

A research associate level **software developer** to assist in the development of the CompuCell3D multi-cell simulation environment for Developmental Biology, Cancer and Toxicology Modeling. The candidate will develop modules to extend the capabilities of the CC3D environment and to improve user support. The candidate should have at least 4 years of experience developing C++ programs, be comfortable with open-source development and have participated in the development of large-scale scientific software. Extensive experience with using scripting languages (Python preferred) required. Experience in PyQt or Qt GUI development is a definite plus. Experience in at least two of the following is also required: modeling environment development, GUI development, data-analysis tool development, multithread optimization and symmetrical domain decomposition methods using OpenMP, multi-processor algorithm development using MPI, scientific GPU programming, lattice-gas or lattice-Boltzmann fluid dynamics solvers, reaction-kinetics modeling or finite-element environment development. Independence and the ability to develop software collaboratively are both essential as are developed writing skills. The successful candidate will also have experience documenting software and developing appropriate training materials and training exercises. Experience in domain specific XML-based language development or ontology development a plus, but not required. The applicant should have at least a B.S. level of experience in either biology, physics, biochemistry or bioengineering, and either M.S. or Ph.D.-level expertise in an appropriate computational or scientific discipline (physics, biology, chemistry, mathematics, computer science, informatics, cognitive science).

Note: All applicants will work in an interdisciplinary team including toxicologists, geneticists, developmental biologists, computer-scientists, physicists and mathematicians to develop large-scale approaches to understanding the principles of development underlying teratogenicity, normal development and developmental diseases like cancer. Interest in regenerative biology and tissue engineering appreciated. Starting salary range will be between \$30,000 and \$70,000 per year plus standard health insurance and retirement benefits. Salary dependant on experience and qualifications. Initial appointment for one year beginning Dec. 1, 2009, renewable for up to three years depending on performance and funding availability. Send CV, research summary and 2 papers or projects, along with a brief statement of relevance of background to position applied for, to Prof. James A. Glazier, glazier@indiana.edu The Biocomplexity Institute Multidisciplinary Science Building (MSP) 1 Simon Hall 047