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The Canadian Journal of Statistics plans to devote a special issue to the theme of Neuroimaging Data Analysis. This is a burgeoning field involving mathematical and statistical methods for the analysis of data arising from a wide array of neurochemical and functional imaging modalities including computed axial tomography (CT), diffusion tensor imaging (DTI), functional magnetic resonance imaging (fMRI), magnetic resonance imaging (MRI), magnetic resonance spectroscopy (MRS), positron emission tomography (PET), single photon emission tomography (SPECT), electroencephalography (EEG), and magnetoencephalography (EMG). Often the data are collected from multiple modalities along with clinical data obtained from various cross-sectional and clustered neuroimaging studies. Brain imaging and genetic data are increasingly being collected together and combined in order to study and diagnose inherited diseases including common mental disorders and neurodegenerative disorders.

Statistics has always had and continues to have a significant role to play in neuroimaging studies because the data are extremely challenging to work with and analyze. The challenges include the need to deal with spatial and spatiotemporal nonstationary covariance, high-dimensional multivariate data, the fusion of data from different modalities, missing data, longitudinal imaging data, network analysis, multiple testing problems, inference for dynamic models, and ill-posed inverse problems. There is tremendous potential for the development of new methods for statistical inference in these novel settings. There is also a pressing need for efficient computational approaches and the development of machine learning techniques for the prediction of disease outcomes.

The goal of this special issue of *The Canadian Journal of Statistics* is to highlight cutting edge research in this area, showcasing solutions to a broad range of statistical and machine learning problems involving neuroimaging data.

We invite you to submit original research articles or review articles; **the submission deadline is December 31, 2019**. All submissions will be subject to the normal review process. Please submit your paper through the CJS submission website, specifying that the submission is for the special issue on neuroimaging:

<https://mc.manuscriptcentral.com/cjs-wiley>

Farouk Nathoo, Linglong Kong, and Grace Yi
Guest Editors, *The Canadian Journal of Statistics*
<https://onlinelibrary.wiley.com/journal/1708945x>