

Emergent Simplicity in Biophysical Dynamics

A Telluride Workshop, September 8-12, 2025

Telluride Science & Innovation Center
300 S. Townsend St., Telluride, CO 81435

Welcome!

This five-day workshop brings together researchers from across disciplines to uncover emergent simplicities in biophysical dynamics. Expect a blend of stimulating talks, interactive discussions, scenic afternoons in Telluride, and lively evening gatherings.

- Talks: Telluride Science & Innovation Center
- Meals & Socials: Locations vary (see below)

Agenda

Sunday, Sept 7

- 5:00 - 6:30 pm | Meet & Greet at Alibi (Cash Bar)

Monday, Sept 8

- 7:30 - 8:00 am | Breakfast (meeting venue)
- 8:00 - 9:10 am | Introduction & Flash Talks
- 9:20 - 10:30 am | Sean Crosson
Microbial adaptation across fluctuating environments
- 10:40 - 11:50 am | Maggie Johnson
Timing and decision making through self-assembly
- 12:00 - 12:45 pm | Lunch
- 12:45 - 4:00 pm | Free time (explore & hike)
- 4:00 - 5:10 pm | Srividya Iyer-Biswas
A more perfect status quo: On life, time and chance
- 5:20 - 6:30 pm | Zemer Gitai
TBD
- 7:00 pm | Group Dinner at La Marmotte

Tuesday, Sept 9

- 7:30 - 8:00 am | Breakfast
- 8:00 - 9:10 am | James Holehouse
Universal models of diversity growth and regulatory scaling
- 9:20 - 10:30 am | Jennifer Schwarz
Emergent learning in multicellular collectives
- 10:40 - 11:50 am | Brian Munsky
Inferring Predictive Models of Signal-Activated Gene Expression and Using Models to Design Faster and Cheaper Experiments
- 12:00 – 1:00 pm | Lunch
- 1:00 - 2:10 pm | Charles Wright (Note: afternoon talks start at 1 pm)
Quantitative imaging across scales
- 2:20 - 3:30 pm | Amy Schmid
How do gene networks adapt to extreme stress?
- 3:30 – 6:30 pm | Free time
- 6:30 - 7:30 pm | Town Talk - Zemer Gitai

Wednesday, Sept 10

- 7:30 - 8:00 am | Breakfast
- 8:00 - 9:10 am | Sander Govers
Image-based profiling to uncover the blueprint of bacterial replication
- 9:20 - 10:30 am | Chris Kempes
Interspecific laws of life origins to modern ecology
- 10:30 am - 3:00 pm | Free time
- 3:00 - 4:10 pm | Grant Bowman
Engineering multicellularity in microbes
- 4:20 - 5:30 pm | Paul Wiggins
TBD
- 5:30 pm | all Telluride Science picnic

Thursday, Sept 11

- 7:30 - 8:00 am | Breakfast
- 8:00 - 9:10 am | Michael Rust
Why do some microbes have clocks?
- 9:20 - 10:30 am | Juan Manuel Pedraza
Populations as information processors: How diversity and specialization turn noise into survival
- 10:40 - 11:50 am | Oskar Hallatschek
Microfluidic Island Biogeograph

- 12:00 - 5:00 pm | Free time
- 5:00 - 6:10 pm | Keren Lasker (note that we start at 5 pm)
Emerging simplicity of bacterial condensates
- 6:20 - 7:30 pm | Discussion and pizza dinner

Friday, Sept 12

- 7:30 - 8:00 am | Breakfast
- 8:00 - 9:10 am | Optional Meetup Time

✨ ✨ Afternoons are intentionally free for hikes, discussions, and exploration. Bring your curiosity, hiking shoes, and a spirit of collaboration.