

# John Muschelli

☎ 610-291-7685  
✉ [muschellij2@gmail.com](mailto:muschellij2@gmail.com)  
<http://johnmuscchelli.com>  
GitHub: [muschellij2](#)

## 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–  
Present **Assistant Scientist**, *Department of Biostatistics*, Johns Hopkins Bloomberg School 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](http://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.
- Kickingeder, 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 February 21, 2020.

**rscopus: Scopus Database API Interface**, 44355.

**fslr: Wrapper Functions for FSL (FMRIB Software Library) from Functional MRI of the Brain (FMRIB)**, 31350.

**neurobase: Neuroconductor Base Package with Helper Functions for nifti Objects**, 24921.

**brainR: Helper Functions to misc3d and rgl Packages for Brain Imaging**, 24289.

**matlabr: An Interface for MATLAB using System Calls**, 21929.

**WhiteStripe: White Matter Normalization for Magnetic Resonance Images using WhiteStripe**, 19438.

**diffR: Display Differences Between Two Files using Codediff Library**, 19413.

**spm12r: Wrapper Functions for SPM (Statistical Parametric Mapping) Version 12 from the Wellcome Trust Centre for Neuroimaging**, 12364.

**kirby21.base: Example Data from the Multi-Modal MRI Reproducibility Resource**, 11833.

**gcite: Google Citation Parser**, 10938.

**freesurfer: Wrapper Functions for Freesurfer**, 10841.

**papayar: View Medical Research Images using the Papaya JavaScript Library**, 10453.

**gifti: Reads in Neuroimaging GIFTI Files with Geometry Information**, 10415.

**kirby21.t1: Example T1 Structural Data from the Multi-Modal MRI Reproducibility Resource**, 9645.

**cifti: Toolbox for Connectivity Informatics Technology Initiative (CIFTI) Files**, 9258.

**kirby21.fMRI: Example Functional Imaging Data from the Multi-Modal MRI Reproducibility Resource**, 8724.

**msscsts: R Client for the Microsoft Cognitive Services Text-to-Speech REST API**, 8108.

**neurohcp: Human Connectome Project Interface**, 8059.

**glassdoor: Interface to Glassdoor API**, 7994.

**fedreporter: Interface to Federal RePORTER API**, 7229.

**stapler: Simultaneous Truth and Performance Level Estimation**, 7051.

**leanpubr: Leanpub API Interface**, 4859.

**text2speech: Text to Speech**, 4702.

**nsrr: Interface to National Sleep Research Resource**, 3787.

**neurovault: Neurovault Database API Access**, 564.