

# Sneha Pandya

Address: 45 River Drive South, Jersey City, NJ 07310. Email: sneha.pandya1@gmail.com, Phone# 267-304-6167

## Educational Background

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### Syracuse University, Syracuse, NY

Master of Science in Biomedical Engineering

Fall 2010 – Spring 2012

GPA-3.58

### Thadomal Shahani Engineering College (T.S.E.C), Mumbai University, Mumbai, India

Bachelor of Engineering in Biomedical Engineering

Fall 2004 – Summer 2008

GPA-3.65

## Awards

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2014 Trainee (Educational) Stipend Award, International Society for Magnetic Resonance in Milan, Italy

## Certificates and Training

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- CITI Program Conflicts of Interest Training
- HIPAA Training 2014
- CITI Collaborative Institutional Training Initiative – For IRB (Institutional Review Board) and HIPAA (Health Insurance Probability and Accountability Act) Protocols
- Received training at Weill Cornell Medical College in preparing competing grant applications that can be submitted electronically through Grants.Gov using Adobe-Forms-B1/B2 package

## Other experience and Professional Memberships

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- 2020 Reviewer, JAD
- 2020, 2019, 2018 Reviewer, Aging
- 2020, 2019, 2018 Reviewer, Medicine
- 2020, 2019, 2018, 2016 Reviewer, NeuroImage: Clinical
- 2019 Reviewer, Alzheimer's & Dementia
- 2019 Reviewer, Brain Imaging and Behavior
- 2017 Reviewer, JMIR
- 2017 Reviewer, Nature Scientific Reports
- 2014 Member, ISMRM

## Media releases

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- 2017 The Brain's Structural Connectome Mediates the Relationship between Regional Neuroimaging Biomarkers in Alzheimer's Disease. *Special issue of Biomedical Advances.*

## Professional Experience

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### Weill Cornell Medicine, Research Data Specialist, NYC, NY

#### Research Aide

November 2015 to present

September 2012 to October 2015

- Engaged in manuscript writing for scientific peer reviewed journal articles and conducting scientific literature searches
- Engaged in oral and poster presentations for scientific conferences
- Actively involved in neuroimage research of MRI, dMRI, fMRI, and PET data to understand structural and functional connectivity and relationships in healthy and diseased patients using high-dimensional data processing techniques
- Assisting and developing pipelines to study white and grey matter associations in neurodegenerative and demyelinating diseases such as Alzheimer's disease, Parkinson's disease, ALS-FTD spectrum, Multiple sclerosis, etc
- Preparing Institutional Review Board (IRB) applications and submissions
- Assisting in preparation of ROI grant application, and internal grant proposals and budget
- Assisting in preparation and maintenance of data management and standard operating procedures (SOP) for audits
- Collecting functional and structural neuroimaging data from clinical and research database following FDA regulations and HIPAA protocols
- Participating in analysis of research data, including test for statistical significance as well as developing graphic and tabular presentations of the result
- Maintaining data collection according to protocol requirements and reviewing data entry for accuracy
- Providing assistance and training to summer interns and volunteers
- Creating and optimizing pipelines for processing and analysing images
- Investigating and implementing new statistical analysis and pre-/post-processing techniques of neuro-imaging data to automate processing
- Assisting in other related duties, but not limited to admin and IT support for research and clinical, and throughout the Department of Radiology and Neurology

### SUNY Upstate Medical University, Research Assistant, Syracuse, NY

January 2012- May 2012

- Developed an algorithm for non-rigid registration of mammographic images using C++ built on ITK
- Algorithm was interfaced to a GUI frontend developed in Matlab
- Effect on algorithm performance as a variety of image processing parameters are changed were investigated

### Banner Alzheimer's Institute, Summer Intern in Computational Medical Imaging, Phoenix, AZ

June 2011- July 2011

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- Preprocessed Positron Emission Tomography (PET) images to test potency of the drug for a pharmaceutical company for early detection and tracking of Alzheimer's disease (AD), which included extraction, normalization and smoothing
- Performed quality control of each image against a common template to ensure proper alignment of preprocessed images
- Standard uptake value (SUV) quantification was done, and intra and inter AD, normal control and mild cognitive impairment subjects were compared by ANOVA analysis to check the retention of the C11 labeled tracer

## **Cochlear Implant, Institute of Sensory Research (ISR), Research Assistant, Syracuse, NY**

**September 2010 -May 2011**

- Assisted research team in adding adaption, a ubiquitous property of neural response to enhance the overall performance of Cochlear Implant processing, mapping the behaviour of natural hearing process in humans
- Designed modules for stimulation pattern, spectrogram and step response to evaluate the understandings of speech processing using MATLAB
- Designed modules to implement the forward masking and loudness function to evaluate the performance of Cochlear Corporation speech processor using MATLAB

## **Assistant Software Developer: Maestros Mediline Systems Ltd, Mumbai, India**

**July 2008 - July 2009**

- Co-lead a group for an end-to-end software development package for remote monitoring of a patient's heart data
- Documented the "Hospital Management System" in detail, including interactive client presentation using Camtasia
- Developed database modules for telemedicine products that are used to deliver healthcare services in rural areas of India
- Developed and documented business requirements from Subject Matter Experts (SMEs), user groups and vendors

## **Academic Projects**

### **Image Registration for Noninvasive Retinal Imaging, Syracuse University, NY**

**Fall 2011**

- Adapted the technique of intrinsic signal optical imaging of neural activity to the non-invasive functional imaging of retina
- Implemented this new method for the functional and diagnostic assessment of retina

### **Drift of Spiral Waves, Syracuse University, Syracuse, NY**

**Fall 2010**

- Modelled and designed a model using C++ to evaluate the characteristic behaviour and functioning of spiral waves mapping the behaviour of drift in cardiac spiral waves during cardiac arrhythmia
- Studied the model, formation of spiral waves and possibilities of its drift affecting cardiac arrhythmias

## **Manuscripts**

### **Accepted**

- Ivanidze J, Skafida M, **Pandya S**, Patel D, Osborne J, Raj A, Gupta A, Henchcliffe C, Dyke J. *Frontiers in Neuroscience*. August 2020.
- Freeze B, Maia P.D., **Pandya S**, Raj A. Network mediation of pathology pattern in sporadic Creutzfeldt-Jakob disease. *Brain Communications*. April 2020.
- Maia P.D.\*, **Pandya S\***, Freeze B, Torok J, Gupta A, Zeighami Y, and Raj A. Origins of atrophy in Parkinson linked to early onset and local transcription patterns. *Brain Communications*. April 2020.
- **Pandya S\***, Kaunzner U\*, Hurtado S.R., Nealon N, Perumal J, Vartanian T, Nguyen T.D., Gauthier S.A. Impact of lesion location on longitudinal myelin water fraction change in chronic multiple sclerosis lesions. *JON*. April 2020.
- Freeze B, **Pandya S**, Zeighami Y, Raj A. Regional transcriptional architecture of Parkinson disease pathogenesis and network spread. *Brain*. May 2019.
- Zhang S, Nguyen T.D, Hurtado S, Kaunzner U, **Pandya S**, Kovanlikaya I, Spincemaille P, Wang Y, Gauthier S.A. Quantitative susceptibility mapping of time-dependent susceptibility changes in multiple sclerosis lesions. *AJNR*. May 2019.
- **Pandya S**, Zeighami Y, Freeze Benjamin, Dadar M, Collins D, Dagher A, Raj A. Predictive model of spread of Parkinson's pathology using network diffusion. *NeuroImage*. March 2019.
- Kaunzner U, Kang Y, Zhang S, Morris E, Yao Y, **Pandya S**, Hurtado S, Park C, Gillen K.M., Nguyen T.D., Wang Y, Pitt D, Gauthier S.A. Quantitative susceptibility mapping identifies inflammation in a subset of chronic multiple sclerosis lesions. *Brain*. October 2018.
- Freeze B.S., Acosta D, **Pandya S**, Zhao Y, Ashish Raj. Regional expression of genes mediating trans-synaptic alpha-synuclein transfer predicts regional atrophy in Parkinson disease. *NeuroImage Clinical*. January 2018.
- **Pandya S**, Mezas C, Raj A. Predictive Model of Spread of Progressive Supranuclear Palsy Using Directional Network Diffusion. *Frontiers in Neurology*. December 2017.
- Torok J, Maia P.D., Powell F, **Pandya S**, Raj A. A method for inferring Regional Origins of Neurodegeneration. *BRAIN*. November 2017.
- Yao Y, Nguyen T.D., **Pandya S**, Zhang Y, Hurtado S.R., Kavanlikaya I, Kuceyeski A, Liu Z, Wang Y, Gauthier S.A. Combining quantitative susceptibility mapping with automatic zero reference (QSM0) and myelin water fraction imaging to quantify iron related myelin damage in chronic active MS lesions. *AJNR*. October 2017.
- Dayan M, Hurtado S.R., Monohan E, Fujimoto K, **Pandya S**, LoCastro E, Vartanian T, Nguyen T.D., Raj A, Gauthier S.A. MRI analysis of white matter myelin water content in multiple sclerosis: a novel approach applied to finding correlates of cortical thinning. *Frontiers in Neuroscience*. May 2017.
- Chiang G.C., Mao X, Kang G, Chang E, **Pandya S**, Vallabhajosula S, Isaacson R, Ravdin L, Shungu D. Relationships among cortical glutathione levels, brain amyloidosis, and memory in normal older adults investigated in vivo with 1H MRS and PiB PET. *AJNR*. January 2017.

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- Chiang G.C., Chang E, **Pandya S**, Kuceyeski A. Hu J, Isaacson R, Ganzer C, Schulman A, Sobel V, Vallabhajosula S, Ravdin L. Cognitive deficits in a non-demented community cohort of diabetic elderly are not associated with brain amyloidosis. *Journal of the Neurological Sciences*. November 2016.
- **Pandya S**, Kuceyeski A, Raj A. The brain's structural connectome mediates the relationship between regional neuroimaging biomarkers in Alzheimer's disease. *JAD*. October 2016.
- Diamond E.L., Hatzoglou V, **Patel S**, Abdel-Wahab O, Rampal R, Hyman D.M., Holodny A, Raj A. Diffuse reduction of cerebral grey matter volumes in Erdheim-Chester disease. *OJRD*. August 2016 [erratum submitted to reflect printing error of co-author "Sneha Patel" to "Sneha Pandya"].
- Dayan. M, Monohan E, **Pandya S**, Kuceyeski A, Nguyen T.D., Gauthier S.A., Raj A. Profilometry: a new framework for the characterization of white matter pathways, with application to Multiple Sclerosis. *HBM*. December 2015.
- Vargas W\*, Monohan E\*, **Pandya. S**, Raj A, Vartanian T, Nealon N, Perumal J, Nguyen T.D., Hurtado Rua S.M., Gauthier S.A. Measuring longitudinal myelin water fraction in new multiple sclerosis lesions. *NeuroImage Clinical*. September 2015 [\*co-first authors].
- Nguyen T.D., Deh K, Monohan E, **Pandya. S**, Spincemaille P, Raj A, Wang Y, Gauthier S.A. Feasibility and reproducibility of whole brain myelin water mapping in 4 minutes using Fast Acquisition with Spiral Trajectory and adiabatic T2prep (FAST-T2) at 3 Tesla. *MRM*. August 2015.
- Raj A, **Pandya S**, Shen X, LoCastro E, Nguyen T.D., Gauthier S.A. Multi-compartment T2 Relaxometry Using A Spatially Constrained Multi-Gaussian Model. *PLOS ONE*. June 2014.

## Preprints

- Maia P.D.\*, **Pandya S\***, Torok J, Gupta A, Zeighami Y, Raj A. Heterogeneity of Incipient Atrophy Patterns in Parkinson's Disease. *BioRxiv*. November 2018.

## Under review

- **Pandya S**, Maia. P.D, Freeze B, Ricarda M, Talbot K, Turner M\*, Raj A\*. **Modelling seeding and neuroanatomic spread of pathology in amyotrophic lateral sclerosis**. *NeuroImage*. August 2020.
- Akerele M.I, Zein S.A, **Pandya S**, Nikolopoulou A, Gauthier S.A, Raj A, Henchcliffe C, Mozley P.D, Karakatsanis N.A, Gupta A, Babich J, Nehmeh S.A. Feasibility of Population-Based Input Function for Kinetic Modeling of [11C]-DPA-713. *Medical Physics*. September 2020.

## Conference Presentations

### Accepted

- Safi N.V., Huang W, **Pandya S**, Nguyen T.D., Kaunzner U, Nealon N, Perumal J, Vartanian T, Wang Y, and Gauthier S.A. (2020, February). Determining the Impact of Ocrelizumab on Chronic Active Lesions in Multiple Sclerosis Utilizing Quantitative Susceptibility Mapping. Selected as a poster presentation at the scientific sessions of the *American Academy of Neurology (AAN)*.
- Kaunzner U, **Pandya S**, Nealon N, Perumal J, Vartanian T, Wang Y, Nguyen T, Hurtado S.R., Gauthier S.A. (2020, February). Three distinct Myelin Water Fraction (MWF) clusters identified within chronic Multiple Sclerosis (MS) lesions. Selected as a poster presentation at the scientific sessions of the *American Academy of Neurology (AAN)*.
- Kaunzner U, **Pandya S**, Nguyen T.D., Hurtado S.R., Gauthier S.A. (2020, February). Three distinct Myelin Water Fraction (MWF) clusters identified within chronic Multiple Sclerosis (MS) lesions. Selected as a poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Safe N.V., **Pandya S**, Nguyen T.D., Kaunzner U, Nealon N, Perumal J, Vartanian T, Wang Y, and Gauthier S.A. (2019, November). The Effect of Ocrelizumab on Chronic Active Lesions Utilizing Quantitative Susceptibility Mapping. Selected as a poster presentation at the *Americas Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS)*.
- Tozlu C, Zhang S, Nguyen T.D., Nealon N, Perumal J, Vartanina T, Morris E, Kaunzner U, **Pandya S**, Wang Y, Gauthier S.A., Kuceyeski A. (2019, September). Classification of MS patients' future impairment status using machine learning methods applied to baseline quantitative susceptibility mapping imaging biomarkers.
- Kaunzner U, **Pandya S**, Hurtado S.R., Nealon N, Perumal J, Vartanian T, Wang Y, Nguyen T.D, Gauthier S.A. (2018, November). Utilizing Myelin Water Fraction to Examine Patterns of Myelin Change in Chronic Multiple Sclerosis (MS) Lesions Among Individual Patients. Selected as a poster presentation at the *Americas Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS)*.
- Skafida M, **Pandya S**, Raj A, Gupta A, Osborne J, Dyke J, Henchcliffe C, Ivanidze J. (2019, October). Striatal Dopaminergic Neuronal Loss and the Neurovascular Unit in Parkinson Disease.
- Kang Y, Kaunzner U, **Pandya S**, Kuceyeski A, Nealon N, Perumal J.S, Vartanian T, Gauthier S.A. (2018, November). Utilization of [11C]-PK11195 PET to Ascertain the Influence of Fingolimod on the Innate Immune Burden in Multiple Sclerosis. Selected as a poster presentation at the *Americas Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS)*.
- **Pandya S**, Zeighami Y, Freeze Benjamin, Dadar M, Collins D, Dagher A, Raj A. (2018, November). Predictive model of spread of Parkinson's pathology using network diffusion. Selected as an **oral presentation** at the scientific sessions of the *Alzheimer's & Parkinson's Diseases Congress (ADPD)*.

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- Pedro D. Maia, J. Torok, **S. Pandya**, A. Raj. (2018, November). Backtracking and forecasting AD/PD progression: New computational methods in neurology. Selected as a poster presentation at the scientific sessions of the *Alzheimer's & Parkinson's Diseases Congress (ADPD)*.
- Kaunzner U, Kang Y, Morris E, Yao Y, Zhang S, **Pandya S**, Nguyen T.D., Kuceyesky A, Nealon N, Perumal J.S., Vartanian T, Wang Y, Gauthier S.A. (2018, January). Correlating the Presence of Rim Positive Lesions on Quantitative Susceptibility Mapping (QSM) with PK11195 Expression on PET Imaging. Selected as a poster presentation at the *Americas Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS)* and for a **talk** at the NAIMS forum during ACTRIMS.
- Kaunzner U.W., Kang Y, Nguyen T.D., Hurtado S, Yao Y, Zang S, Morris E, **Pandya S**, Wang Y, Gauthier S.A. (2018, January). Chronic Multiple Sclerosis Lesions with Hyperintense Rim on Quantitative Susceptibility Mapping demonstrate more Inflammation on PK11195-PET. Selected as a poster presentation at the scientific sessions of the *American Academy of Neurology (AAN)*.
- **Pandya S**, Kaunzner U, Morris E, Nguyen T.D., Nealon N, Perumal J.S., Vartanian T, Wang Y, Gauthier S. (2018, January). Longitudinal change of myelin water fraction (MWF) within chronic multiple sclerosis (MS) lesions. Selected as a poster presentation for **novel techniques** at the scientific sessions of the *American Academy of Neurology (AAN)*.
- Kaunzner U.W., Kang Y, Nguyen T.D., Hurtado S, Yao Y, Zang S, Morris E, **Pandya S**, Wang Y, Gauthier S.A. (2017, October). Lesions with hyperintense rim on quantitative susceptibility mapping demonstrate more inflammation on PET-PK11195. Selected as a poster presentation at the scientific sessions of the 7th Joint ECTRIMS - ACTRIMS Meeting (MSParis2017).
- Yao Y, Nguyen T.D., **Pandya S**, Zhang Y, Hurtado S, Kuceyeski A, Wang Y, Gauthier S.A. (2017, April). MS lesions demonstrating a QSM hyperintense-rim have more myelin loss compared to those without a QSM hyperintense-rim. Selected as an **oral presentation** at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Yao Y, Nguyen T.D., **Pandya S**, Zhang Y, Hurtado S, Kuceyeski A, Wang Y, Gauthier S.A. (2017, April). MS lesions demonstrating a QSM hyperintense-rim have more myelin loss compared to those without a QSM hyperintense-rim. Selected as a poster presentation at the scientific sessions of the *American Academy of Neurology (AAN)*.
- Chiang G, Mao X, Kang G, Chang E, **Pandya S**, Vallabhajosula S, Isaacson R, Ravdin L, Shungu D. (2017, April). Relationships among Cortical Glutathione Levels, Brain Amyloidosis, and Memory in Normal Older Adults Investigated in vivo with 1H MRS and PIB PET. Selected as an electronic poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Chiang G, Mao X, Kang G, Chang E, **Pandya S**, Isaacson R, Ravdin L, Shungu D. (2017, April). Noninvasive Detection of Cortical Glutathione using 1H MRS: Associations with Brain Amyloidosis and Hippocampal Volumes. Selected as an **oral presentation** at the scientific sessions of the *American Society of Neuroradiology (ASNR)*.
- **Pandya S**, Zhang Y, Nguyen T.D., Wang Y, Gauthier S.A. (2016, May). QSM is sensitive to myelin changes just beyond the boundaries of conventional T2 lesion detection. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- **Pandya S**, Kuceyeski A, Raj A (2016, June). Regional neuropathological biomarkers in Alzheimer's disease: the role of the connectome. Selected as a traditional poster presentation at the scientific sessions of the *Organization for Human Brain Mapping (OHBM)*.
- Nguyen T.D., Deh K, **Pandya S**, Wang Y, Gauthier S.A. (2016, May). Inter-scanner reproducibility of 4 minute whole brain myelin mapping using FAST-T2. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Nguyen T.D, Spincemaille P, **Pandya S**, Gauthier S.A., Wang Y (2016, May). Absolute quantification of white matter lesion iron and myelin using QSM and FAST-T2 at 3 Tesla. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Dayan M, Hurtado S.R., Monohan E, **Pandya S**, Perumal J, Nealon N, Vartanian T, Nguyen T.D., Raj A, Gauthier S.A (2016, April). Differential Relationship between Cortical Thinning and Myelin Water Fraction in RRMS and SPMS. Selected for an **oral presentation** at the scientific sessions of the *American Academy of Neurology (AAN)*.
- Monohan E, Vargas W, **Pandya S**, Raj A, Vartanian T, Nealon N, Perumal J, Nguyen T.D., Hurtado S, Gauthier S.A. (2015, October). Intensity of initial demyelinating event associated with lower subsequent MWF in new MS lesions. Selected as an **oral presentation** at the scientific sessions of the 31<sup>st</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS).
- Diamond E.L., Hatzoglou V, **Pandya S**, Abdel-Wahab O, Hyman D.M., Rampal R, Raj A. Diffuse loss of cerebral grey matter structures in Erdhiem-Chester Disease (2015, September). **Published** for 31st Annual Meeting of the Histiocyte Society (HS) in *Pediatric Blood & Cancer*. 62():S125, SEP 2015 Issn Print: 1545-5009. **Orally presented** at the 31<sup>st</sup> Annual Meeting of the Histiocyte Society held at Athens, Greece, and at the 3<sup>rd</sup> Annual *International ECD Global Alliance Medical Symposium* held at the University of Texas MD Anderson Cancer Center in Houston, TX.
- Dayan M, Monohan E, **Pandya S**, Kuceyeski A, Nguyen T.D., Gauthier S.A., Raj A (2015, May). Profilometry: towards a more specific characterization of white matter pathways, with application to Multiple Sclerosis. Selected as a multimedia electronic poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- **Pandya S**, Monohan E, Dayan. D, Gauthier S.A. and Raj A. Moments of the T2 spectrum as a marker of resolving edema in new MS lesions (2015, May). Selected as a traditional poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.

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- Monohan E, Vargas W, **Pandya S**, Dayan M, Nguyen T.D., Raj A, Hurtado S, Gauthier S.A. (2015, May). Describing the distribution of myelin water fraction change among early stage MS lesions. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Nguyen T.D, Deh K, **Pandya S**, Monohan E, Raj A, Wang Y, Gauthier S.A. Highly reproducible whole brain myelin water mapping with FAST-T2 in 4 minutes using geometric echo time sampling. (2015, May). Selected as a traditional poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Nguyen T.D, **Pandya S**, Spincemaille P, Gauthier S.A, Wang Yi. (2015, May). Fast absolute myelin water mapping without an external water standard. Selected as a multimedia electronic poster and an **oral presentation for a Power Pitch Session** at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- **Pandya S**, Dayan M, LoCastro E, Nguyen T.D., Gauthier S.A., Raj A (2014, June). Sparse reconstruction method using L1-norm for whole brain myelin water fraction analysis. Selected as a traditional poster presentation at the scientific sessions of the *Organization for Human Brain Mapping (OHBM)*.
- Dayan M, Rua S.H., Fujimoto K, **Pandya S**, Monohan E, Kuceyeski A, Nguyen T.D., Raj A, Gauthier S.A. (2014, June). Prediction of cortical thickness from MWF imaging in Multiple Sclerosis. Selected as a traditional poster presentation at the scientific sessions of the *Organization for Human Brain Mapping (OHBM)*.
- **Pandya S**, Nguyen T.D., Cooper M.A., LoCastro E, Dayan M, Gauthier S.A., Raj A (2014, May). Test-retest reliability of whole brain myelin water fraction analysis using a spatially constrained multi-Gaussian algorithm on spiral T2 Relaxometry data at 3 Tesla. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Monohan E, **Pandya S**, Fujimoto K, Nguyen TD, Blackwell C, Nealon N, Perumal JS, Raj A, Vartanian T, Gauthier S. Clinical investigation of whole brain myelin water fraction imaging in patients with multiple sclerosis. (2014, May). Selected as an **oral presentation** at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Dayan M, Abdelnour F, LoCastro E, Kuceyeski A, **Pandya S**, Raj A (2014, May). A Network-Diffusion Model of Alzheimer's Disease Estimating Both Disease's Progression and Foci. Selected as a traditional poster presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Vargas W, Monohan E, **Pandya S**, Dayan M, Nguyen T.D., Gauthier S.A., Raj A (2014, May). Longitudinal changes in myelin water fraction in new multiple sclerosis lesions. Selected for an **oral presentation** at the scientific sessions of the *American Academy of Neurology (AAN)*.
- LoCastro E, **Pandya S**, Shen X, Nguyen T.D., Gauthier S.A., Raj A (2013, April). T2 Relaxometry. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.
- Fujimoto K, LoCastro E, **Pandya S**, Monohan E, Raj A, Shen X, Nguyen T, Gauthier S. (2013, April). Technique development for whole brain white matter and lesion myelin water fraction analysis for MS. Selected as a traditional poster presentation at the scientific sessions of the *ISMRM Annual Meeting and Organization for Human Brain Mapping (OHBM)*.
- Fujimoto K, LoCastro E, **Pandya S**, Monohan E, Raj A, Shen X, Nguyen T, Gauthier S. (2013, April). Technique development for accurate whole brain white matter and lesion myelin water fraction analysis for multiple sclerosis using multi-component T2 relaxometry. Selected as a multimedia electronic presentation at the scientific sessions of the *International Society of Magnetic Resonance in Medicine (ISMRM)*.

## Under review

## Leadership skills

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- Lead a group of Say Yes tutors providing one-on-one tutoring to the high school students with additional academic support
- Provided tutoring for SAT preparations and was lauded for improving few student's score by 20% in just 2-3 sessions
- Managed technical events as an Event Head and member of IEEE-ISAAC and IEEE-EMBS society for the year 2005-2007

## Technical Skills

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- **Software:** ImageJ, MRICron, SPM, ITK, FSL, Freesurfer, MRTrx, PMOD
- **Programming Languages:** MATLAB, Bash, Python
- **Others:** Microsoft Office Suite (Excel, Word, and PowerPoint), LibreOffice Suite
- **Languages and Proficiencies:** English and Hind (speak, read, write), German and French (basic)