

# Telluride Workshop: Nuclear Pore Complex/Smart Polymers

**June 21 - June 25, 2022**

**Organizers:** Anton Zilman, University of Toronto  
[zilmana@physics.utoronto.ca](mailto:zilmana@physics.utoronto.ca)

Rob Coalson, University of Pittsburgh, Pittsburgh, PA  
[coalson@pitt.edu](mailto:coalson@pitt.edu)

Tijana Jovanovic-Talisman, City of Hope Comprehensive Cancer Center  
[ttalisman@coh.org](mailto:ttalisman@coh.org)

**TSRC Hosts:** Executive Director, Mike Kozak, 970-708-4426  
Managing Director, Cindy Fusting, [cindy@telluridescience.org](mailto:cindy@telluridescience.org)  
970-708-5069

**Location:** Telluride Intermediate School @ 721 West Colorado Ave.

## Schedule:

### Monday, June 20

5:00pm to 6:30pm - Meet & Greet at the Phoenix Bean, 221 West Colorado Ave.

### Tuesday, June 21

8:30 - 9:20 a.m. Breakfast at the Intermediate School (TSRC), 721 West Colorado Ave  
(You can pick up your identification badge at Intermediate School at this time.)

9:20 - 9:30 a.m. Welcome remarks from the organizers and TSRC

9:30 - 10:15 a.m. Shigeru Amemiya, University of Pittsburgh

**Electrostatic effects on molecular transport through nuclear pore complexes**

10:15 - 11:00 a.m. Aleksei Aksimentiev, U. Illinois, Urbana

11:00 - 11:20 a.m. Coffee break

11:20 - 12:05 p.m. Barak Raveh, Hebrew University of Jerusalem

12:05 - 12:50 p.m. David Cowburn, Einstein College of Medicine

**Probing the fuzzy complexes of the NPC pore**

Lunch

3:00 - 3:45 p.m. Andreas Dahlin, Chalmers University of Technology

**A Fully Artificial Nuclear Pore Complex Using Hydrogen Bonds**

3:45 - 4:30 p.m. Luke Davis, University College London

**The nuclear pore machine: insights from minimal modelling approaches**

6:30 - 7:30 p.m. **Town Talk Panel “Tiny Gatekeepers of the Nano Universe: How Nuclear Pores in our Cells Separate Friend from Foe”**. Participants: Dekker, Rout, Zilman. Moderated by Judy Muller and George Lewis.  
At the Telluride Transfer Warehouse at 201 S. Fir Street in Telluride.

### **Wednesday, June 22**

Morning free

- 2:30 - 3:15 p.m. Siegfried Musser, Texas A&M University  
**Investigating Nucleocytoplasmic Transport via 3D Super-Resolution Single-Molecule Microscopy**
- 3:15 - 4:00 p.m. Roderick Lim, University of Basel
- 4:00 - 4:20 p.m. Coffee break
- 4:20 - 5:05 p.m. Erik Reimhult, University of Vienna
- 5:30 – 7.00 p.m. All-TSRC Picnic in the tent behind the TSRC Facility

### **Thursday, June 23**

- 8:30 - 9:30 a.m. Breakfast at TSRC
- 9:30 - 10:15 a.m. Cees Dekker and Ander Barth, Delft Technical University  
**Biomimetic nuclear pores as a toolbox for studying nuclear transport**
- 10:15 - 11:00 a.m. Patrick Onck, Groningen University  
**Integrative modeling of nucleocytoplasmic transport**
- 11:00 - 11:20 a.m. Coffee break
- 11:20 - 12:05 a.m. Sophie Marbach, Courant Institute, NYU  
**Noise in Nanopores**
- 12:05 - 12:50 p.m. Sergiy Minko, University of Georgia  
**Smart polymers for biomimetic molecular filtration**

Afternoon free

### **Friday, June 24**

- 8:30 - 9:30 a.m. Breakfast at TSRC
- 9:30 - 10:15 a.m. Michael Rout, Rockefeller University  
**Nuclear Pore Complex Structure and Transport**
- 10:15 - 11:00 a.m. Igal Szleifer, Northwestern University  
**Responsive synthetic and biological nanopores**
- 11:00 - 11:20 a.m. Coffee Break

11:20 - 12:05 a.m. Karsten Weis, ETH Zurich  
12:05 - 12:50 p.m. Miao Yu, Johannes Gutenberg University  
**Deciphering the conformations and dynamics of FG-Nucleoporins in situ**

Lunch

2:30 - 3:15 p.m. Rob Coalson, University of Pittsburgh  
3:15 - 4:00 p.m. Anton Zilman, University of Toronto

7:30 p.m. Get together for drinks and food, restaurant TBA

### **Saturday, June 25**

Free day