



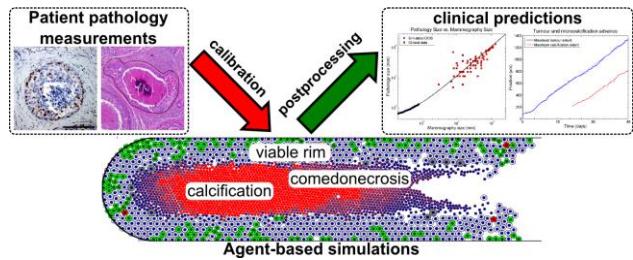
UNIVERSITY OF SOUTHERN CALIFORNIA

Department of Medicine

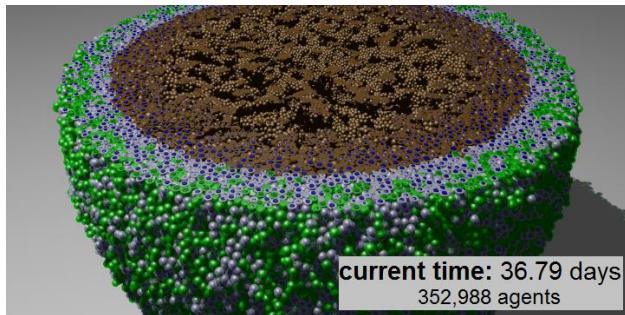
Postdoctoral researcher in computational oncology

Center for Applied Molecular Medicine (CAMM),
Keck School of Medicine – University of Southern California (Los Angeles, CA USA)
Macklin Math Cancer Lab (<http://MathCancer.org>)

About CAMM, CICO and Macklin Lab: The Center for Applied Molecular Medicine, as the lead institution of an innovative NCI-funded physical sciences oncology center (PS-OC), is committed to applying cross-disciplinary approaches to cancer. Our unique center brings physical scientists, mathematicians, biologists, and clinicians together for day-to-day collaboration. The Consortium for Integrative Computational Oncology (CICO)—an outgrowth of two such PS-OCs—aims to develop clinically-oriented computational tools to fight cancer. As part of these efforts, the Macklin Math Cancer Lab (MathCancer.org) is developing state-of-the-art multiscale cancer simulators that integrate experimental and clinical data to predict cancer progression and therapy response *in individual patients*. We aim to accelerate discovery, challenge and refine cancer biology orthodoxy, and put powerful patient-calibrated tools in the hands of doctors to improve care.



Position: The Macklin Lab is looking for a talented computational modeler/scientist to develop mechanistic computational models of cancer growth, therapy response, and biochemical/biomechanical tumor-host interactions. The postdoctoral researcher will be directly involved in: refining our multiscale cell and tissue models; integrating signaling and therapy response models; refining our calibration methods; developing data/model sharing standards; developing standardized multi-model interfaces; and applying our models to quantitative studies including breast and prostate cancer, lymphoma, metastases, and bioengineered tissues. The position is open for an immediate start, and will remain open until filled by the right candidate.



The appointed candidate will have the opportunity to interact with biologists, physical scientists, mathematicians, and clinicians on a daily basis while gaining firsthand experience in moving state-of-the-art computational modeling from the blackboard toward the bedside. The candidate will

have access to excellent resources through USC, the PS-OC network (<http://physics.cancer.gov>), and CICO.

Qualifications: The ideal candidate will hold a Ph.D. in mathematics, computer science, engineering, or a related field, with expertise in one or more of: agent-based models, cell signaling, receptor trafficking, cell phenotype models (cell cycle, apoptosis, etc.), cell and tissue biomechanics and motility, response to cytotoxic and targeted therapies, transport, angiogenesis, continuum and stochastic models, coarse-graining, and multiscale methods. Strong computer programming skills are preferred (especially cross-platform C++ and Matlab). Open source, image processing, and parallel computing experience are encouraged. Experience in parameter estimation and/or calibrating to experimental and clinical data is highly desirable. Must have at least two relevant first-author papers.

The successful candidate is expected to work in collaboration with multidisciplinary teams of biologists, physical scientists, mathematicians, engineers, computer scientists, and clinicians. Good communication and writing skills are essential, as is creativity. We seek an individual who is driven to develop mathematical tools that give biological insight and will one day help improve clinical care.

To apply: Send an email with subject “postdoc application” to Paul.Macklin@usc.edu including:

- (1) Your curriculum vitae
- (2) PDF copies of your best two lead-authored papers (submitted papers/papers in review fine)
- (3) The names of three references
- (4) A brief (4 pages max) research statement, detailing why you are the right candidate for the job

For best consideration, submit all materials by **noon (Pacific Time) on July 22, 2013**.