

# Program for the 2020 Telluride Workshop on Physical Genomics and Transcriptional Engineering

(February 24 - February 28, ~30 min talk + 15 min discussion)

**Organizers:** Vadim Backman & Caroline Uhler

**TSRC Host:** Mark Kozak (970) 708-4426, Cindy Fusting (970) 708-5069

**Location:** Telluride Depot, 300 S. Townsend St., current home of the Ah Haa School for the Arts and future home of Telluride Science and Innovation Center, Telluride

## Sunday February 23, 2019

5:00-6:30 pm: **Phoenix Bean**, 221 W Colorado Ave, Telluride CO 81320  
Meet and greet – a TSRC representative will be on hand to answer questions. Cash bar and food available for purchase; family & guests welcome.

## Monday February 24

9.15am-9.45am: Breakfast

9.45am-10.00am: Welcome (TSRC staff)

10:00am-10.45am: 4D Chromosome Organization and Gene Expression  
**Anna Lappala, Harvard University**

10:45am-11.30am: Chromosome Organization in Living Human Cells Revealed by Single Nucleosome Imaging  
**Kazuhiro Maeshima, National Institute of Genetics, Toyko**

11:30am-11.45am: Break

11:45am-12:30pm: Large-Scale Compartmental Reorganization Restrains Tumor Progression in Colorectal Cancer  
**Martin Aryee, Harvard University**

12:30pm-1:30pm: Lunch

1:30pm-2:15pm: Structure and Function of Chromatin in Bacteria and Archaea  
**Remus T. Dame, Leiden Institute of Chemistry**

2:15pm-3:00pm: Structure and Function of Chromatin Packing Revealed by Nanoimaging  
**Vadim Backman, Northwestern University**

3:00pm-3.15pm: Break

3:15pm-4.00pm: Inferring 3D Chromatin Configuration via Principal curves  
**Mark Segal, University of California San Francisco**

## **Tuesday February 25:**

- 3.00pm-3.45pm: The role of MORCs in Chromatin Compaction  
**Steve Jacobsen, University of California Los Angeles**
- 3.45pm-4.30pm: Mechanobiology of Cell Reprogramming  
**Song Li, University of California Los Angeles**
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: **TBD**  
**Alexander Tarakhovsky, Rockefeller University**
- 6.30pm-8.00pm: **Conference Dinner** at the Village Table, Mountain Village

## **Wednesday February 26:**

- 3.00pm-3.45pm: The Self-Stirred Genome: Dynamics, Flows and Rheology  
**Alexandra Zhidovska, New York University**
- 3.45pm-4.30pm: Multi-Domain Data Integration: From Observations to Mechanistic Insights  
**Caroline Uhler, MIT**
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: Single-Molecule Nanoscopy Elucidates RNA Polymerase II Transcription at Single Genes in Live Cells  
**Alexandros Pertsinidis, Memorial Sloan Kettering Cancer Center**

## **Thursday February 27:**

- 3.00pm-3.45pm: Transcription within TADs: Dynamic Structure Does Alter Function  
**Anne Shim, Northwestern University**
- 3.45pm-4.30pm: **TBD**  
**GV Shivashankar, National University of Singapore**
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: Three-Dimensional Genome Organization and Somatic Alterations in Human Cancers  
**Kadir Akdemir, MD Anderson Cancer Center**