

Medical Image Analysis (MedIA) 2010, 14(5):666-673, Elsevier

4. Tustison N, Awate SP, Altes T, Gee JC
Pulmonary kinematics from tagged hyperpolarized Helium-3 MRI
J. Magnetic Resonance Imaging (JMRI) 2010, 31(5):1236-1241, Wiley
5. Pluta J, Avants B, Glynn S, Awate SP, Gee JC, Detre J
Appearance and incomplete label matching for diffeomorphic template based hippocampus segmentation
Hippocampus 2009; 19(6):565-571, Wiley
6. Awate SP, Zhang H, Gee JC
A fuzzy, nonparametric segmentation framework for DTI and MRI analysis: with applications to DTI-tract extraction
IEEE Trans. Medical Imaging (TMI) 2007; 26(11):1525-1536
7. Awate SP, Whitaker RT
Feature-preserving MRI denoising: a nonparametric empirical-Bayesian approach
IEEE Trans. Medical Imaging (TMI) 2007; 26(9):1242-1255
8. Adluru G, Awate SP, Tasdizen T, Whitaker R, DiBella EVR
Temporally constrained reconstruction of dynamic cardiac perfusion MRI
Magnetic Resonance in Medicine (MRM) 2007; 57:1027-1036, Wiley
9. Awate SP, Tasdizen T, Foster N, Whitaker RT
Adaptive Markov modeling for mutual-information-based unsupervised MRI brain-tissue classification
Medical Image Analysis (MedIA) 2006; 10(5):726-739, Elsevier
(invited paper, in top 8 most-cited papers in MedIA between 2006-2009)
10. Awate SP, Whitaker RT
Unsupervised, information-theoretic, adaptive image filtering for image restoration
IEEE Trans. Pattern Analysis & Machine Intelligence (TPAMI) 2006; 28(3):364-376

Refereed Full-Length Conference Publications

*MICCAI, IPMI, & ISBI are the top 3 premier international conferences for medical image analysis
CVPR & ECCV are among the top 3 premier international conferences for computer vision*

1. Zhu P, Awate SP, Gerber S, Whitaker RT
Fast shape-based nearest-neighbor search for brain MRIs using hierarchical feature matching
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2011; 14(2):484-491
Springer LNCS 6892
(acceptance rate 30%)
2. Awate SP, Yushkevich P, Licht DJ, Gee JC
Gender differences in cerebral cortical folding: multivariate complexity-shape analysis with insights into handling brain-volume differences
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2009; 12(1):200-207
Springer LNCS 5762
(acceptance rate 32%)
3. Zhang H, Awate SP, Das S, Woo J, Melhem E, Gee JC, Yushkevich P
A tract-specific framework for white matter morphometry combining macroscopic and microscopic tract features
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2009; 12(1):141-149

Springer LNCS 5762

(young-investigator-award runner-up; in top 8% of 186 eligible papers; in top 3 in category)

4. Zheng Y, Grossman M, Awate SP, Gee JC
Automatic correction of intensity nonuniformity from sparseness of gradient distribution in medical images
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2009; 12(1):852-859
Springer LNCS 5762
(acceptance rate 32%)
5. Awate SP, Yushkevich P, Song Z, Licht D, Gee JC
Multivariate high-dimensional cortical folding analysis, combining complexity and shape, in neonates with congenital heart disease
Information Processing in Medical Imaging (IPMI) 2009; 21:552-563, Springer LNCS 5636
(acceptance rate 39%)
6. Tustison N, Awate SP, Song G, Cook T, Gee JC
A new information-theoretic measure to control the robustness-sensitivity trade-off for DMFFD point-set registration
Information Processing in Medical Imaging (IPMI) 2009; 21:215-226, Springer LNCS 5636
(acceptance rate 39%)
7. Awate SP, Win L, Yushkevich P, Schultz RT, Gee JC
3D cerebral cortical morphometry in autism: increased folding in children and adolescents in frontal, parietal, and temporal lobes
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2008; 11(1):559-567
Springer LNCS 5241
(acceptance rate 35%)
8. Awate SP, Zhang H, Gee JC
Multivariate segmentation of brain tissues by fusion of MRI and DTI data
IEEE Int. Symposium on Biomedical Imaging (ISBI) 2008; 5:213-216
(podium presentation, acceptance rate 17%)
9. Tustison N, Awate SP, Cai J, Altes T, Miller G, Lange E, Mugler J, Gee JC
Point-set registration of tagged He-3 images using a structurally-based Jensen-Shannon divergence measure within a deterministic-annealing framework
IEEE Int. Symposium on Biomedical Imaging (ISBI) 2008; 5:772-775
(podium presentation, acceptance rate 17%)
10. Cook PA, Zhang H, Awate SP, Gee JC
Atlas-guided probabilistic diffusion-tensor fiber tractography
IEEE Int. Symposium on Biomedical Imaging (ISBI) 2008; 5:951-954
11. Song Z, Awate SP, Gee JC
Nonparametric Markov priors for tissue segmentation
IEEE Int. Symposium on Biomedical Imaging (ISBI) 2008; 5:73-76
12. Song Z, Awate SP, Licht DJ, Gee JC
Clinical neonatal brain-MRI segmentation using adaptive nonparametric data models and intensity-based Markov priors
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2007; 10(1):883-890
Springer LNCS 4791
(acceptance rate 37%)

13. Awate SP, Zhang H, Gee JC
Fuzzy nonparametric DTI segmentation for robust cingulum-tract extraction
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2007; 10(1):294-301
Springer LNCS 4791
(acceptance rate 37%)
14. Awate SP, Gee JC
A fuzzy, nonparametric segmentation framework for DTI and MRI analysis
Information Processing in Medical Imaging (IPMI) 2007; 20:296-307, Springer LNCS 4584
(acceptance rate 30%)
15. Awate SP, DiBella EVR, Tasdizen T, Whitaker RT
Model-based image reconstruction for dynamic cardiac perfusion MRI from sparse data
IEEE Conf. Engineering in Medicine & Biology Society 2006; (1):936-941
(podium presentation, acceptance rate 17%)
16. Awate SP, Tasdizen T, Whitaker RT
Unsupervised texture segmentation with nonparametric neighborhood statistics
European Conference on Computer Vision (ECCV) 2006; 9:494-507, Springer LNCS 3952
(acceptance rate 21 %)
17. Tasdizen T, Awate SP, Whitaker RT, Foster N
MRI tissue classification with neighborhood statistics: a nonparametric, entropy-minimizing approach
Medical Image Computing & Computer Assisted Intervention (MICCAI) 2005; 8(2):517-525
Springer LNCS 3750
(podium presentation, acceptance rate 7 %)
18. Awate SP, Whitaker RT
Nonparametric neighborhood statistics for MRI denoising
Information Processing in Medical Imaging (IPMI) 2005; 19:677-688, Springer LNCS 3565
(acceptance rate 26 %)
19. Awate SP, Whitaker RT
Higher-order image statistics for unsupervised, information-theoretic, adaptive image filtering
IEEE Computer Vision & Pattern Recognition (CVPR) 2005; (2):44-51
(podium presentation, acceptance rate 6 %)

Refereed Full-Length Workshop Publications

1. Prastawa M, Awate SP, Gerig G
Building spatiotemporal anatomical models through joint segmentation, registration, and 4D-atlas estimation
IEEE Workshop Mathematical Methods in Biomedical Image Analysis (MMBIA), 2012
(podium presentation, acceptance rate 22 %)
2. Liu W, Awate SP, Anderson J, Yurgelun-Todd D, Fletcher PT
Monte Carlo expectation maximization with hidden Markov models to detect functional networks in resting-state fMRI
Int. Workshop Machine Learning in Medical Imaging (MLMI) at Int. Conf. MICCAI 2011, 2:59-66
Springer LNCS 7009

Refereed Papers, Abstracts, Presentations

1. Wu J, Awate SP, Licht DJ, Avants B, Clouchoux C, Plessis A, Gee JC, Limperopoulos C

Cortical folding measurement is a potential indicator for prenatal brain maturity
Workshop on Image Analysis of Human Brain Development at Int. Conf. MICCAI 2011, 1:8

2. Wu J, Awate SP, Licht DJ, Limperopoulos C, Gee JC
 Cortical folding analysis for normal fetuses
Int. Society of Magnetic Resonance in Medicine (ISMRM) 2010
(podium presentation, acceptance rate 15%)
3. Cook T, Tustison N, Song G, Awate SP, Torigian D, Geftter W, Gee JC
 Segmentation-based quantitation of pulmonary alveolar proteinosis, pre- and post-lavage, using high-resolution computed tomography
Proc. Second Int. Workshop on Pulmonary Image Processing at Int. Conf. MICCAI 2009, 61-71
4. Awate SP, Zhang H, Gee JC
 Novel statistical models and methods for DTI fiber-bundle segmentation
Int. Society of Magnetic Resonance in Medicine (ISMRM) 2008
(podium presentation, acceptance rate 15%)
5. Awate SP, Whitaker RT
 An interactive, parallel, multiprocessor, level-set solver with dynamic load balancing
 School of Computing, University of Utah, Technical Report UUCS-05-002
SIAM Conf. Parallel Processing for Scientific Computing (PPSC) 2004
(podium presentation)

Professional Service

- Associate Editorship (*ad hoc*)
 - Medical Physics, American Association of Physicists in Medicine
- Peer reviewing for journals
 - IEEE Transactions
 - Pattern Analysis & Machine Intelligence (TPAMI)
 - Medical Imaging (TMI)
 - Image Processing (TIP)
 - Signal Processing (TSP)
 - Visualization and Computer Graphics (TVCG)
 - Elsevier
 - Medical Image Analysis (MedIA)
 - NeuroImage (NIMG)
 - Pattern Recognition (PR)
 - Computer Vision & Image Understanding (CVIU)
 - Image & Vision Computing (JIVC)
 - Parallel & Distributed Computing (JPDC)
 - Oxford journals
 - Cerebral Cortex
 - Society for Industrial & Applied Mathematics (SIAM)
 - Multiscale Modeling & Simulation (MMS)
 - Imaging Sciences (SIIMS)
 - SPIE
 - Journal of Electronic Imaging
- Peer reviewing for conferences
 - Scientific Review Committee member for Information Processing in Medical Imaging (IPMI)

2011

- Medical Image Computing & Computer Assisted Intervention (MICCAI) 2007-2011
- IEEE International Symposium on Biomedical Imaging (ISBI) 2009-2012
- Int. Conf. Pattern Recognition (ICPR) 2010
- Asian Conference on Computer Vision (ACCV) 2009
- Medical Imaging & Augmented Reality (MIAR) 2008
- Society for Optical Engineering (SPIE) Medical Imaging 2007

Awards

2009	Young-investigator-award runner-up for MICCAI conference publication
2001	Rank 8/2000 (top 0.4%) in B.E. University of Mumbai; Rank 1/120 in college
1997–2001	Dhirubhai Ambani Undergraduate Merit Scholarship
1997,1998	IIT Joint Entrance Exam ranks in top 2100 & 1100 from 150,000+ examinees in India
1997	National Merit Scholarship Scheme Certificate from the Government of India (Top 0.1% in All India Senior Secondary School Examination; Rank 4 in Maharashtra state)

Computing Experience

- Contributed multi-threaded C++ code to widely-used open-source software ITK
- Image-processing tools: ITK, VTK, Matlab, FFTW, Vispack
- Programming: C/C++, Matlab, Linux Shell, Perl, OpenGL, GLUT, Tcl/Tk, x86 assembly