

Patrick Kosuke Kimes, Ph.D.

Contact	<i>Phone:</i> 913-314-4511 <i>Email:</i> patrick.kimes@gmail.com	<i>Web:</i> pkimes.github.io <i>GitHub:</i> github.com/pkimes
Education	University of North Carolina at Chapel Hill Ph.D. Statistics , Certificate in Bioinformatics Advisors: Yufeng Liu , J. S. Marron , D. Neil Hayes Pomona College B.A. Mathematics	August 2015 May 2009
Experience	Roche Sequencing Principal Scientist I, Bioinformatics <i>Pleasanton, CA</i> <ul style="list-style-type: none">◦ Implement and benchmark bioinformatic algorithms for development of molecular diagnostics using PacBio SMRT sequencing technology◦ Provide statistical analyses and consultations for entire development unit Janssen R&D (Johnson & Johnson) Network Pharmacology Intern <i>Spring House, PA</i> <ul style="list-style-type: none">◦ Explored network topology-based algorithms for gene coexpression analysis◦ Delivered analysis pipeline as a complete R package for internal use Lineberger Comprehensive Cancer Center Graduate Research Assistant <i>Chapel Hill, NC</i> <ul style="list-style-type: none">◦ Acting as lead mRNA analyst for The Cancer Genome Atlas (TCGA) Thymoma group◦ Contributing analyses to other TCGA working groups (LUAD, HNSC, PCPG, UVM)◦ Developing visualization and clustering methods for RNA-seq data	June 2015 to Present June 2014 to August 2014 January 2012 to May 2015
Honors	Travel Grant , <i>UW Summer Institute in Statistical Genetics</i> <ul style="list-style-type: none">◦ stipend and fee waiver to attend short courses in Seattle, WA Cambanis-Hoeffding-Nicholson Award , <i>UNC Statistics</i> <ul style="list-style-type: none">◦ highest score on Ph.D. comprehensive written exams Senior Service Award , <i>Pomona College</i> <ul style="list-style-type: none">◦ significant contributions to campus life through leadership Pomona College Scholar , <i>Pomona College</i> Summer Research Grant (SURP) , <i>Pomona College</i>	July 2012 December 2011 May 2009 Spring 2006 to Fall 2007 Summer 2007
Leadership	Co-Organizer , <i>Student Seminar Series, UNC Statistics</i> Head Mentor , <i>Asian Am. Mentoring Program, Pomona College</i> Member , <i>Speaker Series Working Group, Pomona College</i> Intern , <i>Asian Am. Resource Center, Pomona College</i> Mentor , <i>Asian Am. Mentoring Program, Pomona College</i>	August 2012 to May 2015 March 2008 to May 2009 August 2009 to April 2009 August 2007 to May 2008 August 2006 to May 2007

- Publications**
- 1 **Kimes PK**, Liu Y, Hayes DN, and Marron JS. “Statistical significance for hierarchical clustering.” **Revision invited**.
 - 2 **Kimes PK**, Hayes DN, Marron JS, and Liu Y. “Binary large-margin classification with multiple decision rules.” **Statistical Learning and Data Mining**, 2016.
 - 3 Ko YH, Walter V, Catalano M, Yin X, **Kimes PK**, Xiao X and Hayes DN. “Integrative analysis of miRNAs classify two distinct stages of epithelial cell differentiation in head and neck squamous cell carcinoma (HNSCC).” **Cancer Research** (conference abstract), 2015.
 - 4 **The Cancer Genome Atlas Research Network**, “Comprehensive genomic characterization of head and neck squamous cell carcinomas.” **Nature**, 2015.
 - 5 **Kimes PK***, Cabanski CR*, Wilkerson MD, Zhao N, Johnson AR, Perou CM, Makowski L, Maher CA, Liu Y, Marron JS, and Hayes DN. “SigFuge: single gene unsupervised clustering of RNA-seq reveals differential isoform usage among cancer samples.” **Nucleic Acids Research**, 2014. *: *joint first authors*
 - 6 **The Cancer Genome Atlas Research Network**, “Comprehensive molecular profiling of lung adenocarcinoma.” **Nature**, 2014.

- In Prep.**
- 7 **Kimes PK**, Liu Y. “Soft classification using parallel large-margin classifiers.”
 - 8 **Kimes PK**, Liu Y, Marron JS and Hayes DN. “SpliceGraHMs: a tool for the visualization and exploratory analysis of alternative splicing across large cohorts.”

- Talks / Posters**
- 1 “Large-Margin Classification with Multiple Decision Rules,” Joint Statistical Meetings (Chicago, IL), August 2016. [**invited paper/talk**]
 - 2 “Methods and Applications of Statistical Significance of Clustering,” USF Math Colloquium (San Francisco, CA), November 2015. [**invited talk**]
 - 3 “Statistical Significance for Hierarchical Clustering,” Joint Statistical Meetings (Seattle, WA), August 2015. [**contributed talk**]
 - 4 “SigFuge: unsupervised discovery in RNA-seq data,” The Cancer Genome Atlas’ 3rd Annual Scientific Symposium (Bethesda, MD), May 2014. [**poster**]
 - 5 “SigFuge: unsupervised discovery in RNA-seq data,” Lineberger Comprehensive Cancer Center Postdoc/Faculty Research Day (Chapel Hill, NC), September 2013. [**poster**]
 - 6 “Adaptive Nonparametric Tests for the Two-Sample Location Model with Applications to Microarray Data,” Pomona College Summer Research Poster Conference (Claremont, CA), September 2007. [**poster**]

- Skills**
- Computing:**
- *Proficient*: R/Bioconductor, MATLAB, L^AT_EX [[see GitHub](#)]
 - *Familiar*: C++, Java, Python, Git, bash
- Languages:**
- *Native*: English, Japanese

References *Available upon request.*

last updated: December 28, 2015