dimensional Transformation and Segmentation of MR Images of the Hippocampus". Information Processing in Medical Imaging: 14th International Conference, 1995 Jun; Brest, France, Edited by Y. Bizais, C. Barillot, and R. Di Paola (1995):401-402 (*Published*)
129. Christensen GE, Rabbitt RD, Miller MI, Joshi SC, Grenander U, Coogan T, Van Essen D. "Topological Properties of Smooth Anatomic Maps". Information Processing in Medical Imaging: 14th International Conference, 1995 Jun; Brest, France, Edited by Y. Bizais, C. Barillot, and R. Di Paola (1995):101-112 (*Published*)
130. Schmich RM, Miller MI. "Stochastic Intensity of Hodgkin-Huxley-Based Spike generation Models". 18th Annual Midwinter Research Meeting of the Association for Research in Otolaryngology, 1995 Feb. (1995) (*Published*)
131. Christensen GE, Miller MI, Marsh JL, Vannier MW. "Automatic Analysis of Medical Images Using a Deformable Textbook". International Symposium on Computer Communication Systems for Image Guided Diagnosis and Therapy, 1995 Jun, Edited by H.U. Lemke, K. Inamura, D. Jaffe, and M.W. Vannier (1995):146-151 (*Published*)
132. Lanterman AD, Miller MI, Snyder DL. "Automatic Target Recognition via the Simulation of Infrared Scenes". 6th Annual Ground Target Modeling and Validation Conference, 1995 Aug; Houghton, MI (1995):195-204 (*Published*)
133. Christensen GE, Miller MI, Vannier MW. "A 3-D Deformable Magnetic Resonance Textbook Based on Elasticity". 1994 AAAI Spring Symposium: Applications of Computer Vision in Medical Imaging, 1994 Mar; Palo Alto, CA (1994) (*Published*)
134. Srivastava A, Miller MI, Grenander U. "Lie Group Parametrization for Dynamics based prior in ATR". 1994 Sixth IEEE Digital Signal Processing Workshop, 1994 Oct; Yosemite National Park, CA (1994):97-100 (*Published*)
135. O'Sullivan JA, Mark K, Miller MI. "Markov Random Fields on Graphs for Natural Languages". 1994 IEEE-IMS Workshop on Information Theory and Statistics, 1994 Oct; Alexandria, VA (1994):47 (*Published*)
136. Lanterman AD, Miller MI, Snyder DL, Miceli WJ. "Jump-diffusion processes for the automated understanding of FLIR scenes". Automatic Object Recognition IV, 1994 Apr; Orlando, FL. Proceedings of the SPIE International Society of Optical Eng., Edited by F.A. Sadjadi 2234 (1994):416-427 (*Published*)
137. O'Sullivan JA, Jacobs SP, Miller MI, Snyder DL. "A Likelihood-based Approach to Joint Target Tracking and Identification". 27th Asilomar Conference on Signals, Systems and Computers, 1993 Nov; Pacific Grove, CA 1 (1993):290-294 (*Published*)
138. Srivastava A, Teichman RS, Miller MI, Snyder D, O'Sullivan JA. "Jump-diffusion Based Sampling Algorithm for Target Tracking and Recognition". 27th Asilomar Conference on Signals, Systems and Computers, 1993 Nov; Pacific Grove, CA 2 (1993):1181-1185) (*Published*)
139. Miller MI, Amit Y, Grenander U. "Jump-Diffusion Processes for Unknown Model Order Estimation Problems". 1993 IEEE International Symposium on Information Theory, 1993 (1993):185 (*Published*)
140. Schaewe TJ, Miller MI. "A model-Based Approach to Magnetic Resonance Image Estimation". 1993 IEEE International Symposium on Information Theory, 1993 (1993):134 (*Published*)
141. O'Sullivan JA, Du KC, Teichman RS, Miller MI, Snyder DL, Vannicola VC. "Reflectivity models for radar target recognition". Proceedings of the SPIE International Society of Optical Engineering 1960 (1993):152-161 (*Published*)
142. Preza C, Miller MI, Conchello JA. "Image reconstruction for 3D light microscopy with a regularized linear method incorporating a smoothness prior". Proceedings of the SPIE International Society of Optical Engineering 1905 (1993):129-149 (*Published*)
143. Christensen GE, Rabbitt RD, Miller MI. "A Deformable Neuroanatanomy Textbook Based on Viscous Fluid Mechanics". 27th Annual Conference on Information Sciences and System, 1993 Mar; Baltimore, MD, Edited by J. Prince and T. Runolfsson (1993):211-216 (*Published*)
144. Snyder DL, Lanterman AD, Miller MI. "Regularizing Images in Emission Tomography via an Extension of Good's Roughness Penalty". Conference Record of the 1992 IEEE Nuclear Science Symposium and Medical Imaging Conference, 1992. 2 (1992):1223 (*Published*)
145. Smith KR, Miller MI. "Iterative Bayesian method for segmenting images that have undergone a gray-level degradation". Sensor Fusion IV: Control Paradigms and Data Structures, 1991 Nov; Boston, MA. Proceedings of the SPIE International Society of Optical Eng., Edited by P.S. Schenker 1611 (1992):555-563 (*Published*)
146. Christensen GE, Miller MI, Amit Y, Grenander U. "Global Shape Models for Anatomical Structures". 26th Annual Conference on Information Sciences and System, 1992 Mar; Princeton, NJ, Edited by H.V. Poor, and S.C. Schwartz (1992):356 (*Published*)

147. Mark K, Miller MI, Grenander U. "Parameter Estimation for Constrained Context Free Language Models". 5th DARPA Speech and Annual Language Workshop, 1992 Feb; Harriman, NY (1992):146-149 (*Published*)
148. Grenander U, Miller MI, Christensen GE. "Deformable Anatomical Databases using Global Shape Models: A Position Paper for the 1992 Electronic Imaging of the Human Body Workshop". Cooperative Working Group on Whole Body 3-D Electronic Imaging of the Human Body, 1992 Mar (1992) (*Published*)
149. Miller MI, O'Sullivan JA. "On the Entropy of Random Branching Processes". Proceedings. 1991 IEEE International Symposium on Information Theory, 1991 (1991):20 (*Published*)
150. Butler CS, Miller MI. "Maximum A Posteriori Estimation for SPECT using Regularization Techniques on Massively-parallel Computers". Conference Record of the 1991 IEEE Nuclear Science Symposium and Medical Imaging Conference, 1991. 3 (1991):2001-2005 (*Published*)
151. Grenander U, Miller MI. "An Application of the Global Model". Proceedings of the Seventh Workshop on Multidimensional Signal Processing, 1991. (1991):P.5 (*Published*)
152. Miller MI, Roysam B, Smith KR. "Automated Segmentation of Biological Shapes in Electron Microscopic Autoradiography". 25th Annual Conference on Information Sciences and System, 1991 Mar; Baltimore, MD, Edited by F. Davidson and J. Goutsias (1991) (*Published*)
153. Roysam B, Miller MI. "Stochastic Representation of Memoryless Boolean Functions: Application to Boundary Estimation at Low Contrast". 1990 International Conference on Acoustics, Speech, and Signal Processing, 1990 Apr; Albuqerque, NM 4 (1990):2333-2336 (*Published*)
154. Smith KR, Miller MI. "A Bayesian Approach Incorporating Rissanen Complexity for Learning Markov Random Field Texture Models". 1990 International Conference on Acoustics, Speech, and Signal Processing, 1990. ICASSP-90. 4 (1990):2317-2320 (*Published*)
155. Schaewe TJ, Miller MI. "Maximum likelihood reconstruction algorithm for magnetic resonance imaging". Medical Imaging IV: Image Formation, 1990 Feb; Newport Beach, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by R.H. Schneider 1231 (1990):188-194 (*Published*)
156. Miller MI. "Stochastic Representations of Formal Languages". The 1989 IEEE/CAM Information Theory Workshop at Cornell, 1989 Jun; Ithaca, NY. (1989):8_4 (*Published*)
157. Roysam B, Miller MI. "A Unified Approach for Hierarchical Imaging Based on Joint Hypothesis Testing and Parameter Estimation". 1989 International Conference on Acoustics, Speech, and Signal Processing, 1989. ICASSP-89. 3 (1989):1779-1782 (*Published*)
158. Smith KR, Miller MI. "Learning regular grammars on connection architectures". 1989 International Conference on Acoustics, Speech, and Signal Processing, 1989. ICASSP-89. 4 (1989):2501-2504 (*Published*)
159. Fuhrmann DR, Miller MI. "Maximum-likelihood Wideband Direction-of-arrival Estimation". Sixth Multidimensional Signal Processing Workshop, 1989. (1989):133-134 (*Published*)
160. Roysam B, Shrauner JA, Miller MI. "Bayesian Imaging using Good's Roughness Measure-Implementation on a Massively Parallel Processor". 1988 International Conference on Acoustics, Speech, and Signal Processing, 1988. ICASSP-88. 2 (1988):932-935 (*Published*)
161. Miller MI, Turmon MJ, O'Sullivan JA, Snyder DL. "Spectrum Estimation via Maximum Likelihood Estimation of Toeplitz Constrained Covariances". Fourth Annual ASSP Workshop on Spectrum Estimation and Modeling, 1988. (1988):182-185 (*Published*)
162. Roysam B, Miller MI. "Grammars and Bayes Priors for Hierarchical Image Processing on Massively Parallel Processors". 26th Annual Allerton Conference on Communication, Control and Computing, 1988 Oct; Monticello, IL (1988) (*Published*)
163. Snyder DL, Miller MI, Schultz TJ. "Constrained Probability-Density Estimation from Noisy Data". 22nd Annual Conference on Information Sciences and System, 1988 Mar; Princeton, NJ (1988):170-172 (*Published*)
164. Miller MI, Roysam B, Smith KR. "Mapping Rule-based and Stochastic Constraints to Connection Architectures: Implications for Hierarchical Image Processing". Visual Communications and Image Processing, 1988 Nov. Proceedings of the SPIE International Society of Optical Eng., Edited by T.R. Hsing 1001 (1988):1078-1085 (*Published*)
165. Miller MI, Snyder DL. "The Role of Likelihood and Entropy in Incomplete-Data Problems: Applications to Estimating Point-Process Intensities and Toeplitz Constrained Covariances". Proceedings of the IEEE 75. 7 (1987):892-907 (*Published*)
166. Miller MI, Fuhrmann DR. "An EM Algorithm for Direction-of-Arrival Estimation for Narrowband Signals in Noise". Advanced Algorithms and Architectures for Singal Processing II, 1987 Aug; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by F.T. Luk 826 (1987):101-103 (*Published*)
167. Snyder DL, O'Sullivan JA, Miller MI. "An Estimation Theoretic Approach for Imaginary Diffuse Radar-Targets". Advanced Algorithms and Architectures for Singal Processing II, 1987 Aug; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by F.T. Luk 826 (1987):141-142 (*Published*)
168. Barrett RC, McCarthy AW, Miller MI, Morley RE. "Gaussian Convolutions on a Massively Parallel Processor". 21st Annual Conference on Information Sciences and System, 1987 Mar; Baltimore, MD, Edited by W.J. Rugh, and B.L. Hughes (1987):373-374 (*Published*)

169. Miller MI, Fuhrmann DR. "Maximum-Likelihood Direction of Arrival Estimations for Multiple Narrowband Signals in Noise". 21st Annual Conference on Information Sciences and System, 1987 Mar; Baltimore, MD, Edited by W.J. Rugh, and B.L. Hughes (1987):710-712 (*Published*)
170. Turmon MJ, Miller MI. "Performance Evaluation of Maximum-Likelihood Estimation of Toeplitz Covariances Generated with the Expectation Maximization Algorithm". 21st Annual Conference on Information Sciences and System, 1987 Mar; Baltimore, MD, Edited by W.J. Rugh, and B.L. Hughes (1987):548 (*Published*)
171. Fuhrmann DR, Miller MI. "On the Existence of Positive Definite Maximum-Likelihood Estimates of Structured Covariance Matrices". 21st Annual Conference on Information Sciences and System, 1987 Mar; Baltimore, MD, Edited by W.J. Rugh, and B.L. Hughes (1987):549-552 (*Published*)
172. Snyder DL, Miller MI. "The use of Grenander's Sieves in Quantum-Limited Imaging". 24th Annual Allerton Conference on Communication, Control and Computing, 1986 Oct; Monticello, IL (1986):213 (*Published*)
173. Miller MI, Snyder DL. "The Application of Maximum Entropy and Maximum-Likelihood for Spectral Estimation ". Proceedings of the IEEE International Symposium on Information Theory, 1986 Oct; Ann Arbor, MI (1986):53 (*Published*)
174. Miller MI, Snyder DL, Turmon MJ. "Iterative Maximum-Likelihood estimation of Toeplitz-Constrained Covariances". 24th Annual Allerton Conference on Communication, Control and Computing, 1986 Oct; Monticello, IL (1986):111-112 (*Published*)
175. Miller MI, Snyder DL. "An Alternating Maximization of the Entropy/Likelihood Function for Image Reconstruction and Spectrum Estimation". Advanced Algorithms and Architectures for Signal Processing, 1986 Aug; San Diego, CA. Proceedings of the SPIE International Society of Optical Eng., Edited by J.M. Speiser 696 (1986):163-166 (*Published*)
176. Miller MI. "Strategies for the Representation of Broadband Stimuli in the Discharge Patters of Auditory Nerve Fibers". NATO Advanced Research Workshop on Auditory Frequency Selectivity, 1986 Jun. (1986):265-272 (*Published*)
177. Snyder DL, Miller MI. "Estimation under Quantum-Limited Conditions". Quantum Limited Imaging and Image Processing Topical Meeting, 1986 Mar; Honolulu, HI (1986):120-123 (*Published*)
178. Bergeron LE, Goldberg AJ, Kwon SY, Miller MI. "A Robust Adaptive Transform Coder for 9.6 Kb/s Speech Transmission". 1980 International Conference on Acoustics, Speech and Signal Processing, 1980 Apr; Denver, CO (1980):344-347 (*Published*)

Publications: Patents

1. Susumu Mori, Michael I. Miller, Kenichi Oishi, Jiangyang Zhang. “Automated Image Analyses for Magnetic Resonance Imaging”. US Patent No. 8,731,256.
2. Michael I. Miller, Can Ceritoglu, Susumu Mori, Anqi Qiu, Jiangyang Zhang “ Advanced Cost Functions for Image Registration for Image Analysis: Multi-channel, Hypertemplate and Atlases with Built-in Anatomical Variability”. US Patent No. 8,600,131.
3. Susumu Mori, Michael I. Miller. “ Automated Characterization of Time-dependent Tissue Change” US Patent No. 8,594,401
4. Susumu Mori, Andreia V. Farai, Michael I. Miller, Kenichi Oishi. “Atlas-based Analysis for Image-based Anatomic and Functional Data of Organisms”. US Patent No. 8,838,201
5. Susumu Mori and Michael I. Miller. “ImageGrid”, U.S. Patent No. 9646138
6. Michael I. Miller. "Viewpoint-Invariant Detection and ID of 3D object from 2D Imagery". US Patent No. 7,853,085 B2. Issued December 14, 2010.
7. Michael I. Miller. "Generation of Image Database for Multifeatured Objects". US Patent No. 7,643,683 B2 January 5, 2010.
8. Michael I. Miller. "Viewpoint-Invariant Image Matching and Generation of 3D Models from 2D Imagery". US Patent No. 7,643,685 B2. Issued January 5, 2010.
9. Susumu Mori, Michael I. Miller, Anqi Qui, Can Ceritoglu, Jiangyan Zhang. "Description of Invention: Advanced Cost Functions for Image Registration for Automated Image Analysis: Multi-Channel, Hypertemplate and Atlases With Built-In Anatomical Variability". (2008) (US patent, pending) (*Submitted*)
10. Susumu Mori, Michael I. Miller, Anqi Qui. "Automated Surface-based Anatomical Analysis Based on Atlas-Based Segmentation of Medical Imaging". (2008) (US patent, pending) (*Submitted*)
11. Rapid Convolution based large Deformation Image Matching Via Landmark and Volume Imagery. Granted June 18, 2002.
12. Method and Apparatus for Processing Images with Curves. Inventors Bakircioglu M, Khaneja N, Miller MI. Filed January 27, 2000.
13. Method and Apparatus for Cross-Modality Image Registration. Inventor Miller MI. Filed December 11, 2000.
14. Method and Apparatus for Image Registration Using Large Deformation Diffeomorphisms on a Sphere. Inventors Bakircioglu M, Joshi S, Miller MI. Filed December 27, 2000.

15. Method and Apparatus for Image Registration. Inventors Miller MI, Christensen GE, Joshi SC, Grenander U. US Patent No. 6,009,212. Filed July 6, 1996. Issued December 28, 1999.

Supervised Students

1. Kwame Kutten
   Ph.D. Awarded 2017
   Biomedical Engineering: Thesis title: "A Large Deformation Diffeomorphic Approach to Inter-modality Registration of Microscopy Image Volumes with Mutual Information Matching"

2. Daniel Tward
   Ph.D. Awarded 2017
   Biomedical Engineering: Thesis title: "Singular geodesic coordinates for representing diffeomorphic maps in computational anatomy, with application to the morphometry of early Alzheimer's disease in the medial temporal lobe"

3. Dan Wu
   Ph.D. Awarded 2016
   Biomedical Engineering: Thesis title:" Characterization of brain tissue microstructures with diffusion MRI"

4. Kegang Hua
   Ph.D. Awarded 2014
   Biomedical Engineering: Thesis title: "Human Brain White Matter Analysis Using Tractography -- An Atlas-Based Approach"

5. Jianqiao Feng
   Ph.D. Awarded 2014
   ECE: Thesis title: "Fusion and Inference of Geometric Information and Functional Contrast in Computational Anatomy"

6. Yajing Zhang
   Ph.D. Awarded 2014
   Biomedical Engineering

7. Xiaoying Tang
   Ph.D. Awarded 2014
   ECE: Thesis title: "Brain Segmentation via Diffeomorphic Likelihood Fusion and It's Applications to Clinical Analyses"

8. Aastha Jain
   Ph.D. Awarded, 2011
   Biomedical Engineering: Thesis title: "Partical Methods for Diffeomorphic Registration"

9. Manisha Aggarwal
   Ph.D. Awarded, 2011
   Biomedical Engineering: Thesis title: Longitudinal Characterization of Brain Atrophy in Mouse Models of Huntginton's Disease using in vivo Magnetic Resonance Imaging

10. Jun Ma
    Ph.D. Awarded, 2011
    Biomedical Engineering: Thesis title: "Statistics on Computational Anatomy: From Template Estimation to Geodesically Controlled Diffeomorphic Active Shapes"

11. Felipe Arrate
    Ph.D. Awarded, 2010
    Biomedical Engineering: Thesis title: "Evolution Equations on the Group of Diffeomorphisms, with Applications in Computational Anatomy"

12. Nayoung Lee
    Ph.D. Awarded, 2010
    Biomedical Engineering: Thesis title: "Characterization of Brain Development in Children Using Diffusion Tensor Imaging"

13. Can Ceritoglu
    Ph.D. Awarded Spring 2008
    Biomedical Engineering: Thesis title: “Multichannel Large Deformation Diffeomorphic Metric Mapping and Registration of Diffusion Tensor Images”

14. Marc Vaillant
    Ph.D. Awarded, Spring 2007
    Biomedical Engineering. Thesis title: “Surface Matching via Currents and Tangent Space Representations for Statistics on Diffeomorphisms”

15. Sachin Gangaputra
    Ph.D. Awarded 2006
    Electrical and Computer Engineering

16. Anqi Qiu
    Ph.D. Awarded, 2006
    Thesis Title: “Intrinsic and Extrinsic Analysis in Computational Anatomy”
    Electrical and Computer Engineering

17. Dmitri Bitouk
    Ph.D. Awarded Summer 2006
    Thesis title: “Head-Pose and Illumination Invariant 3-D Audio-Visual Speech Recognition”
    Electrical and Computer Engineering

18. Hao Huang
    Ph.D. Awarded, 2005
    Electrical and Computer Engineering
19. Jiangyang Zhang
    Ph.D. Awarded, Spring 2004
    Biomedical Engineering

20. Agatha Lee
    Ph.D. Awarded 2003
    Biomedical Engineering

21. Faisal Beg
    Ph.D. Awarded, Summer 2003
    Thesis Title: "Variational and Computational Methods for Flows of Diffeomorphisms in Image Matching and Growth in Computational Anatomy"
    Biomedical Engineering

22. Rakesh Lal
    M.S. Awarded, July 2001
    Thesis Title: "Tracking in Diffusion Tensor Imaging"
    Biomedical Engineering

23. Cash Costello
    M.S. Awarded, August 2000
    Thesis Title: "Medical Image Registration using the Hilbert-Schmidt Estimator"
    Biomedical Engineering

24. Matthew Cooper
    Ph.D. Awarded, July 1999
    Thesis Title: "Information Measures for Object Recognition Accommodating Signature Variability"
    Electrical and Computer Engineering

25. Joseph Kostakis
    M.S. Awarded, July 1999
    Thesis Title: "Multi-Sensor Active-Passive Performance Characterization"
    Electrical and Computer Engineering

26. Muge Bakircioglu
    M.S. Awarded, July 1999
    Thesis Title: "Large Deformation Diffeomorphisms for Mapping Spherical Brain Manifolds"

27. Aaron Lanterman
    Ph.D. Awarded, August 1998; M.S. Awarded, May 1995
    M.S. Thesis Title: "Jump-Diffusion Algorithms for the Automated Understanding of Forward-Looking Infrared Scenes" Ph.D. Thesis Title: "Minimum Description Length Estimation for ATR"

28. Sarang Joshi
    Ph.D. Awarded, August 1997; M.S. Awarded, January 1993;
    M.S. Thesis Title: "MAP Intensity Estimation with Good's Roughness and Global Shape Models for 3-D Optical Sectioning Microscopy" Ph.D. Thesis Title: “Large Deformation Diffeomorphisms and Gaussian Random Fields for the Statistical Characterization of Brain Submanifolds”
    Electrical Engineering

29. Kevin Mark
    Ph.D. Awarded, May 1997
    Thesis Title: "Markov Random Field Models for Natural Language"
    Electrical Engineering

30. Anuj Srivastava
    M.S. Awarded, December 1994; Ph.D. Awarded, July 1996
    M.S. Thesis Title: "Automated Target Tracking and Recognition Using Jump-Diffusion Processes" Ph.D. Thesis Title: "Inferences on Transformation Groups Generating Patterns on Rigid Motions"
    Electrical Engineering

31. Robert Schmich
    M.S. Awarded, May 1996
    Thesis Title: "Stochastic Models of Synaptic Recovery and Post-Synaptic Action Potential Generation via Active Channel Dynamics"

32. Navin Khaneja
    M.S. Awarded, December 1996
    Thesis Title: "Statistics and Geometry of Cortical Features"

33. Ayananshu Banerjee
    M.S. Awarded, June 1996
    Thesis Title: "High-Dimensional Anatomical Maps and their Applications in Empirical Estimation, Functional Imaging and -> Neuromorphometry"

34. Robert Teichman
    M.S. Awarded, December 1994
    Thesis Title: "Automated Target Recognition in a Distributed Computing Environment"

35. Gary Christensen
    Ph.D. Awarded, August 1994
    "Deformable Shape Models for Anatomy"
    Electrical Engineering

36. Jing Wang
    M.S. Awarded, May 1993
    Thesis Title: "A Markov Process Model for Vesicle Release-Recycle and Action Potential Generation"
    Electrical Engineering

37. Christopher Butler
    M.S. Awarded, January 1993
    Thesis Title: "3-D Maximum A-Posteriori Estimation on Massively Parallel Computers for Single Photon Emission Tomography with Multigrid Initialization"
    Electrical Engineering

38. Timothy Schaewe
    Ph.D. Awarded, September 1991
    Thesis Title: "Maximum Likelihood Estimation for Magnetic Resonance Image Reconstruction"
    Electrical Engineering

39. Anders McCarthy
    M.S. Awarded, August 1990
    Thesis Title: "Medical Imaging on Mesh-Connected Parallel Computers"
    Electrical Engineering

40. Michael Turmon
    M.S. Awarded, August 1990
    Thesis Title: "Maximum-Likelihood Estimation of Constrained Means and Toeplitz Covariances with Application to Direction Finding"
    Electrical Engineering

41. Chrysanthe Preza
    M.S. Awarded, August 1990
    Thesis Title: "A Regularized Linear Reconstruction Method for Optical-Sectioning Microscopy"
    Electrical Engineering

42. Kurt Smith
    Ph.D. Awarded, December 1990
    Thesis Title: "A Bayesian Approach Incorporating Stochastic Complexity for Learning Regular Grammar Models and Image Models: Application to Segmenting Biomedical Images"
    Electrical Engineering

43. Tim S. Chen
    M.S. Awarded, August 1990
    Thesis Title: "Maximum-Likelihood Methods for 1- and 2-D Nuclear Magnetic Resonance Spectroscopy"
    Electrical Engineering

44. Badrinath Roysam
    Ph.D. Awarded, August 1989
    Thesis Title: "Joint Stochastic and Symbolic Inference: Application to Hierarchical Imaging via Massively Parallel Architectures" Ph.D. Awarded, August 1989
    Electrical Engineering

45. David Maffitt
    M.S. Awarded, December 1989
    Thesis Title: "Applications of the Maximum-Likelihood Method for Electron-Microscopic Autoradiography with Real Data
    Electrical Engineering

46. Neophytos Karamanos
    M.S. Awarded, December 1987
    Thesis Title: "A New Method for Analyzing Auditory-Nerve Discharge Patterns"
    Electrical Engineering

Courses Taught at Johns Hopkins University

Fall 2018
580.431 Introduction to Computational Medicine
Undergraduate Students:

580.222 Systems and Controls
Undergraduate Students:

Spring 2018
580.222 Systems and Controls
Undergraduate Students:

Fall 2017
580.431 Introduction to Computational Medicine
Undergraduate Students: 45

Spring 2017
580.222 Systems and Controls
Undergraduate Students: 120

Fall 2016
580.431 Introduction to Computational Medicine
Undergraduate Students: 30

Spring 2016
580.222 Systems and Controls
Undergraduate Students: 120

Fall 2015
580.431 Introduction to Computational Medicine
Undergraduate Students: 30

Spring 2014
580.222 Systems and Controls
Undergraduate Students: 125

Spring 2013
580.222 Systems and Controls
Undergraduate Students: 140

Spring 2012
580.222 Systems and Controls
Undergraduate Students: 115

Spring 2011
580.222 Systems and Controls
Undergraduate Students: 105

Spring 2010
580.222 Systems and Controls
Undergraduate Students: 105

Spring 2009
580.222 Systems and Controls
Undergraduate Students: 110

Spring 2008
580.222 Systems and Controls
Undergraduate Students: 100

Spring 2007
580.222 Systems and Controls
Undergraduate Students: 100

Spring 2006
580.222 Systems and Controls
Undergraduate Students: 88

Spring 2005
580.222 Signals and Systems
Undergraduate Students: 101

Fall 2004
580.222 Signals and Systems
Undergraduate Students: 137

Spring 2003
520.644 Pattern Theory
Graduate Students: 3

Spring 2003
580.222 Signals and Systems
Undergraduate Students: 150