John Muschelli

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Education

2012–2016 **PhD**, *Biostatistics*,
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.
Computational Methods for Neuroimaging in R: Stroke Hemorrhage in X-ray Computed Tomography Scanning
Advisor: Ciprian Crainiceanu, PhD

Relevant Experience

2016– **Assistant Scientist**, *Department of Biostatistics*, Johns Hopkins Bloomberg School
Present of Public Health, (Research-track Faculty).

Peer-Reviewed Publications from past 3 years

* denotes authors contributed equally

2019 **Muschelli, J.** (2019b). "Roc and auc with a binary predictor: a potentially misleading metric". *Journal of Classification.* In Press.

Muschelli, J. (2019a). "Recommendations for processing head ct data". *Frontiers in Neuroinformatics* 13, p. 61.

Hadavand, A. (2019). "Analysis of student behavior using the R package crsra". *Journal of Learning Analytics* 6.2, pp. 140–152.

2018 **Muschelli, J.** (2018). "freesurfer: connecting the Freesurfer software with R". *F1000Research* 7.

Muschelli, J. (2018). "Neuroconductor: an R platform for medical imaging analysis". *Biostatistics*, kxx068. eprint: `/oup / backfile / content _ public / journal / biostatistics/pap/10.1093_biostatistics_kxx068/1/kxx068.pdf`.

Commowick, O. (2018). "Objective evaluation of multiple sclerosis lesion segmentation using a data management and processing infrastructure". *Scientific Reports*.

Smith, C. H. (2018). "Feasibility of coping effectiveness training for caregivers of children with autism spectrum disorder: a genetic counseling intervention". *Journal of genetic counseling* 27.1, pp. 252–262.

Valcarcel, A. (2018b). "TAPAS: threshold adjustment to probability map automatic segmentations". *MULTIPLE SCLEROSIS JOURNAL*. Vol. 24, pp. 629–630.

Valcarcel, A. M. (2018a). "MIMoSA: an automated method for intermodal segmentation analysis of multiple sclerosis brain lesions". *Journal of Neuroimaging*.

2017 **Muschelli, J.** (2017). "PItcHPERFeCT: primary intracranial hemorrhage probability estimation using random forests on CT". *NeuroImage: Clinical* 14, pp. 379 –390.

Hanley, D. F. (2017). "Thrombolytic removal of intraventricular haemorrhage in treatment of severe stroke: results of the randomised, multicentre, multiregion, placebo-controlled CLEAR III trial". *The Lancet* 389.10069, pp. 603–611.

Kickingereder, P. (2017). "Radiomic subtyping improves disease stratification beyond key molecular, clinical and standard imaging characteristics in patients with glioblastoma." *Neuro-Oncology*.

Maier, O. (2017). "ISLES 2015 - a public evaluation benchmark for ischemic stroke lesion segmentation from multispectral MRI". *Medical Image Analysis* 35, pp. 250–269.

Software

R Packages

All download counts are from RStudio CRAN logs and are accurate as of April 06, 2020.

rscopus: Scopus Database API Interface, *47753*.

fslr: Wrapper Functions for FSL (FMRIB Software Library) from Functional MRI of the Brain (FMRIB), *32419*.

neurobase: Neuroconductor Base Package with Helper Functions for nifti Objects, *26621*.

brainR: Helper Functions to misc3d and rgl Packages for Brain Imaging, *25197*.

matlabr: An Interface for MATLAB using System Calls, *22881*.

diffr: Display Differences Between Two Files using Codediff Library, *20404*.

WhiteStripe: White Matter Normalization for Magnetic Resonance Images using WhiteStripe, *20152*.

spm12r: Wrapper Functions for SPM (Statistical Parametric Mapping) Version 12 from the Wellcome Trust Centre for Neuroimaging, *12910*.

kirby21.base: Example Data from the Multi-Modal MRI Reproducibility Resource, *12511*.

freesurfer: Wrapper Functions for Freesurfer, *11736*.

gcite: Google Citation Parser, *11622*.

gifti: Reads in Neuroimaging GIFTI Files with Geometry Information, *11439*.

papayar: View Medical Research Images using the Papaya JavaScript Library, *11124*.

kirby21.t1: Example T1 Structural Data from the Multi-Modal MRI Reproducibility Resource, *10298*.

cifti: Toolbox for Connectivity Informatics Technology Initiative (CIFTI) Files, *9970*.

kirby21.fmri: Example Functional Imaging Data from the Multi-Modal MRI Reproducibility Resource, *9356*.

mscstts: R Client for the Microsoft Cognitive Services Text-to-Speech REST API, *8899*.

neurohcp: Human Connectome Project Interface, *8706*.

glassdoor: Interface to Glassdoor API, *8651*.

fedreporter: Interface to Federal RePORTER API, *7873*.

stapler: Simultaneous Truth and Performance Level Estimation, *7748*.

text2speech: Text to Speech, *5704*.

leanpubr: Leanpub API Interface, *5349*.

nsrr: Interface to National Sleep Research Resource, *4303*.

neurovault: Neurovault Database API Access, *589*.