



THE FIELDS INSTITUTE  
CENTRE FOR MATHEMATICAL MEDICINE

# COMPUTATIONAL MODELS FOR NEURODEGENERATION

OCTOBER 26, 2018: 9AM - 5PM

The last decade has witnessed important advances in a wide spectrum of applications and methodologies in the realm of Computational Neurodegeneration. In particular, up to now there has not been a single source of detailed descriptive interpretations on the bringing up of neurodegeneration research, mathematical modeling and computational approaches. With this workshop, we aim to provide a comprehensive orientation work to better describe this new research area. Computational Neurodegeneration embraces a holistic approach by offering a synergy of numerous approaches and novel qualities to be gained by using mathematical methodologies applied with computational methods in the study of neurodegeneration.

This workshop reviews the central issues and methodological approaches of the main mathematical topics related to the field for which we pursue a thorough overview. New techniques and platforms are described which combine advances in biomedical sciences and computing. It also conveys more advanced knowledge presenting the mathematical tools that are currently applied, thus serving both as a starting point for an in-depth study of a specific area, as well as a quick reference source for the expert by reflecting the state of the art and future prospects. The workshop includes topics that are usually missing or are only marginally represented in standard non-interdisciplinary conferences.

## SPEAKERS

Panayiotis Vlamos (Ionian University)

Provata Astero (Institute of Nanoscience & Nanotechnology, NCSR Demokritos, Complex Systems and Applications (COSA) Network)

Maria Hadjinicolaou (Hellenic Open University)

Themis Exarchos (Ionian University)

Greg Anderson (Justice Institute of British Columbia)

Ioannis Tarnanas (University of Bern, ARTORG Center for Biomedical Engineering Research)

Michael Harney (Health Catalyst)

Phivos Mylonas (Ionian University)

Ilias Kotsireas (Wilfrid Laurier University-Waterloo)

For more information, please visit:

[www.fields.utoronto.ca/activities/18-19/neurodegeneration](http://www.fields.utoronto.ca/activities/18-19/neurodegeneration)



THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

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