

## **RegGenSIG**

Orlando, July 9<sup>th</sup> 2016

### **7:30 am – 8:45 am Registration**

### **8:30 am – 10.15 am Session *Regulatory genomics in development***

#### **Chair: Saurabh Sinha**

Julia Zeitlinger (Stowers Institute) – *“Elucidating enhancer mechanisms using genomics”* (30 min)

Chris Rushlow (NYU) – *“Activation of the Drosophila genome by the pioneer factor Zelda”* (30 min)

Vivekanandan Ramalingam (Stowers Institute) – *“The promotor factor Lola regulates gene activation during embryogenesis by making promoters accessible over time”* (20 min)

Sushmita Roy – *“CMINT: Chromatin Module inference on cellular trajectories identifies poised epigenetic states in reprogramming to induced pluripotent stem cells”* (20 min)

### **10:15 am – 10:45 am Morning Coffee Break**

### **10.45 am – 12.05 pm Session *Regulatory genomics and epigenomics***

#### **Chair: Jason Ernst**

Anshul Kundaje (Stanford University) – *“Interpretable, integrative deep learning models for regulatory genomics and epigenomics”* (30 min)

Mathieu Blanchette (McGill University) – *“Studying human gene regulation using paleogenomics”* (30 min)

Mathieu Lupien (University of Toronto) – *“Chromatin context reveals the role of noncoding mutations in cancer”* (30 min)

### **12.05 am – 12.15 pm Flash Talks**

Marco-Antonio Mendoza-Parra – *“A functional genomics explorer for visualizing and comparing large amounts of datasets retrieved in the public domain”*

Maya Botzman – *“POEM: Identifying joint additive effects on regulatory circuits”*

### **12:30 pm - Lunch and poster session**

### **2:00 pm – 3.30 pm Session *Transcription factor specificity***

#### **Chair: Anshul Kundaje**

Ning Shen – *“Determinants of differential DNA binding specificity between closely related transcription factors”* (20 min)

Yaron Orenstein – *“DNA Shape Readout Specificities of Different TF Families”* (20 min)

Shuxiang Ruan – *“An EM Algorithm for Binding Energy Estimation Using HT-SELEX Data”* (20 min)

Timothy Hughes (University of Toronto) – *“Multiparameter network diversity of human C2H2 zinc finger transcription factors”* (30 min)

**3:30 pm – 4:00 pm Afternoon Coffee Break**

**4.00 pm – 6:00 pm Session *New techniques - from enhancer assays to RNA splicing***

**Chair: Sushmita Roy**

Vincent Drury FitzPatrick – *“Discovering the autonomous rules by which sequence drives transcription using a novel massively parallel barcoded reporter assay”* (20 in)

Jonathan Cairns – *“Robust interaction detection in Capture Hi-C connects enhancers and disease SNPs to target genes”* (20 min)

R. Taylor Raborn – *“Promoter architecture and sex-specific gene expression in the microcrustacean *Daphnia pulex* revealed by large-scale profiling of 5'-mRNA ends”* (20 min)

Logan Everett – *“Deep Sequencing of Whole Transcriptomes Across the *Drosophila* Genetic Reference Panel”* (20 min)

Joshua Welch – *“Robust Detection of Alternative Splicing in a Population of Single Cells”* (20 min)