

Brian B. Avants

Curriculum Vitae

3600 Market St, Suite 370
Philadelphia, PA 19104

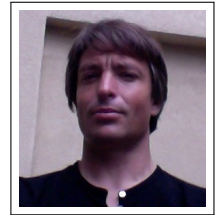
☎ (215) 870 0787

FAX (215) 615 3681

✉ avants@grasp.cis.upenn.edu

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Education

- 2005 **Ph.D.**, *The University of Pennsylvania*, Philadelphia, PA, *Bioengineering*.
- 2002 **M.S.**, *The University of Pennsylvania*, Philadelphia, PA, *Computer Science*.
- 1998 **B.A.**, *New College of Florida*, Sarasota, FL, *Physics*.

Postgraduate Training and Fellowships

- 2006 Research Fellow, Radiology, University of Pennsylvania

Professional Appointments

- 2012 Assistant Professor of Radiology, University of Pennsylvania
- 2010 Research Associate, Radiology, University of Pennsylvania

Specialty Certification

- 2008–2013 Human Subjects Research Training University of Pennsylvania

Awards and Honors

- 2012 Advanced Normalization Tools (ANTs) Software Determined as "Standard Setting" Registration for MICCAI 2013 Multi-Atlas Segmentation Challenge
- 2012 ANTs finished 1st overall in an unbiased EMPIRE10 intl. lung mapping competition
- 2012 ANTs finished in 1st rank in an unbiased Klein 2009 intl. brain mapping competition
- 2007 Young Investigator Award, General Medical Computing, MICCAI
- 2003 Best Poster Award SPIE Medical Imaging
- 1995 Future Healthcare Researcher Scholarship, Humana Health Care
- 1994 National Merit Scholarship, New College of Florida, Sarasota, FL

Editorial Positions

- 2008–2013 Human Subjects Research Training University of Pennsylvania

Academic and Institutional Committees

2008–2013 Human Subjects Research Training University of Pennsylvania

Major Academic and Clinical Teaching Responsibilities

2008–2013 Human Subjects Research Training University of Pennsylvania

Lectures by Invitation

- 2012 "Multi-Modality Analysis", CMROI Workshop, University of Pennsylvania, Philadelphia, PA Mar 2013
- 2012 "Multivariate Medical Imaging Analysis with R", MICCAI 2013, Nagoya, Japan Sep 2013
- 2012 "Early Home Environment Impacts Cortical Thickness in Young Adulthood", Chinese Academy of Sciences, Beijing, China May 2012
- 2012 "A Unified Image Registration Framework for ITKv4", National Library of Medicine, Bethesda, MD Oct 2012
- 2012 "A Unified Registration Framework for ITKv4," WBIR 2012, Nashville, TN Jul 2012
- 2012 "Early Home Environment Impacts Cortical Thickness in Young Adulthood," Society for Neuroscience Press Conference, New Orleans, LA Oct 2012
- 2012 "Multivariate Methods for Integrating Multiple Modalities in Brain Mapping", Incheon National University, Incheon, South Korea May 2012
- 2012 "Eigenanatomy Methods for Multivariate Brain Mapping", University of California, San Francisco Jun 2012
- 2012 "Open Source Neonatal Brain Mapping," Washington University at St. Louis, St. Louis, MO Jan 2011
- 2012 "Multivariate analyses improve detection power for cortical longitudinal change in dementia", Society for Neuroscience Meeting, Washington D.C. Nov 2011
- 2012 "Modern analytics for neuroimaging," University of California, Los Angeles Dec 2011
- 2012 "Multivariate methods in neuroimaging", Washington Univ. at St. Louis Feb 2011
- 2012 "ITKv4 Image Registration Tutorial", MICCAI 2011, Toronto, Canada Sep 2011
- 2012 "Open Source in Medical Imaging" Inst. of Automation, Chinese Academy of Sciences, Beijing, China. Sep 2010
- 2010 Open Source Image Registration, National Library of Medicine, Bethesda, MD Jun 2010
- 2010 "Multivariate Longitudinal Correlation of Atrophy in White Matter and Gray Matter" MICCAI, Beijing, China. Sep 2010
- 2010 "Multivariate Longitudinal Correlation of Atrophy in White Matter and Gray Matter" MICCAI, Beijing, China. Sep 2010
- 2010 "Advanced ITK-Based Image Registration, NLM, Bethesda, MD. Jul 2010

- 2010 Sparse Unbiased Analysis of Anatomical Variance in Longitudinal Neuroimaging, MICCAI 2010, Beijing China. (45 of 786 submissions accepted for oral presentation). Sep 2010
- 2009 Grammatical comprehension and longitudinal adolescent brain development: a multivariate DTI and T1 analysis, Human Brain Mapping 2009, San Francisco, CA. Jun 2009
- 2009 Democratizing Hippocampus Labeling, Columbia University, NY, NY. Jul 2009
- 2009 Multivariate Analysis of the Adolescent Brain and its Association with Language Development, Columbia University, NY, NY. Jul 2009
- 2009 Follow-Up on Effects of Prenatal Cocaine Exposure on the Young Adult Brain, Eastern SPR, Philadelphia, PA. Mar 2009
- 2009 Multivariate Methods and Applications for Neuroimaging, SRI, Menlo Park, CA. Jul 2009
- 2008 The Longitudinal Effect of Neurodegeneration of Language Network Neuroanatomy and Cognition, Pendergrass Symposium, Univ. of Penn. Philadelphia, PA Jun 2008
- 2008 Template-based Brain Mapping with Diffeomorphisms, Janelia Farm, Ashburn, Virginia. Sep 2008
- 2008 Multivariate Template-based Retinotopic Mapping, Stanford Vision Science Group, Stanford University, Palo Alto, CA. Oct 2008
- 2007 "Symmetric Shape Averaging in the Diffeomorphic Space", International Symposium Biomedical Imaging, Washington DC. Apr 2007
- 2007 "Spatiotemporal Normalization for Longitudinal Analysis of Gray Matter Atrophy in Frontotemporal Dementia," MICCAI 2007, Brisbane, Australia. Oct 2007
- 2007 "Tutorial on Neuromorphometry, MICCAI 2006, Copenhagen, Denmark. Oct 2006
- 2007 "IEEE International Symposium on Biomedical Imaging 2006, Alexandria, VA Apr 2006
- 2007 "Mapping Statistical Patterns in Medical Images via Diffeomorphisms, Univ. of Pennsylvania, CIS 520 lecture, Philadelphia, PA. Nov 2005
- 2005 "Shape Optimizing Diffeomorphisms in Medical Imaging," ISI, Utrecht, NL Jul 2005

Grants

Pending

2008–2013 Human Subjects Research Training University of Pennsylvania

Current

2008–2013 Human Subjects Research Training University of Pennsylvania

Past

2008–2013 Human Subjects Research Training University of Pennsylvania

Languages

English **Mothertongue**