

# Celia Siu

<http://csiu.github.io>

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## EDUCATION

### Pursuing a Master's degree, Bioinformatics

Sept.2014 - Present

- University of British Columbia, Vancouver, BC
- Supervised by Dr. Steven Jones at the Genome Sciences Centre, BC Cancer Agency
- 4 month lab rotations with Steven Jones, Wyeth Wasserman, and Denise Daley

### Bachelor of Science, Biochemistry

Sept.2008 – May.2013

- University of British Columbia, Vancouver, BC
- Completed the Co-operative Education Program

## M.SC. THESIS PROJECT

“Characterization of the normal thyroid reference epigenome”

In this study, we compare the consistency of chromatin state annotations across the epigenomes from the grossly uninvolved tumour-adjacent thyroid tissue of four human individuals using ChIP-sequencing and RNA-sequencing data. We examine 6 histone modifications, identify chromatin states using hidden Markov models, produce a new metric for model selection, and establish epigenomic maps of 19 chromatin states.

## AWARDS

2016 🏆 CEEHRC Travel Award

2016 🏆 John Bosdet Memorial Fund

2015 🏆 NSERC Canada Graduate Scholarship Master's Award

2014 🏆 CIHR Strategic Training in Health Research in Bioinformatics Award

2013 🏆 NSERC Undergraduate Student Research Award (USRA)

2008 🏆 UBC President's Entrance Scholarship

## PUBLICATIONS

Co-authored in:

- McPherson et al. (2016) Divergent modes of clonal spread and intraperitoneal mixing in high-grade serous ovarian cancer. *Nature Genetics*. doi:10.1038/ng.3573
- Eirew et al. (2015) Dynamics of genomic clones in breast cancer patient xenografts at single-cell resolution. *Nature*, 518(7539):422-6. doi: 10.1038/nature13952
- Leon et al. (2012) Application and evaluation of automated methods to extract neuroanatomical connectivity statements from free text. *Bioinformatics*, 28(22):2963-70. doi: 10.1093/bioinformatics/bts542

Acknowledged in:

- Zoubarev et al. (2012) Gemma: a resource for the reuse, sharing and meta-analysis of expression profiling data. *Bioinformatics*, 28(17):2272-3. doi: 10.1093/bioinformatics/bts430

## PRESENTATIONS

Poster presentation, Intelligent Systems for Molecular Biology (ISMB) 2016 Conference	July 9 & 10, 2016
Poster presentation, BTP/IOP/GSAT 2016 Retreat	March 11, 2016
Oral presentation, Bioinformatics Research Rotation Presentation	July 24, 2015
Oral presentation, Bioinformatics Research Rotation Presentation	March 27, 2015
Oral presentation, Bioinformatics Research Rotation Presentation	November 28, 2014

## EMPLOYMENT HISTORY

**BCCRC | The University of British Columbia** Jan.2014 – Aug.2014

*Research Assistant at the Shah Lab*

- Wrote Bash, Python, and R scripts for downstream analysis and pipeline development
- Produced figures and limited text suitable for scientific manuscripts
- Leveraged parallel computing for analyses on a compute cluster to increase efficiency and decrease runtime

**BCCRC | Provincial Health Services Authority** Sept.2013 – Dec.2013

*Research Intern at the Shah Lab*

- Ran automated analysis pipelines for data processing and data generation
- Wrote Bash and Python scripts to rename files, parse data, and wrap third party software
- Documented observations and comments on platforms such as the Atlassian Confluence Wiki, Atlassian Jira issue tracker, and Atlassian Stash Git management system

**NSERC Undergraduate Student Research Award (USRA)** May.2013 – Aug.2013

*Undergraduate Summer Research Student in the UBC Department of Statistics*

- Contributed to the development of an R toolkit for the management and delivery of data analytic course and research material
- Organized, within a budget, a small meet-and-greet coffee social to acquaint oneself with the UBC Statistics NSERC-USRA students and their supervisors

**UBC Centre for High-throughput Biology** May.2012 – Aug.2012

*Linux System Administrator Assistant*

- Created and updated documentation and protocols for internal use and for end users
- Created and setup user accounts on desktops, servers, and wikis
- Used a variety of softwares – including Nagios, Bacula, and CFengine – to monitor, backup, and perform system administrative jobs
- Provided troubleshooting services for users and kept record of the issues, challenges, solutions in Request Tracker

**UBC Centre for High-throughput Biology** Sept.2011 – Apr.2012

*Bioinformatics Research Assistant at the Pavlidis Lab*

- Independently processed and checked the quality of microarray data for the FishManOmics project headed by the Department of Fisheries and Oceans Canada
- Paid attention to detail to analyze, annotate, and curate Gene Expression Omnibus (GEO) datasets that were to be imported into the Gemma database
- Reported issues based on continuous evaluation of lab software (e.g. Gemma) across multiple operating systems including Linux, Windows, and Mac OS

**Biofine International Inc.** May.2011 – Aug.2011  
*Organic Chemistry Synthesis Laboratory Assistant*

- Verbally communicated with supervisors to receive instructions for the execution of experiments
- Researched, experimented, and evaluated the method of Marfey's reaction for enantiomeric resolution of amino acids
- Multitasked in coordination between executing experiments, keeping records, restocking supplies, and cleaning glassware

**A&W Food Services of Canada** July.2007 – Oct.2010  
*Cashier*

**Pacific National Exhibition** Seasonal  
*Concessions Attendant*

- Was a cashier at Triple-O's for 4 seasons: August 2006, 2007, 2008, and 2009

#### **VOLUNTEER EXPERIENCE**

*Helper, Software Carpentry workshop* Oct.2016  
*Wayfinder, St. Paul's Hospital* Feb.2013 – Apr.2013  
*Healthy Heart Resource Centre Clerk, St. Paul's Hospital* May.2013 – Aug.2013