

STEPHEN D. TURNER, PH.D.

Charlottesville, Virginia, United States

vustephen@gmail.com
www.stephenturner.us
github.com/stephenturner

Summary

- I have spent my career working collaboratively with scientists, clinicians, biomedical researchers, and government officials at the forefront of biosecurity, data science, public health, medicine, genomics, and infectious disease.
- Experience in academia (UVA professor and Bioinformatics Core Director and course director for 8 years), industry (professional services with government consulting/contracting 13 years), startups, and independent consulting.
- Principal scientist who can write code, manage hybrid teams, bring in support through external grants and contracts.
- Trained in genetics (PhD), statistics (MS), bioinformatics (postdoc), and public health epidemiology (postdoc).
- Domain expertise: Deep expertise in human genomics, public health, microbial genomics, synthetic biology, biosecurity.
- Seasoned grant & contract proposal writer: capture manager & proposal writer for awards from US Gov.

Education & Credentials

- Postdoctoral Fellowship in Bioinformatics & Epidemiology, University of Hawaii Cancer Center, Honolulu HI
- Ph.D. Computational Human Genetics, Vanderbilt University, Nashville, TN
- M.S. Applied Statistics, Vanderbilt University, Nashville, TN
- B.S. Biology, James Madison University, Harrisonburg, VA
- Registered U.S. Patent Agent (#65905)
- Project Management Professional (PMP)
- Active DOD Top Secret clearance, SCI eligible (counterintelligence polygraph: July 2019), DHS Suitability.

Experience

2025-Present: Associate Professor of Data Science, University of Virginia

- Research, teaching, and research administration as the Assistant Dean of Research.
- Research areas: AI, biosecurity, infectious disease, genomics, data science, human health, synthetic biology.

2023-Present: Form Bio / Colossal Biosciences: Principal Scientist, Principal Bioinformatics Engineer

- Principal data science / bioinformatics engineer developing tools, methods, workflows for genome engineering.
- Senior engineer on a 17-person genotype-to-phenotype team supporting synthetic biology and genome analysis.
- Mentor to junior scientists in NF workflow development, data analysis, R, git, Docker, Linux, GCP, scientific writing.
- Business development lead on grants and contracts with DARPA, DoD, NSF, and other federal government agencies.
- Developed 11 software packages (R/Py) + 9 NF workflows in <18 months, all currently used in production.

2022-Present: Independent Consultant: CDC / Council of State and Territorial Epidemiologists (CSTE)

- Consultant and coach for the CDC/CSTE Data Science Team Training Program (DSTT).
- Mentor to 12 teams of public health practitioners from state and local public health departments nationwide.
- High-level mentorship: executive data science; making decisions with data; effective visualization+communication with stakeholders (public and policymakers); managing data science teams; data science project management.
- Technical mentorship: R/Shiny/ggplot2/Looker/Tableau/Etc. for effective analysis, communication, dashboards, etc.

2019-2023: Signature Science: Senior Staff Scientist, Science & Technology Advisor

- Lead developer on data analytics software development for government contracts valued at >\$100MM (DOD, CDC).
- Principal investigator on grants awarded by CDC for developing statistical forecasting methods for infectious disease.
- Supervisor to 8 junior developers specializing in data science + AI/ML applied to genomics for infectious disease.
- Primary developer on 10+ software packages put into operation by the US Government for analysis and visualization.
- Internal Research and Development (IRAD) founding scientist in the SigSci Center for Advanced Genomics.
- First author or senior author on several peer-reviewed scientific publications.
- Business development lead for federal government opportunities from DoD, DARPA, IARPA, DHS, and others.

2011-2019: University of Virginia School of Medicine: Assistant Professor, Bioinformatics Core Director

- Founding director of the Bioinformatics Core: analysis, visualization, interpretation of large biomedical data.
- Co-author of over 50 peer-reviewed scientific publications in collaboration with UVA investigators.
- Lead developer of custom-built data analysis + visualization pipelines, tools for analyzing large-scale genomic data.
- Supervisor and mentor to junior scientists, postdocs, and graduate students for data analysis and visualization.
- Founding director of the iTHRIV Biomedical Data Science course: covering data science including visualization.
- Launched the “Biomedical Data Science” graduate course, oversubscribed every semester. Materials on GitHub.
- Launched a series of short courses on biomedical data science similar to the above graduate course.

STEPHEN D. TURNER, PH.D.

Charlottesville, Virginia, United States

vustephen@gmail.com
www.stephenturner.us
github.com/stephenturner

Technical Expertise

- Scientific computing: R, R/Tidyverse, R/Bioconductor, R package development (expert), Docker for containerizing and deploying workflows (expert), Git/GitHub for collaborative development (expert), workflow development with Nextflow (proficient), SQL (proficient), Python (proficient), cloud architecture and development with GCP / AWS (proficient).
- Life sciences expertise: Human genetics, microbial genomics, non-model organism genomics, transcriptomics (RNA-seq), public health, infectious disease modeling and forecasting, biosecurity, synthetic biology, genome engineering.
- Business: Consulting & professional services, solutions architecture, customer success, strategy, pricing.
- Business development: proposal development for genomics, bioinformatics, public health, data science.
- Leadership: >10 years leading, mentoring, managing teams of developers, engineers, scientists.
- Regulatory: Secure software development and deployment onto sensitive US Government Defense systems.
- Outreach: Blog/Newsletter since 2009 (previously, Getting Genetics Done, >20,000 monthly pageviews, currently blog.stephenturner.us). Active in bioinformatics, computational biology, data science on Bluesky, X, misc. Slacks.
- Teaching: Course director for advanced courses in biological data science, and data science short courses for biologists.

Select Publications

Select publications and preprints. Full Google Scholar profile linked from www.stephenturner.us.

- **Turner SD.** biorecap: an R package for summarizing bioRxiv preprints with a local LLM. *arXiv* 2408.11707 (2024).
- Nagraj VP, ..., **Turner SD.** PLANES: Plausibility Analysis of Epidemiological Signals. *medRxiv* 10.1101/2024.08.22.24312449 (2024).
- Mathis S, ..., **Turner SD,** et al. Evaluation of FluSight influenza forecasting in the 2021–22 and 2022–23 seasons with a new target laboratory-confirmed influenza hospitalizations. *Nature Communications* 15(1)6289 (2024).
- Nagraj VP, Williams D, **Turner SD.** Evaluating Performance of Near-Term Influenza Forecasters Across Consecutive Seasons. *medRxiv* 2023.09.28.23296216 (2023).
- **Turner SD,** et al. tfboot: Bootstrapping and statistical analysis for transcription factor binding site-disrupting variants in gene sets. *bioRxiv* 2023.07.14.549004 (2023).
- Nagraj VP and **Turner SD.** pracpac: Practical R Packaging with Docker. *arXiv* 2303.07876 (2023).
- Russell, DA, ..., **Turner SD,** et al. Developmental Validation of the Illumina Infinium Assay Using the Global Screening Array (GSA) on the iScan System for Use in Forensic Laboratories. *Forensic Genomics*. In press (2023).
- Peck, MA., **Turner SD.** Internal Validation of the ForenSeq Kintelligence Kit for Application to Forensic Genetic Genealogy. *Forensic Genomics* 2(4):1-12 (2022).
- Truong, VQ, ..., **Turner SD,** et al. Quality Control Procedures for Genome-Wide Association Studies. *Current Protocols* 2(11):1-21 (2022).
- **Turner SD,** et al. Evaluating the Impact of Dropout and Genotyping Error on SNP-Based Kinship Analysis With Forensic Samples. *Frontiers in Genetics* 29: 10.3389/fgene.2022.882268 (2022).
- **Turner SD.** KGP: An R Package with Metadata from the 1000 Genomes Project. *arXiv* 2210.00539 (2022).
- **Turner SD,** et al. Forecasting Influenza-Like Illness (ILI) during the COVID-19 Pandemic. *BioRxiv* 10.1101/2022.10.27.22281617 (2022).
- Nagraj VP, ..., **Turner SD.** Relationship Inference with Low-Coverage Whole Genome Sequencing on Forensic Samples. *Forensic Genomics* 2(3) 81-91 (2022).
- **Turner SD,** et al. k2v: A Containerized Workflow for Creating VCF Files from Kintelligence Targeted Sequencing Data. *BioRxiv* 2022.11.21.517402 (2022).
- Nagraj VP, ... **Turner SD.** Automated Infectious Disease Forecasting: Use-cases and Practical Considerations for Pipeline Implementation. *arXiv* 2208.05019 (2022). In: *Proceedings of the Epidemiology meets Data Mining and Knowledge Discovery* (2022).
- Cramer, EY, **Turner SD,** et al. Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the United States. *Proceedings of the National Academy of Sciences* 119, e2113561119 (2022).
- **Turner SD** et al. SNP-based kinship analysis with forensic samples: evaluating the impact of dropout and genotyping error on genome-wide relatedness and IBD segment approaches. *Frontiers in Genetics* 13: 1664-8021 (2022).
- **Turner SD** et al. skater: an R package for SNP-based kinship analysis, testing, and evaluation. *F1000Research* 11, 18 (2022).
- Nagraj, VP, ..., **Turner SD.** vcferr: Development, Validation, and Application of a SNP Genotyping Error Simulation Framework. *F1000Research* 11:775 (2022).
- Koepfel, ... **Turner SD.** Environmental DNA sequencing data from algal blooms in Lake Erie using Oxford Nanopore MinION. *bioRxiv* 2022.03.12.483776 (2022) doi:10.1101/2022.03.12.483776.

STEPHEN D. TURNER, PH.D.

Charlottesville, Virginia, United States

vustephen@gmail.com
www.stephenturner.us
github.com/stephenturner

- Dickinson, AJ, **Turner SD**, et al. E-liquids and vanillin flavoring disrupts retinoic acid signaling and causes craniofacial defects in *Xenopus* embryos. *Developmental Biology* 481, 14-29 (2022).
- Nagraj, V, ... **Turner SD**. FOCUS: Forecasting COVID-19 in the United States. *medRxiv* 2021.05.18.21257386 (2021) doi:10.1101/2021.05.18.21257386.
- Melssen, MM, **Turner SD**, et al. Characterization and comparison of innate and adaptive immune responses at vaccine sites in melanoma vaccine clinical trials. *Cancer Immunol Immunother* (2021) doi:10.1007/s00262-020-02844-w.
- Sun, T. ..., **Turner SD**, et al. Sexually Dimorphic Crosstalk at the Maternal-Fetal Interface. *J Clin Endocrinol Metab* (2020) 105.
- Bannon, ..., **Turner SD**, et al. Gene expression in mouse muscle over time after nickel pellet implantation. *Metallomics* (2020) 10.1039/c9mt00289h.
- Burgess, ..., **Turner SD**, et al. Gut microbiome communication with bone marrow regulates susceptibility to amebiasis. *Science*. Submitted. Preprint: *bioRxiv* 10.1101/487652.
- Liebergall SR, ..., **Turner SD**, et al. Inflammation Triggers Liver X Receptor-Dependent Lipogenesis. *ASM Molecular and Cellular Biology* (2020) 40(2):e00364-16.
- Operario DJ, ..., **Turner SD**, et al. Mycobacterium Avium Complex Diversity within Lung Disease as Revealed by Whole Genome Sequencing. *American Journal of Respiratory and Critical Care Medicine* (2019) 10.1164/rccm.201903-0669LE.
- Frisbee A, ..., **Turner SD**, et al. IL-33 drives group 2 innate lymphoid cell-mediated protection during *Clostridium difficile* infection. *Nature Communications* (2019) 10:2712.
- Berendam SJ, ..., **Turner SD**, et al. Comparative Transcriptomic Analysis Identifies a Range of Immunologically Related Functional Elaborations of Lymph Node Associated Lymphatic and Blood Endothelial Cells. *Frontiers in Immunology* (2019) 10:816.
- McCann JV, ..., **Turner SD**, et al. Endothelial miR-30c suppresses tumor growth via inhibition of TGF- β -induced Serpine1. *Journal of Clinical Investigation* (2019) 129:1654-70.
- Matume ND, ..., **Turner SD**, et al. Characterization of APOBEC3 variations in a South African population. *BMC Medical Genetics* (2019) 20:21.
- Lee B, ..., **Turner SD**, et al. Differential Gene Expression during Placentation in Pregnancies Conceived with Different Fertility Treatments Compared to Spontaneous Pregnancies. *Fertility and Sterility* (2019) 111(3):535-546.
- Makin RD, ..., **Turner SD**, et al. RF/6A Chorioretinal Cells Do Not Display Key Endothelial Phenotypes. *Investigative Ophthalmology & Visual Science* (2018) 59(15):5795-5802.
- Wahl SE, ..., **Turner SD**, et al. Transcriptome analysis of *Xenopus* orofacial tissues deficient in retinoic acid receptor function. *BMC Genomics* (2018): 19:795.
- **Turner SD**. qqman: an R package for visualizing GWAS results using Q-Q and manhattan plots. *Journal of Open Source Software* (2018). 3(25), 731. DOI:10.21105/joss.00731.
- Hao Yi, ..., **Turner SD**, et al. TGF- β Signaling Limits Lineage Plasticity in Prostate Cancer. *PLoS Genetics* (2018). 14(5).
- Xu B, ..., **Turner SD**, et al. Alteration of transporter activities in the epididymides of infertile initial segment-specific Pten knockout mice. *Biology of Reproduction* (2018). 10.1093/biolre/iy073.
- Gonzalez TL, ..., **Turner SD**, et al. Sex Differences in the First Trimester Human Placenta Transcriptome. *Biology of Sex Differences* (2018). 9(4):1-23.
- Shi Y, ..., **Turner SD**, et al. Neuromedin B Expression Defines the Mouse Retrotrapezoid Nucleus. 37(48), 11744-11757 (2017).
- Brautigan DL, ..., **Turner SD**, et al. Lysolecithin as feed additive enhances collagen expression and villus length in the jejunum of broiler chickens. *Poult. Sci.* pex078, (2017).
- Operario, D. J., ..., **Turner SD**, et al. Prevalence and extent of heteroresistance by next generation sequencing of multidrug-resistant tuberculosis. *PLoS One* 12, e0176522 (2017).
- Zhang Y, ..., **Turner SD**, Petricoin EF, Gray LS, Abounader, R. Targetable T-type calcium channels drive glioblastoma. *Cancer Research* (2017). 10.1158/0008-5472.CAN-16-2347.
- Operario DJ, **Turner SD**, et al. Prevalence and extent of heteroresistance by next generation sequencing of multidrug-resistant tuberculosis. *PLoS ONE* (2017). 12(5):e0176522.
- Brautigan DL, **Turner SD**, et al. Lysolecithin as feed additive enhances collagen expression and villus length in the jejunum of broiler chickens. *Poultry Science* (2017) pex078.
- Anderson AE, **Turner SD**, et al. Tgif1 and Tgif2 repress expression of the RabGAP Evi5l. *Molecular and Cell Biology* (2016) 37 (5) e00527-16.
- Langouet-Astrie C, **Turner SD**, et al. RNA sequencing analysis of the developing chicken retina. *Nature Scientific Data* (2016) 3:160117.

STEPHEN D. TURNER, PH.D.

Charlottesville, Virginia, United States

vustephen@gmail.com
www.stephenturner.us
github.com/stephenturner

- Houssin NS, **Turner SD**, et al. The role of JNK during buccopharyngeal membrane perforation, the last step of embryonic mouth formation. *Developmental dynamics* (2016). 246:100-115.
- Han CZ, **Turner SD**, et al. Macrophages redirect phagocytosis by non-professional phagocytes and influence inflammation. *Nature* (2016) 539:570-574.
- Tan S, **Turner SD**, et al. Acid ceramidase is upregulated in AML and represents a novel therapeutic target. *Oncotarget* (2016). 7(50):83208-83222.
- Filiano AJ, **Turner SD**, et al. Unexpected role of interferon-gamma in regulating neuronal connectivity and social behaviour. *Nature* (2016) 535:425-429.
- Arambula SE, **Turner SD**, et al. Impact of Low Dose Oral Exposure to Bisphenol A (BPA) on the Neonatal Rat Hypothalamic and Hippocampal Transcriptome. *Endocrinology* (2016) 157:3856-3872.
- Cherepanova OA, **Turner SD**, et al. Activation of the ESC pluripotency factor OCT4 in smooth muscle cells is atheroprotective. *Nature Medicine* (2016). 22:657-665.
- Barrett MJ, **Turner SD**, et al. Investigation of Genetic Variants Associated with Alzheimer Disease in Parkinson Disease Cognition. *J Parkinsons Dis* (2016) 6:119-124.
- Li R, **Turner SD**, et al. Xanthophylls lutein and zeaxanthin modify gene expression and induce synthesis of hyaluronan in keratinocyte model of human skin. *Biochemistry and Biophysics Reports* (2015).
- Gilchrist CA, **Turner SD**, et al. Whole-Genome Sequencing in Outbreak Analysis. *Clinical Microbiology Reviews* (2015). 3:541-563.
- Cronk JC, **Turner SD**, et al. Methyl-CpG Binding Protein 2 Regulates Microglia and Macrophage Gene Expression in Response to Inflammatory Stimuli. *Immunity* (2015). 42:679-91.
- Mathers AJ, **Turner SD**, et al. *Klebsiella pneumoniae* carbapenemase (KPC) producing *K. pneumoniae* at a Single Institution: Insights into Endemicity from Whole Genome Sequencing. *Antimicrobial Agents and Chemotherapy* (2015). 3:1656-63.
- Barbery CE, **Turner SD**, et al. Alterations in microRNA Expression in a Murine model of Diet-Induced Vasculogenic Erectile Dysfunction. *Journal of Sexual Medicine* (2015). 3:621-630.
- Hurney CA, **Turner SD**, et al. Normal table of embryonic development in the four-toed salamander, *Hemidactylium scutatum*. *Mechanisms of Development* (2015). 136:99-110.
- Ritchie M, **Turner SD**, et al. Electronic medical records and genomics (eMERGE) network exploration in cataract: several new potential susceptibility loci. *Molecular Vision* (2014). 20:1281-95.
- Giorgi EE, **Turner SD**, et al. Fine-mapping IGF1 and prostate cancer risk in African Americans: The Multiethnic Cohort Study. *Cancer Epidemiology, Biomarkers & Prevention* (2014). doi:10.1158/1055-9965.EPI-14-0333.
- Budowle B, **Turner SD**, et al. Validation of High Throughput Sequencing and Microbial Forensics Applications. *Investigative Genetics* 5:9 (2014) doi:10.1186/2041-2223-5-9.
- Allen EK, **Turner SD**, et al. Characterization of the nasopharyngeal microbiota in health and during rhinovirus challenge. *Microbiome* 2:22 (2014) doi:10.1186/2049-2618-2-22.
- Song W, **Turner SD**, et al. Glucagon Regulates Hepatic Kisspeptin to Impair Insulin Secretion. *Cell Metabolism* 19(4):667-681 (2014).
- Belyea B, **Turner SD**, et al. Identification of renin progenitors in the mouse bone marrow that give rise to B-cell leukaemia. *Nature Communications* 5:3273 (2014).
- Prince J, **Turner SD**, et al. Multiparametric Analysis of Host Response to Murine Cytomegalovirus in MHC Class I-Disparate Mice Reveals Primacy of D^k-Licensed Ly49G₂⁺ NK Cells in Viral Control. *J Immunology* 191:4709-19 (2013).
- Scian MJ, **Turner SD**, et al. Identification of Biomarkers to Assess Organ Quality and Predict Post-Transplant Outcomes. *Transplantation*. 94(8): 1-8 (2012).
- **Turner SD**, et al. Knowledge-Driven Multi-Locus Analysis Reveals Gene-Gene Interactions Influencing HDL Cholesterol Level in Two Independent EMR-Linked Biobanks. *PLoS ONE*. 6(5):e19586 (2011).
- **Turner SD**, et al. Quality Control procedures for Genome-Wide Association Studies. *Current Protocols in Human Genetics*. Chapter 1, Unit 1.19 (2011). PMID:21234875.
- **Turner SD**, et al. A Multivariate Analysis of Regulatory SNPs: Empowering Personal Genomics by Considering Cis-Epistasis and Heterogeneity. *Pacific Symposium in Biocomputing* (2011). *Pac Symp Biocomput*. 2011:276-287 (2011).
- **Turner SD**, et al. ATHENA: A Knowledge-Based Hybrid Backpropagation-Grammatical Evolution Neural Network Algorithm for Discovering Epistasis among Quantitative Trait Loci. *BMC BioData Mining*. 3:5 (2010).
- **Turner SD**, et al. Incorporating Domain Knowledge into Evolutionary Computing for Discovering Gene-Gene Interaction. *11th Int'l Conference on Parallel Problem Solving From Nature (PPSN), Lecture Notes in Computer Science*. 6238(I):394-403 (2010).
- **Turner SD**, et al. Grammatical Evolution of Neural Networks for Discovering Epistasis among Quantitative Trait Loci. *Lecture Notes in Computer Science*. 6023:86-97 (2010).

STEPHEN D. TURNER, PH.D.

Charlottesville, Virginia, United States

vustephen@gmail.com
www.stephenturner.us
github.com/stephenturner

Courses Taught in Data Science, Data Visualization, Data Analysis

- 2019-2023: Company-internal/proprietary individualized small group workshops and code review sessions on data analysis, visualization, and effective communication to clients, stakeholders, and collaborators.
- 2018-2019: Data Science Course Organizer & Instructor for Translational Health Research Institute of Virginia. *Introduction to Biomedical Data Science for Translational Health Research.*
- 2018: Graduate course at University of Virginia: *Biological Data Science.*
- 2017: Data Science Course Organizer & Instructor for Translational Health Research Institute of Virginia. *Introduction to Biomedical Data Science for Translational Health Research.*
 - 2017: Graduate course at University of Virginia: Biological Data Science.
 - 2017-2018 Health Sciences Library Workshop Series: Organizer and Lead Instructor
 - 4/4/2017: Survival Analysis in R with TCGA data
 - 3/2/2017: Essential Statistics with R
 - 10/30/2017: Advanced Data Visualization with R and ggplot2
 - 11/6/2017: Reproducible Research and Dynamic Documentation
 - 11/13/2017: Essential Statistics with R
 - 2/5/2018: Predictive modeling & forecasting
 - 3/16/2018: Predictive modeling & forecasting
- 2017 Summer: Organizer & instructor: Bioinformatics Workshop for visiting students from Virginia Wesleyan University. Topics include introduction to R, advanced data manipulation and visualization, RNA-seq data analysis, Reproducible Research & Dynamic documentation, and essential statistical analysis.
- 2017 Summer Organizer & instructor: Workshop in Biological Data Science, sponsored by 4-VA for UVA and visiting students from James Madison University. Topics include introduction to R, advanced data manipulation and visualization, phylogenetic tree analysis and annotation, and Reproducible Research & Dynamic documentation.
- 2016: Graduate course at University of Virginia: *Biological Data Science.*
- 2016 Fall: Health Sciences Library Workshop Series: Organizer and Lead Instructor
 - 9/3/2016: Introduction to R
 - 9/22/2016: Advanced Data Manipulation with R
 - 10/13/2016: Advanced Data Visualization with R
 - 10/18/2016: Essential Statistics with R
 - 10/24/2016: RNA-seq data analysis with R
 - 10/25/2016: Reproducible Research and Dynamic Documentation
 - 11/7/2016: Survival analysis in R with TCGA data
- 2015 Spring: Instructor & organizer: R for the life sciences workshop series. Same courses as above.
- 2015 Fall Health Sciences Library Workshop Series: Organizer and Lead Instructor.
 - 2/23/2015: Introduction to R for Life Scientists
 - 2/26/2015: Advanced Data Manipulation with R
 - 3/2/2015: Advanced Data Visualization with R
 - 4/6/2015: R Workshop Series for Life Scientists 1: Introduction to R for Life Scientists
 - 4/9/2015: R Workshop Series for Life Scientists 2: Advanced Data Manipulation
 - 4/13/2015: R Workshop Series for Life Scientists 3: Advanced Data Visualization
- 2015: Instructor & organizer: RNA-seq data analysis bootcamp, 3/23/2015-3/26/2015: Introduction to Linux, cloud computing, genomic analysis, statistics with R.
- 2015: Instructor, Cold Spring Harbor Laboratory DNA Learning Center, 6/9/2015-6/10/2015: RNA-seq quality control and analysis of differential gene expression.
- 2015: Co-instructor / organizer, Software Carpentry Bootcamp, 4/15/2015-4/16/2015: Software Carpentry (2-day computing skills bootcamp).
- 2014: Instructor, Statistical Computing Workshop, 3/18/2014: Introduction to R for Life Scientists.
- 2014: Instructor, Software Carpentry Bootcamp, 3/10/2014: Software Carpentry (2-day computing skills bootcamp).
- 2014: UVA Biomedical Engineering Graduate Course, 2/20/2014: Introduction to Bioinformatics.
- 2013: UNC-Charlotte Bioinformatics Program, 11/15/2013: Bioinformatics-as-a-Service: Applications, Opportunities, and Challenges with Large-Scale -Omics Data
- 2013: Instructor at University of Miami's Genetic Analysis of Complex Human Diseases Course: Examining Gene Expression and Methylation with Next-Gen Sequencing.
- 2012-2013: Many guest lectures in UVA Cell Biology, Public Health, Biomedical Engineering, BIMS.