
Dissertation Defense - Leena Nezamuldeen, PhD Bioinformatics and Computational Biology

November 29, 2021 11:00 AM - 1:00 PM

All are invited to attend the defense. For more information please contact Graduate Coordinator at dstgerma@gmu.edu

Candidate: Leena Nezamuldeen

Program: PhD, Bioinformatics and Computational Biology

Date: Monday, November 29, 2021

Time: 11:00 AM

Zoom Link: <https://gmu.zoom.us/j/94616959884?pwd=WEtOT3l6Tk93RTZtbitHeFhiWllHdz09>

Title: Automation of Text Curation on the Effect of Genetic Variants to Predict the Target of Therapy for Neurodevelopment Disorders

Committee Chair: Dr. M. Saleet Jafri

Committee Members: Dr. Aman Ullah, Dr. Iosif Vaisman, Dr. Robert Lipsky

ABSTRACT:

Autism spectrum disorder is a neurological illness that is extremely complex. It has a broad spectrum of symptoms that vary between individuals and fluctuate throughout the course of the disorder. For decades, experts have faced difficulties to understand the causes and treatment of this puzzling disorder. While advances in genomic sequencing have aided in identifying the altered genes (variants) associated with autism and the alterations they induce in translated proteins, evaluating the effect of these mutations on protein function remains a challenge. Numerous sorts of studies have been undertaken to determine the effect of mutations on protein function, including wet lab and intensive computer analysis. The purpose of this dissertation thesis is to develop a novel system that utilizes advanced artificial intelligence techniques in text and data mining to extract information from previous studies in order to develop a computational pathway model that can have a beneficial effect on treatment decisions and personalized medicine for autism patients. Once established, this strategy could be applied to other complex disorders.