

MACQUARIE UNIVERSITY
STATISTICS DEPARTMENT SEMINAR

Speaker: Dr Dana Pascovici, Australian Proteome Analysis Facility, Macquarie University

Date: Tuesday 5 June 2018, Time 1-2pm

Venue: Room 264, 14 Sir Christopher Ondaatje Ave

Title: Recent Trends in Proteomics Experiments

Abstract:

The Australian Proteome Analysis Facility at Macquarie has been around for 25+ years, with the simple brief of helping people derive scientific insights from measurements of protein amounts -- including their pieces, modifications, functions and networks. Over the last few years, the trends have been towards larger and more complex experiments, a greater variety of techniques for quantitation, and an increasing expectation of finding some insight rather than simply describing a complex dataset with a few nice pictures. Each of these trends presents an opportunity for data analysis. With more complex experiments comes the need to implement more interesting analysis pipelines. In the quantitation technique realm, we saw the move from simply counting protein pieces as a proxy of abundance (spectral counting), to implementing machine learning approaches to aid with recent mass spectrometry techniques such as SWATH. Finally the task of finding some insight remains the most time consuming, with many more tools now available but no simple path to biologically relevant findings. This talk will illustrate these changes and ensuing needs for data analysis and statistics, in the context of experiments from human disease, plants and bacteria.

Enquiries: Dr Georgy Sofronov

Email: georgy.sofronov@mq.edu.au