

# C u r r i c u l u m   V i t a e

## Date Prepared

October 27, 2015

## Name

Peter Savadjiev

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## Education

1997-2000	B.Sc. First-class Honours, Dean's Honour List.	Computer Science and Neuroscience	McGill University, Montreal, Canada.
2000-2003	M.Eng.	Electrical Engineering	McGill University, Montreal, Canada.
2004-2008	Ph.D.	Computer Science Advisor: K. Siddiqi	McGill University, Montreal, Canada.

## Postdoctoral Training

10/2008-12/2010	Postdoctoral Fellow	Medical Image Analysis Advisors: C.-F. Westin, M. E. Shenton	Brigham and Women's Hospital, Harvard Medical School.
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## Faculty Academic Appointments at Harvard Medical School

12/2010 - 10/2015	Instructor	Harvard Medical School.
10/2015 - present	Assistant Professor in Psychiatry and Radiology	Harvard Medical School.

## Appointments at Harvard Hospitals/Affiliated Institutions

10/2008-12/2010	Research Fellow	Department of Psychiatry, Brigham and Women's Hospital.
12/2010 - present	Research Associate	Department of Psychiatry, Brigham and Women's Hospital.
10/2015 - present	Research Associate	Department of Radiology, Brigham and Women's Hospital.

## Faculty Academic Appointments at McGill University

03/2015 - present	Adjunct Professor	School of Computer Science, McGill University, Montreal, Canada.
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## Honors and Prizes

- 1997-2000 James McGill scholarship for B.Sc. studies, McGill University.  
1999 Scholarship from Steltor Inc. (now part of Oracle Corporation).  
2000 B.Sc., First-Class Honours and Dean's Honour List distinctions.  
2000-2002 Natural Science and Engineering Research Council of Canada (NSERC) graduate scholarship for M.Eng. studies, McGill University.  
2004-2006 Fonds québécois de la recherche sur la nature et les technologies (FQRNT) fellowship for Ph.D. studies, McGill University.  
2005 Best Student Paper / Young Scientist Award at the Medical Image Computing and Computer Assisted Intervention (MICCAI) conference, category Simulation and Visualization.  
2007 Precarn scholar award.  
2009 Nomination by the School of Computer Science of McGill University for the NSERC doctoral thesis award.  
2009 Young Scientist Award at the MICCAI conference, category Medical Image Computing: Shape Analysis.  
2015-2017 NARSAD Young Investigator Award (for further details, see Report of Funded Projects)

## Professional Societies

- 2007-2008, International Society for Magnetic Resonance in Medicine Member.  
2010-2012, 2015 (ISMRM)  
Medical Image Computing and  
Computer Assisted Intervention (MICCAI)  
2010, 2015 Workshop on Computational Diffusion MRI Program Committee Member  
2014, 2015 Interactive Medical Image Computing (IMIC) Workshop Program Committee Member

## Report of Funded Projects

### Funding Information

#### Past

- 2009 - 2011 Investigator - NIH/NIMH 1 P50 MH080272  
*Vulnerability to Progression in Schizophrenia*  
PI: Robert McCarley  
To goal of this project is to study subjects who are at various stages of progression of schizophrenia, prodromal, first episode and chronic, giving us a broad perspective and large database on phenotypic markers and predictors of progression.
- 2010 - 2011 Investigator - NIH/NIMH 1 R01 MH050740  
*Novel Computerized Image Analyses of MR Scans in Schizophrenia.*  
PI: Martha E. Shenton.  
The goal of this project is to investigate of white matter abnormalities in schizophrenia, where we will use magnetic resonance diffusion tensor imaging (MR-DTI).
- 2009 - 2014 Investigator - NIH/NIMH 1 R01 MH082918-01A2  
*Computational Morphometry in Schizophrenia and Related Disorders.*  
PI: Sylvain Bouix.  
The goal of the project is to develop, evaluate and apply novel computational tools for the purpose of understanding morphometric changes in neuroanatomical structures related to schizophrenia.

## Current

- 2010 - present Investigator - NIH/NIMH 1 R01 MH092862-01  
*Novel Computational Methods of Higher Order Diffusion MRI in Autism.*  
PI: Ragini Verma and Carl-Fredrik Westin.  
This project aims at developing computational methods for analyzing diffusion MRI data fitted with higher order models that uniquely characterize complex white matter regions, affected in Autism Spectrum Disorder.
- 2011 - present Investigator - Dept. of Defense W81XWH-07-CC-CS-DoD  
*Brain Indices of Risk for Post-Traumatic Stress Disorder after Mild Traumatic Brain Injury.*  
PI: Connie Duncan.  
This is a prospective, longitudinal cohort study to evaluate associations between indices of brain structure and function and course of post-traumatic stress disorder (PTSD) symptoms in military service members who have sustained mild traumatic brain injury.
- 2011 - present Investigator - Dept. of Defense W81XWH-07-CC-CS-DoD  
*A Randomized Clinical Trial of Glyburide for Traumatic Brain Injury.*  
PI: Howard Eisenberg.  
The main goal of this subaward is develop algorithms for the imaging component of this study on traumatic brain injury.
- 2013 - present Investigator- NIH/NIMH 1 R01 MH097979-01A1  
*Taking Advanced Diffusion Imaging to the Clinic for Pediatric Patients with ADHD.*  
PI: Yogesh Rathi.  
The goal of this grant is to propose several novel algorithms for fast acquisition and reconstruction of advanced diffusion MRI protocols, tailored specifically to pediatric patients with ADHD.
- 2015 - present Research Scientist - NSERC Idea to Innovation (I2I) - McGill University  
PI: Kaleem Siddiqi.  
The goal of this grant is twofold. First, to develop our existing technology for the inference and modeling of heart wall myofibers into a comprehensive software product, and second, to extend the application of this technology from MRI to ultrasound imaging (echocardiography), in order to make it applicable to the most common imaging modality in cardiology today, at a fraction of the imaging cost.
- 2015-2017 *Computational methods for structural brain morphology in neurodevelopment*  
Brain and Behavior Research Foundaton  
NARSAD Young Investigator Award  
**Role: Principal Investigator, total award amount: \$65,000**  
The goal of this project is to develop novel computational analysis methods for the investigation of white matter geometry and its relationship to cortical geometry. This will make possible the study of abnormalities involving developmental processes in various psychiatric disorders.

## Report of Local Teaching and Training

### Teaching of Students in Courses

1998-2003 (5 semesters)	<i>Introduction to Computer Systems</i> Undergraduate level, Teaching Assistant	McGill University 6hrs per wk
1999 (1 semester)	<i>Computers in Engineering</i> Undergraduate level, Teaching Assistant	McGill University 6hrs per wk
2005-2006 (2 semesters)	<i>Fundamentals of Computer Vision</i> Undergraduate/Graduate level, Teaching Assistant	McGill University 6hrs per wk
2014	Evaluation of a Harvard student's Senior Honors Thesis, Neurobiology major, Departments of Neurobiology and Neuroscience.	Harvard University

## Laboratory and Other Research Supervisory and Training Responsibilities

- 2013-2015 Co-supervision of two post-doctoral research fellows 2 hours per month.  
2014-present Co-supervision of two post-doctoral research fellows 3 hours per week.

## Formally Supervised Trainees

- 2009-2010 Andrew C. Rausch, B.Sc. / Medical student at the Tufts University School of Medicine, Boston, MA.  
Co-authored publications in *Schizophrenia Research*, 2011, and in *Cerebral Cortex*, 2014.  
2010-2011 Christian Clemm von Hohenberg, M.D./ Resident Physician, Central Institute of Mental Health, Mannheim, Germany.  
Co-authored publication in *Cerebral Cortex*, 2014,  
2012-2014 Brian Dahlben, B.Sc. / Medical student at the Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA.  
Co-authored publication in *Journal of Neurosurgery*, 2014.

## Invited Presentations at Harvard Hospitals / Affiliated Institutions

- 2009 *Fibre geometry and diffusion MRI analysis: past, present and future work* Invited Seminar  
Laboratory for Mathematics in Imaging, Brigham and Women's Hospital  
2010 *Going beyond FA: DTI measures of fibre tract geometry and their applications to schizophrenia research.* Invited Seminar  
Psychiatry Neuroimaging Laboratory, Brigham and Women's Hospital  
2011 *DTI-based measures of white matter fibre geometry, and applications to schizophrenia research* Invited Seminar  
Martinos Center for Biomedical Imaging, Massachusetts General Hospital.  
2013 *White matter and the geometry of curves: applications to neuroimaging studies of psychiatric disorders.* Invited Seminar  
Psychiatry Neuroimaging Laboratory, Brigham and Women's Hospital  
2014 *White matter and the geometry of curves: applications to neuroimaging studies of psychiatric disorders.* Invited Seminar  
Computational Radiology Laboratory, Children's Hospital Boston

## Report of National and International Teaching and Presentations

### Teaching of Students in Courses

- 2015 External Examiner, PhD thesis defence committee for M. Samuel Bélanger.  
Department of Biomedical Engineering,  
École Polytechnique de Montréal, Canada.

## Invited Presentations

- 2010 *DTI-based measures of white matter fibre geometry, and applications to schizophrenia research* Invited Seminar  
Scientific Visualization Group,  
Computer Science department,  
Brown University, Providence, Rhode Island.
- 2010 *Diffusion MRI-based measures of white matter geometry, and their application to research in schizophrenia.* Invited Seminar  
Douglas Mental Health Research Institute,  
McGill University, Montreal, Canada.
- 2010 *DTI-based measures of white matter fibre geometry, and applications to schizophrenia research.* Invited Seminar  
Biomedical Imaging Center (CIBM),  
University Hospitals of Geneva, Geneva, Switzerland.
- 2011 *DTI-based measures of white matter fibre geometry, and applications to schizophrenia research* Invited Seminar  
Neuro Image Analysis and Research Lab,  
Computer Science department,  
University of North Carolina, Chapel Hill, NC.
- 2015 *Novel computational methods applied to the study of geometrical structure in the brain, as well as to brain network analysis* Invited Seminar  
Center for Addiction and Mental Health,  
University of Toronto, Canada

## International Conference Podium Presentations

- 2003 *Surface Recovery from 3D Point Data Using a Combined Parametric and Geometric Flow Approach* Conference talk  
Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR) Workshop  
Lisbon, Portugal
- 2005 *3D Curve inference for diffusion MRI regularization* Conference talk  
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)  
Palm Springs, California, USA
- 2009 *Local white matter geometry indices from diffusion tensor gradients* Conference talk  
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)  
London, U.K.
- 2012 *Multi-scale Characterization of White Matter Tract Geometry* Conference talk  
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)  
Nice, France
- 2013 *Combining surface and fiber geometry: an integrated approach to brain morphology* Conference talk  
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)  
Nagoya, Japan
- 2014 *Vector weights and dual graphs: an emphasis on connections in brain network analysis* Conference talk  
MICCAI Workshop on Computational Diffusion MRI  
Boston, Massachusetts, USA

# Report of Technological and Other Scientific Innovations

As a member of the National Alliance for Medical Image Computing, I have participated in the design, implementation and testing of 3D Slicer ([www.slicer.org](http://www.slicer.org)), a free open source software suite for Medical Image Analysis. I was involved in the development of:

- a Slicer Extension for advanced multi-tensor tractography in diffusion MRI data based on the Kalman filter framework.
- a Slicer Extension for computing brain connectivity and tractography based on the Finsler metric computed on diffusion MRI data.

## Patents

Heart Wall Myofibers are Arranged in Minimal Surfaces to Optimize Organ Function.

US patent application US14/712,236, filed in May 2015.

During my PhD, I developed a mathematical model for the geometry of cardiac myofibers, with several applications in cardiac tissue modeling and simulation.

## Report of Scholarship

### Original Articles

#### Peer-Reviewed Publications in International Journals

1. **P. Savadjiev**, J. S. W. Campbell, G. B. Pike and K. Siddiqi, “3D curve inference for diffusion MRI regularization and fibre tractography”, *Medical Image Analysis*, 10(5):799–813, October 2006.
2. **P. Savadjiev**, J. S. W. Campbell, M. Descoteaux, R. Deriche, G. B. Pike and K. Siddiqi, “Labeling of ambiguous sub-voxel fibre bundle configurations in high angular resolution diffusion MRI”, *NeuroImage*, 41(1):58–68, May 2008.
3. C. Lenglet, J. S. W. Campbell, M. Descoteaux, G. Haro, **P. Savadjiev**, D. Wassermann, A. Anwender, R. Deriche, G. B. Pike, G. Sapiro, K. Siddiqi and P. Thompson, “Mathematical methods for diffusion MRI processing”, *NeuroImage*, 45(Suppl. 1):S111–S122, March 2009.
4. **P. Savadjiev**, G. L. Kindlmann, S. Bouix, M. E. Shenton and C. F. Westin, “Local white matter geometry from diffusion tensor gradients”, *NeuroImage*, 49(4):3175–3186, February 2010.
5. T. J. Whitford\*, **P. Savadjiev\***, M. Kubicki, L. J. O’Donnell, D. P. Terry, S. Bouix, C.-F. Westin, J. S. Schneiderman, L. Bobrow, A. C. Rausch, M. Niznikiewicz, P. G. Nestor, C. Pantelis, S. J. Wood, R. W. McCarley and M. E. Shenton, “Fiber geometry in the corpus callosum in schizophrenia: evidence for transcallosal misconnection”, *Schizophrenia Research*, 132(1):69–74, 2011.  
\* indicates equal first authorship.
6. **P. Savadjiev.**, G. J. Strijkers, A. J. Bakermans, E. Piuze, S. W. Zucker and K. Siddiqi, “Heart wall myofibers are arranged in minimal surfaces to optimize organ function”, *Proc Natl Acad Sci USA (PNAS)*, 109(24):9248–53, 2012.
7. A. Nummenmaa, J. McNab, **P. Savadjiev**, Y. Okada, M. S. Hamalainen, R. Wang, L. L. Wald, A. Pascual-Leone, V. J. Wedeen, T. Raji. “Targeting of white matter tracts with transcranial magnetic stimulation”. *Brain Stimulation*, 7(1):80-84, 2014.
8. Y. Rathi, O. Pasternak, **P. Savadjiev**, O. Michailovich, S. Bouix, M. Kubicki, C-F Westin, N. Makris, M. E. Shenton. “Gray matter alterations in early aging: A diffusion magnetic resonance imaging study”. *Human Brain Mapping*, 35(8):3841-3856, 2014.
9. **P. Savadjiev**, T. J. Whitford, M. E. Hough, C. Clemm von Hohenberg, S. Bouix, C.-F. Westin, M. E. Shenton, T. J. Crow, A. C. James, M. Kubicki. “Sexually dimorphic white matter geometry abnormalities in adolescent onset schizophrenia”. *Cerebral Cortex*, 24(5):1389-1396, 2014.
10. T. Sasaki, O. Pasternak, M. Mayinger, M. Muehlmann, **P. Savadjiev**, S. Bouix, M. Kubicki, E. Friedman, B. Dahlben, K. Helmer, A. M. Johnson, J. D. Holmes, L. A. Forwell, E. Skopelja, M. E. Shenton, P. Echlin, I. K. Koerte. “Hockey Concussion Education Project, Part 3. White matter microstructure in ice hockey players

with a history of concussion: a diffusion tensor imaging study”. *Journal of Neurosurgery*, 120(4):882-890, 2014.

11. T. J. Whitford, S. W. Lee, J. S. Oh, R. de Luis-Garcia, **P. Savadjiev**, J. L. Alvarado, C.-F. Westin, M. Niznikiewicz, P. G. Nestor, R. W. McCarley, M. Kubicki, M. E. Shenton. “Localized abnormalities in the cingulum bundle in patients with schizophrenia: a diffusion tensor tractography study”. *NeuroImage Clinical*, 5:93-99, 2014.
12. **P. Savadjiev**, Y. Rathi, S. Bouix, A. R. Smith, R. T. Schultz, R. Verma, C.-F. Westin. “Fusion of white and gray matter geometry: a framework for investigating brain development”. *Medical Image Analysis*, 18(8):1349-60, 2014.
13. J. S. W. Campbell, P. Momayyez Siakhal, **P. Savadjiev**, I. R. Leppert, K. Siddiqi, G. B. Pike. “Beyond crossing fibers: bootstrap probabilistic tractography using complex subvoxel fiber geometries”. *Frontiers in Neurology* 5:216, 2014.
14. **P. Savadjiev**, L. J. Seidman, H. Thermenos, M. Keshavan, S. Whitfield-Gabrieli, T. J. Crow, M. Kubicki. “Sexual Dimorphic Abnormalities in White Matter Geometry Common to Schizophrenia and Non-Psychotic High-Risk Subjects: Evidence for a Neurodevelopmental Risk Marker?” *Human Brain Mapping*, In Press, 2015. DOI: 10.1002/hbm.23026.

### Peer-Reviewed Full-Length Articles in International Conference Proceedings

*Note: International Conferences publications presented here are full length peer-reviewed articles and are viewed as important as journal publications in the computer science and engineering community.*

1. **P. Savadjiev**, F. P. Ferrie and K. Siddiqi, *Surface Recovery from 3D Point Data Using a Combined Parametric and Geometric Flow Approach.*, in: *Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR)*, volume LNCS 2683, pp. 325–340, 2003.
2. **P. Savadjiev**, J. S. W. Campbell, G. B. Pike and K. Siddiqi, *3D Curve inference for diffusion MRI regularization*, in: *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, LNCS 3749, pp. 123–130, 2005.  
**Best Student Paper Award, category Simulation and Visualization.** [Top 0.8% of 632 submissions.]
3. J. S. W. Campbell, **P. Savadjiev**, K. Siddiqi and G. B. Pike, *Validation and regularization in diffusion MRI tractography*, in: *International Symposium on Biomedical Imaging (ISBI)*, pp. 351 – 354, 2006.
4. M. Descoteaux, **P. Savadjiev**, J. S. W. Campbell, G. B. Pike, K. Siddiqi and R. Deriche, *Validation and Comparison of Analytical Q-Ball Imaging Methods*, in: *International Symposium on Biomedical Imaging (ISBI)*, pp. 1084–1087, 2007.
5. **P. Savadjiev**, S. W. Zucker and K Siddiqi, *On the Differential Geometry of 3D Flow Patterns: Generalized Helicoids and Diffusion MRI Analysis*, in: *International Conference on Computer Vision (ICCV)*, 2007.
6. **P. Savadjiev**, J. S. W. Campbell, G. B. Pike and K Siddiqi, *Streamline flows for white matter fibre pathway segmentation in diffusion MRI*, in: *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, volume LNCS 5241, pp. 135–143, 2008.
7. **P. Savadjiev**, G. L. Kindlmann, S. Bouix, M. E. Shenton and C. F. Westin, *Local white matter geometry indices from diffusion tensor gradients*, in: *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, volume LNCS 5761, pp. 345–352, 2009.  
**Young Scientist Award, category Medical Image Analysis: Shape Analysis.**
8. **P. Savadjiev**, Y. Rathi, J. G. Malcolm, M. E. Shenton and C.-F. Westin, *A geometry-based particle filtering approach to white matter tractography*, in: *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, volume LNCS 6362, pp. 233–240, 2010.
9. Y. Feng, **P. Savadjiev**, Y. Rathi, M. Quan, Z. Wang and C.-F. Westin, *A swarm tracking approach for stochastic white matter tractography*, in: *International Symposium on Biomedical Imaging (ISBI)*, pp. 803–807, 2011.
10. **P. Savadjiev**, Y. Rathi, S. Bouix, R. Verma and C.-F. Westin, *Multi-scale Characterization of White Matter Tract Geometry*, in: *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, volume LNCS 7512, pp. 34–41, 2012.
11. **P. Savadjiev**, Y. Rathi, S. Bouix, A. R. Smith, R. T. Schultz, R. Verma and C.-F. Westin, *Combining surface and fiber geometry: an integrated approach to brain morphology*, in: *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, volume LNCS 8149, pp. 50–57, 2013.

12. **P. Savadjiev**, C.-F. Westin and Y. Rathi, *Vector weights and dual graphs: an emphasis on connections in brain network analysis*, in: *Computational Diffusion MRI (CDMRI)*, pp. 3–12, 2014.
13. H. Mirzaalian, A. de Pierrefeu, **P. Savadjiev**, O. Pasternak, S. Bouix, M. Kubicki, C.-F. Westin, M. E. Shenton, Y. Rathi, *Harmonizing Diffusion MRI Data Across Multiple Sites and Scanners*, in: *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, volume LNCS 9349, pp. 12-19, 2015.

## Theses

1. **P. Savadjiev**, “Surface recovery from three-dimensional point data”, Master’s Thesis, McGill University, 2003.
2. **P. Savadjiev**, *Perceptual organisation in diffusion MRI: curves and streamline flows*, PhD thesis, McGill University, 2009.

## Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

1. K. Siddiqi, **P. Savadjiev**, J. S. W. Campbell and G. B. Pike. “3D Curve Inference, Co-Helicity and Diffusion MRI Regularization”. In *American Mathematical Society Meeting (Annandale-on-Hudson, NY), 2005*.
2. J. S. W. Campbell, **P. Savadjiev**, G. B. Pike and K. Siddiqi. “Regularized Diffusion Tensor MRI for High Angular Resolution ODF Estimation and Fibre Tractography”. In *International Society for Magnetic Resonance in Medicine Conference (Seattle, WA), May, 2006*.
3. M. Descoteaux, R. Deriche, **P. Savadjiev**, J. S. W. Campbell, G. B. Pike and K. Siddiqi. “Analytic ODF Estimation and Validation in Q-Ball Imaging”. In *Human Brain Mapping (Florence, Italy), June 2006*.
4. **P. Savadjiev**, J. S. W. Campbell, M. Descoteaux, R. Deriche, G. B. Pike and K. Siddiqi. “Disambiguation of Complex Subvoxel Fibre Configurations in High Angular Resolution Fibre Tractography”. In *International Society for Magnetic Resonance in Medicine Conference (Berlin, Germany), May, 2007*.
5. **P. Savadjiev**, M. Kubicki, S. Bouix, G. L. Kindlmann, M. E. Shenton, C.-F. Westin. “Tract-based parameterization of local white matter geometry”. In *International Society for Magnetic Resonance in Medicine Conference (Stockholm, Sweden), May, 2010*.
6. **P. Savadjiev**, C.-F. Westin, A. C. Rausch, M. Maddah, S. Bouix, M. E. Shenton, M. Kubicki. “Tract-oriented parameterization of left uncinate geometry abnormalities in schizophrenia”. In *Human Brain Mapping (Barcelona, Spain), June, 2010*.
7. M. Kubicki, **P. Savadjiev**, M. E. Hough, T. J. Whitford, M. E. Shenton, T. J. Crow, A. C. James. “White Matter Geometry and Gender Effects in Adolescent-Onset Schizophrenia”. In *Annual Meeting of the American College of Neuropsychopharmacology (ACNP) (Waikoloa, Hawaii), December, 2011*.
8. **P. Savadjiev**, Y. Rathi, M. E. Shenton, S. Bouix, C.-F. Westin. “Multi-scale characterization of white matter tract geometry”. In *International Society for Magnetic Resonance in Medicine Conference (Melbourne, Australia), May, 2012*.
9. D. J. Rotenberg, **P. Savadjiev**, Y. Rathi, N. J. Lobaugh, A. N. Voineskos, M. M. Chakravarty. “Distortion Correction: Effect on Fractional Anisotropy and Tractography”. In *Human Brain Mapping (Seattle, WA), June, 2013*.
10. **P. Savadjiev**, Y. Rathi, S. Bouix, A. R. Smith, R. T. Schultz, R. Verma, C.-F. Westin. “Global white matter geometry changes in autism spectrum disorder”. In *Human Brain Mapping (Hamburg, Germany), June, 2014*.
11. M. Kubicki, **P. Savadjiev**, L. DeLisi, L. J. Seidman, M. E. Shenton. “Callosal Tract Geometry in Non-psychotic Familial High-risk Subjects- DTI Study”. In *Annual Meeting of the American College of Neuropsychopharmacology (ACNP) (Phoenix, AZ), December, 2014*.
12. **P. Savadjiev**, C.-F. Westin, Y. Rathi. “Line graphs and vector weights: a novel paradigm for brain network analysis”. In *International Society for Magnetic Resonance in Medicine Conference (Toronto, Canada), June, 2015*.
13. A. E. Lyall, **P. Savadjiev**, E. del Re, L. J. O’Donnell, L. J. Seidman, J. Goldstein, R. Mesholam-Gately, T. Petryshen, J. Wojcik, R. W. McCarley, M. E. Shenton, M. Kubicki. “Exploring the relationship of gray and white matter structural pathology in first-episode schizophrenia through mutual information”. In *International Congress on Schizophrenia Research (Colorado Springs, CO), March 2015*.
14. A. E. Lyall, **P. Savadjiev**, E. Del Re, L. J. O’Donnell, L. J. Seidman, J. Goldstein, R. Mesholam-Gately, T.



Petryshen, J. Wojcik, R. W. McCarley, M. E. Shenton, M. Kubicki. "Utilizing mutual information analysis to explore the relationship between gray and white matter structural pathologies in first episode schizophrenia." In *World Congress of Biological Psychiatry (Athens, Greece), June 2015*.

## Editorial Activities

### Ad Hoc Reviewer

Since 2003 NeuroImage  
Medical Image Analysis  
Human Brain Mapping  
PLOS One  
Functional Neurology  
Frontiers in Neuroscience  
IEEE Transactions on Medical Imaging.  
IEEE Transactions on Biomedical Engineering.  
Journal of Magnetic Resonance.  
Computer Vision and Image Understanding.  
Pattern Recognition.  
Journal of Mathematical Imaging and Vision  
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI).  
International Conference on Computer Vision and Pattern Recognition (CVPR).  
International Conference on Computer Vision (ICCV).  
European Conference On Computer Vision (ECCV).  
International Conference on Pattern Recognition (ICPR).  
Asian Conference on Computer Vision (ACCV).  
International Conference on 3D Imaging and Modeling (3DIM).  
MICCAI Interactive Medical Image Computing Workshop.

### Review Editor

Since 2015 Frontiers in ICT,  
Section on Computer Image Analysis