



University of Utah
School of Medicine
Eccles Institute of Human Genetics

Postdoc, graduate student, & software developer positions in computational genetics Marth laboratory

USTAR Center for Genetic Discovery, Department of Human Genetics, University of Utah



MAY 7, 2018

Gabor Marth's laboratory (<http://marthlab.org>) develops novel computational algorithms for detecting and interpreting genomic variants and mutations; and tracking tumor evolution across relapse, chemo-resistance, and metastasis. We are also building web-based analysis tools (<http://iobio.io>) for intuitive, interactive analysis of genomic and clinical *big data*. We participate in large genomic consortium projects such as the Simon's Foundation Autism Research Initiative. Together with clinician-scientist collaborators, we are developing software tools to aid personalized medicine and precision oncology in the clinic. A representative list of our projects:

- Graph approaches for genome representation, mapping, genetic variant discovery, and variant interpretation
- Reference-free, k-mer methods for detecting germline *de novo* mutations and tumor somatic mutations
- Algorithms for reconstructing tumor subclone evolution longitudinally, across multiple time points during a cancer patient's disease progression, and spatially, across multiple metastatic sites
- Computational methods for dissecting phenotypic cancer evolution at single-cell resolution, single cell DNA and RNA sequencing algorithm development
- Cell free circulating tumor DNA based biomarker development in brain cancers
- A web-based tool suite for clinician-driven diagnostic disease variant interrogation
- A web-based precision oncology tool suite

We are looking for postdoctoral researchers, graduate students, and scientific/web programmers, to drive our projects. You will join a vibrant community of computational and experimental scientists, as part of the USTAR Center for Genetic Discovery (<http://ucgd.genetics.utah.edu>), within the Eccles Institute of Human Genetics on the University of Utah Medical School campus in Salt Lake City, UT.

For more information or to apply please contact Dr. Gabor Marth at gmarth@genetics.utah.edu.

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