Thayasivam Umashanger

Associate Professor
Mathematics

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Education:
BSc (Statistics), University of Colombo
MS (Statistics), University of Georgia
PhD (Statistics), University of Georgia

Research Expertise:
Data Mining and Statistical Learning | Robust Estimation | Bayesian Statistics

We are pursuing several lines of research to identify and validate the use of statistical learning/data mining methods with multidisciplinary data.

Projects include:
Biomarker discovery for neurogenerative diseases
Peak detection with maximum entropy principal
Clustering mix attributes – network security
Spoof detection and Speaker identification/verification in biometrics
Assessing robust methods for analyzing multivariate data Telemedicine/Telehealth statistical learning

Member of:
American Statistical Association (www.asa.org)
Institute of Mathematical Statistics (www.imstat.org)
Institute of Applied Statistics Sri Lanka (www.iappstat.lk)
Data Science Association

Recent Publications
DeMarshall CA, Nagele EP, Sarkar A, Godsey G, Thayasivam U, Han M, Belinka B, Nagele RG (2017) Autoantibodies as diagnostic biomarkers for the detection and subtyping of Multiple Sclerosis, J Neuroimmol. 309:51-57.

Kabakci F, Thayasivam U (2017) Assessing robust clustering for gaussian mixtures in the presence of outliers and noise variables with component overlap - A simulation study. Computational Mathematics, Computational Geometry & Statistics (CMCGS). 175-181. Received Best Paper Award.

Edwards JS, Ramachandran RP, Thayasivam U (2017) Robust speaker verification with a two classifier format and feature enhancement. IEEE ISCAS 2017, 50th International Symposium on Circuits & Systems. Conference, Baltimore, MD

DeMarshall CA, Nagele EP, Sarkar A, Acharya NK, Godsey G, Goldwaser EL, Kosciuk M, Thayasivam U, Han M, Belinka B, Nagele RG (2016) Detection of Alzheimer's disease at mild cognitive impairment and disease progression using auto-antibodies as blood-based biomarkers, Alzheimers Dement (Amst). 3:51-62.

Thayasivam U, Hnatyshin V, Muck IB (2016) Accuracy of Class Prediction using Similarity Functions in PAM. In Proc of 2016 IEEE International Conference on Industrial Technology (ICIT), Taipei, pp. 586-591.