

# 2024 Telluride Workshop on Physical Genomics and Transcriptional Engineering

(February 26-29, 30 min talk + 15 min discussion)

**Organizers:** Vadim Backman & Martin Aryee

**TSRC Host:** Mark Kozak (970) 708-4426

Location: Ah Haa School for the Arts, 155 W Pacific Ave Telluride, CO 81435

## **Monday February 26 (All times are Mountain US)**

9.00am-9.30am: Breakfast

9.30am-9.45am: Welcome (TSRC staff and Vadim)

9.45am-10.30am: Structure and Function of RNA-Dependent Transcription Environments  
**Nick Gilbert, University of Edinburgh**

10.30am-11.15am: RNA-Dependent Chromatin Regulation  
**Adam Schmitt, Memorial Sloan Kettering Cancer Center**

11.15am-11.30am: Break

11:30pm-12.15pm: Super-Resolution Imaging of Chromatin in Health and Disease  
**Melike Lakadamyali, University of Pennsylvania**

12:15pm-1:15pm: Lunch

1.15pm-2.00pm: Principles of Chromosome Territory Organization in Mammalian Cells  
**Nicola Neretti, Brown University**

2.00pm-2.45pm: Visualizing the Dynamic Nature of RNA Polymerase II Promoter Proximal Pausing  
**Seychelle Vos, MIT**

2.45pm-3.00pm: Break

3.00pm-3.45pm: Impact of Chromatin State on Cohesin Loop Extrusion Dynamics  
**Martin Aryee, Harvard University & Dana Farber Cancer Institute**

## **Tuesday February 27:**

2.15pm – 3.00pm: How Do Forces From the Cell's Environment Affect DNA Organization?  
**Vivek Shenoy, University of Pennsylvania**

- 3.00pm-3.45pm: Nucleosome Resolution Monte Carlo, Brownian Dynamics, and Gene Reconstruction Algorithms  
**Tamar Schlick, New York University**
- 3.45pm-4.00pm: Break
- 4.00pm-4.45pm: Investigating Rapid Gene Activation in Response to Mechanical Stress  
**Julien Morival, Cornell University**
- 4.45pm-5.30pm: Do Chromatin Packing Domains Program Transcriptional Memory?  
**Vadim Backman, Northwestern University**
- 6.00pm-8.00pm: **Conference Dinner @ Black Iron, Mountain Village**

**Wednesday February 28:**

- 9:00am Optional Group Ski
- 3.00pm-3.45pm: How Do Protein Condensates (Mis)regulate Chromatin Function?  
**Bo Huang, University of California, San Francisco**
- 3.45pm-4.30pm: Dynamics of 3D Genome Structure and Function  
**Anders Hansen, MIT**
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: Signaling Control of Microglia by Cytoplasmic Polycomb Complex  
**Anne Schaeffer, Icahn School of Medicine at Mt. Sinai**

**Thursday February 29:**

- 8:30am-9:15am: Epigenetics of Virus-Host Interaction  
**Sasha Tarakhovsky, Rockefeller University**
- 9:15am-10:00am: Image-Based 3D Genomics in Health and Disease  
**Siyuan Wang, Yale University**
- 10:00am-10.15am: Break
- 10:15am-11:00am: Searching for Ways to Alleviate Acute Hypoxia Stress  
**Lani Wu, University of California, San Francisco**
- 11:00am-11:45am: The Hunt for Vulnerabilities of Cancer Persister  
**Steven Altschuler, University of California, San Francisco**