

Computational methods (NEURON development)

We seek a highly motivated Postdoctoral Associate to advance the frontiers of neuroscience simulation. Related lab projects include: combining machine learning and mechanistic modeling, multisimulation (interoperation with other tools), high-resolution simulations of subcellular chemical dynamics, and algorithm development (GPUs, initialization, performance enhancements). The Postdoctoral Associate will lead one or more of these projects and will present this work at conferences, in publications, and in the form of open-source software. Mentorship and career development opportunities will be tailored to the Postdoctoral Associate's interests. The successful candidate will join the McDougal lab (Biostatistics/Health Informatics, Computational Biology and Bioinformatics, Wu Tsai Institute, Biomedical Informatics and Data Science). We are major contributors to the development of the NEURON simulator and run the ModelDB model discovery platform. We additionally have a wide-range of collaborations at Yale and beyond, applying informatics methods to solve biomedical challenges.

Qualifications Applicants should hold or be about to complete a PhD in a quantitative field (e.g., mathematics, computer science), neuroscience, or a related field. Strong programming skills in Python and C are essential, as is scientific excellence as demonstrated through publication history. Experience with the NEURON simulator, in machine learning, numerical methods, and/or GPU computing is desirable, but not required.

Application Instructions Please apply online at <https://apply.interfolio.com/135170> Interested individuals should submit a CV, cover letter, and contact information for three professional references.

Review of applications will begin immediately and will continue until the position is filled. Initial appointment is for one year with the possibility of renewal. Questions regarding this position should be directed to robert.mcdougal@yale.edu