
# Telluride Workshop 2025

## Macromolecular Crowding

### 07/14/2025 - 07/18/2025

### Telluride, Colorado, USA

Telluride Science (formerly known as the Telluride Science Research Center or TRSC) was founded in 1984 as an interdisciplinary think tank for science and engineering challenges. Telluride Science is about expanding the frontiers of science, exploring new ideas, and building collaborations. Read more about Telluride Science's history here. The workshop schedule will allow for substantial unstructured time for participants to talk and think. All participants are expected to stay for the entire duration of the workshop. Scientists are encouraged to consider bringing family or friends. Telluride offers several options for children's camps (including Telluride Academy, Aha School for the Arts, and Pinhead Institute). There is more information on childcare, camps, and family activities on Telluride Science's website. Feel free to contact Telluride Science's staff to help with any planning and/or coordinating care.

### Organizing Committee


- Shahar Sukenik, Syracuse University, ssukenik@syr.edu, cell: +1-217-550-2917
- Stephen Fried, Johns Hopkins University, sdfried@jhu.edu, cell: +1-913-314-6448


### Meeting Venue

Telluride Intermediate School, 721 W Colorado Ave, Telluride, CO 81435

### Local Telluride Science contacts


- Mark Kozak, email: mark@telluridescience.org, cell: 970-708-4426
- Sara Friedberg, email: sara@telluridescience.org, cell: 970-708-0622
- Cindy Fusting, email: cindy@telluridescience.org, cell: 970-708-5069


### Food / Activities

Grab-and-go breakfast will be available daily at the workshop location. Lunches and dinners are NOT included in registration.

**Group hike** will be organized on Wednesday (location TBD) – this is an excellent

opportunity to unwind and get to know each other in a more relaxed setting. Bring comfortable shoes and plenty of water. Altitude at Telluride is ~ 8750 ft so make sure to stay hydrated.

## Scientific Program

The scientific program starts on Monday, July 14th 8:15 AM, and ends at 1:00 PM on Thursday, July 17th, with an optional session Friday, July 18th at 8:30 AM. Each talk is scheduled for 40 minutes including Q&A. Interruptions and questions during talks are encouraged!

## Code of Conduct

- Treat your fellow participants and Telluride Science staff with consideration and professionalism, respecting diversity of views and opinions.
- Communicate openly with civility for others, critiquing ideas rather than individuals.
- Be mindful of your surroundings and fellow participants. Anyone requested to stop unacceptable behavior is expected to comply immediately. Telluride Science staff may take any action deemed necessary and appropriate, including immediate removal from the meeting without warning or refund.
- Be kind and considerate of people in the Telluride community. You represent Telluride Science when you are in town.

## Unacceptable Behavior

Harassment, intimidation, exclusion, or discrimination. Physical or verbal abuse.

## Reporting Unacceptable Behavior

If you are the target of unacceptable behavior or have witnessed any such behavior, please immediately notify a Telluride Science or the workshop organizer. Alert Telluride Science staff, and 911 if appropriate, if you notice a dangerous situation or someone in distress. Report concerns to report@telluridescience.org. All reports will be treated confidentially and with discretion.

## Values Statement

Telluride Science values inclusion and is committed to creating a respectful, equitable, and welcoming environment free from discrimination, exclusion, and harassment for all participants. Telluride Science is known for its collegial workshops that spawn new ideas and collaborations. We encourage the open expression and exchange of ideas, and we are dedicated to strengthening our culture of diverse and inclusive workshops, conferences, and schools.

**Most importantly:** Have fun! Be inspired! Make new friends!

## Schedule

**Meet & Greet / badge pickup:** Sunday, July 13th 5:00-6:30 pm at The Alibi (121 S. Fir Street). (Badges can be picked up at the venue as well)

| Day 1, Monday 7/14 | | |
|---|---|---|
| 7:30-8:15 | **Breakfast (grab and go)** | |
| 8:15-8:30 | **Welcome remarks/Intro** | |
| 8:30-9:10 | Gary Pielak | Crowding beyond excluded volume: a tale of two dimers pt 1 |
| 9:10-9:50 | Daniel Harries | Crowding beyond excluded volume: a tale of two dimers pt 2 |
| 9:50-10:30 | Klaus Huber | Impact of Macromolecular Crowding on Cellular processes – Learning from Synthetic Model Systems |
| 10:30-10:45 | **Coffee break** | |
| 10:45-11:25 | Arnold Boersma | Protein aggregation in cell-mimetic crowding and confinement |
| 11:25-12:05 | Stepan Timr | Crowding and Dynamic Enzyme Assemblies: Developing a Computational Perspective |
| 12:05-12:45 | Elisabetta Mileo | How cellular crowding shapes protein structural dynamics: insights from EPR spectroscopy |
| 12:45-13:00 | **Wrap up** | |

| Day 2, Tuesday 7/15 | | |
|---|---|---|
| 7:30-8:15 | **Breakfast (grab and go)** | |
| 8:15-8:30 | **Welcome remarks/Intro** | |
| 8:30-9:10 | Huan-Xiang Zhou | ATP converts protein-nucleic acid aggregates into liquid droplets |
| 9:10-9:50 | Caitlin Davis | Phase Separation Modulates Opposing Stability and Kinetics of G-quadruplex and i-Motif DNA in the Nuclei of Living Cells |
| 9:50-10:30 | Alfredo Caro | AgroSpheres: one-step production and encapsulation of high-value biologics |
| 10:30-10:45 | **Coffee break** | |
| 10:45-11:25 | Fabio Sterpone | Proteome dynamics at the cell-death temperature: a picture of life adaptation to different |
| 11:25-12:05 | Stephen Fried | Who by Fire, and Who by Water: Keeping Proteins Alive in Extremes |

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|---|---|---|
| 12:05-12:45 | Shahar Sukenik | How do proteins survive extreme crowding induced by desiccation? |
| 12:45-13:00 | **Wrap up** | |

| **Day 3, Wednesday 7/16** | |
|---|---|
| 7:30 | **Breakfast (grab and go)** |
| 9:00 -13:00 | Meet for group hike - location TBD |

| **Day 4, Thursday 7/17** | | |
|---|---|---|
| 7:30-8:15 | **Breakfast (grab and go)** | |
| 8:15-8:30 | **Welcome remarks/Intro** | |
| 8:30-9:10 | Richard Kriwacki | Multiphase behavior regulates ribosome assembly in the nucleolus |
| 9:10-9:50 | Arohan Subramanya | Material Properties of WNK Signaling Condensates |
| 9:50-10:30 | Peter Chung | The effect of crowder length on protein self-coacervation |
| 10:30-10:45 | **Coffee break** | |
| 10:45-11:25 | Andrea Sorrano | TBD |
| 11:25-12:05 | Karsten Weis | The role of polysomes and mRNA in controlling the biophysical properties of the eukaryotic cytoplasm |
| 12:05-12:45 | Srabanti Chaudhury | TBD |
| 12:45-13:00 | **Wrap up** | |

| **Day 5, Friday 7/18** | |
|---|---|
| 7:30-8:15 | **Breakfast (grab and go)** |
| 9:00 -10:30 | **Meeting summary and discussion - where is the field headed?** |