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Biostatistics & Epidemiology
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Area of Expertise

My primary research goal is to develop novel, intuitive, and practical statistical methods that can contribute to solving real life problems. In fact, the motivation for most of my statistical methodological research comes from real data where conventional statistical approaches are either inadequate or fail completely. To accomplish my research objectives, I actively seek opportunities to collaborate with statisticians and investigators in diverse research fields. I have applied my methods to a broad range of applications including clinical trials, neuroimaging, dose response, psychiatry, and signal processing using a wide array of statistical methods like Multivariate Statistical Analysis, Receiver Operating Characteristics (ROC) methods, Multiple Comparison, Resampling Methods, Machine Learning, Bayesian variable selection, Optimal Designs, and Spatial Statistics.

Qualifications

PhD in Probability/Statistics, University of Washington
Award Date: 1 Jan 2002

MS in Statistics, Indian Statistical Institute
Award Date: 1 Jan 2001

BS in Statistics, Indian Statistical Institute
Award Date: 1 Jan 2000

Recent Publications

Effects of Auditory Training on Electrophysiological Measures in Individuals with Autism Spectrum Disorder

Gopal, K. V., Schafer, E. C., Mathews, L., Nandy, R., Beaudoin, D., Schadt, L., Brown, A., Phillips, B. & Caldwell, J., 1 Jan 2020, In : Journal of the American Academy of Audiology. 31, 2, p. 96-104 9 p.

Multivariate group-level analysis for task fMRI data with canonical correlation analysis

Zhuang, X., Yang, Z., Sreenivasan, K. R., Mishra, V. R., Curran, T., Nandy, R. & Cordes, D., 1 Jul 2019, In : NeuroImage. 194, p. 25-41 17 p.

Identifying behaviors predicting early morning emotions by observing permanent supportive housing residents: An ecological momentary assessment

Nandy, R. R., Nandy, K., Hébert, E. T., Businelle, M. S. & Walters, S. T., Feb 2019, In : Journal of Medical Internet Research. 21, 2, e10186.

Risk assessment of recreational noise-induced hearing loss from exposure through a personal audio system—iPod Touch

Gopal, K. V., Mills, L. E., Phillips, B. S. & Nandy, R., 1 Jan 2019, In : Journal of the American Academy of Audiology. 30, 7, p. 619-633 15 p.

Safety of autologous umbilical cord blood therapy for acquired sensorineural hearing loss in children

Baumgartner, L. S., Moore, E., Shook, D., Messina, S., Day, M. C., Green, J., Nandy, R., Seidman, M. & Baumgartner, J. E., 1 Oct 2018, In : Journal of Audiology and Otology. 22, 4, p. 209-222 14 p.

3D spatially-adaptive canonical correlation analysis: Local and global methods

Yang, Z., Zhuang, X., Sreenivasan, K., Mishra, V., Curran, T., Byrd, R., Nandy, R. & Cordes, D., 1 Apr 2018, In : NeuroImage. 169, p. 240-255 16 p.

Potential audiological and MRI markers of tinnitus

Gopal, K. V., Thomas, B. P., Nandy, R., Mao, D. & Lu, H., Sep 2017, In : Journal of the American Academy of Audiology. 28, 8, p. 742-757 16 p.

A family of locally constrained CCA models for detecting activation patterns in fMRI

Zhuang, X., Yang, Z., Curran, T., Byrd, R., Nandy, R. & Cordes, D., 1 Apr 2017, In : NeuroImage. 149, p. 63-84 22 p.

Efficacy of SMS Text Message Interventions for Smoking Cessation: A Meta-Analysis

Spohr, S. A., Nandy, R. R., Gandhiraj, D., Vemulapalli, A., Anne, S. & Walters, S. T., 1 Jan 2015, In : Journal of Substance Abuse Treatment. 56, p. 1-10 10 p.

Characterization and reduction of cardiac- and respiratory-induced noise as a function of the sampling rate (TR) in fMRI

Cordes, D., Nandy, R. R., Schafer, S. & Wager, T. D., 1 Apr 2014, In : NeuroImage. 89, p. 314-330 17 p.

Sponsored Projects

Amyloid Burden among Mexican Americans

O'Bryant, S., Hall, J., Johnson, L. & Nandy, R.

NIA: National Institute on Aging

30/09/18 → 31/08/19

An Alzheimer's Blood Test for Primary Care

O'Bryant, S., Hall, J., Johnson, L. & Nandy, R.

NIA: National Institute on Aging

1/06/18 → 31/05/21

A Novel Nonparametric Threshold Free Method in Produce fMRI Activation Maps Using Minimum Misclassification Rate

Nandy, R.

University of Maryland, Baltimore

1/12/17 → 31/12/18

Biomarkers of Alzheimer's Disease in Adults with Down Syndrome

O'Bryant, S. & Nandy, R.

Columbia University Medical Center

30/09/15 → 30/04/20

Blood-Based Biomarker Profiles for a Precision Medicine Approach to Parkinsons Disease

O'Bryant, S., Hall, J. & Nandy, R.

Michael J. Fox Fnd for Parkinson's Res

15/10/19 → 14/10/20

Blood Biomarkers for Discriminating Amongst Neurodegenerative Diseases

O'Bryant, S., Hall, J. & Nandy, R.

Michael J. Fox Fnd for Parkinson's Res

1/06/19 → 31/05/20

Safety of Autologous Stem Cell Treatment for Acquired Hearing Loss in Children

Nandy, R.

Florida Hospital

4/04/17 → 3/10/17