



# Following the evolution of TheVirtualBrain's multiscale modelling approach

SEMINAR & VISITING SPEAKER SERIES

## DATE

Monday, January 8th, 2024

TIME 11:00 AM to 12:00 AM

## LOCATION

A POTEX 050

## SPEAKER

Randy McIntosh, PhD

Professor, Department of Biomedical Physiology & Kinesiology, Simon Fraser University. Director, Institute for Neuroscience and Neurotechnology

## BIO

I hold a PhD in psychology and neuroscience with a strong background in statistics. My research journey began at the Rotman Research Institute, University of Toronto, where I developed a keen interest in understanding aging and cognition. Through international collaborations, we created TheVirtualBrain (thevirtualbrain.org), a groundbreaking platform that unites global research efforts. My vision encompasses two key objectives: 1) integrating our modeling platform into clinical decision-making processes and 2) establishing a user-friendly cloud-based system for brain modeling in research, clinical applications, and education. I've recently joined Simon Fraser University, where my research will play a pivotal role in the new Institute for Neuroscience and Neurotechnology..

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Topics: computational neuroscience, dementia, epilepsy, neuroimaging

## ABSTRACT

TheVirtualBrain (TVB) was introduced to the neuroscience community a decade ago. It was the first platform for the creation of large-scale simulations of human brain networks, and has continued to evolve as a community project, extending to multiple basic and clinical applications, as well as extensions to models of rodent and macaque brains. My talk will review some key milestones and cover the good and not-so-good decisions we made in building this platform.

## OBJECTIVES

- 1) Understand the basic framework for connectome-based brain simulation with TheVirtualBrain (TVB)
- 2) Consider the applications of TVB modelling
- 3) Consider potential for extension of TVB models to new indications.

Join Zoom Meeting

<https://umanitoba.zoom.us/j/69287093490?pwd=bU-Jwd00zMjJGdVcrS09kYnZqajl0QT09>

Meeting ID: 692 8709 3490

Passcode: 377420