**DAY 0**

**Sunday, July 21, 2024**

5:00pm to 6:30pm All-Telluride Science Meet and Greet

Location: Alibi – 157 S. Fir Street

This is a good chance to meet up with fellow participants before your meeting. A staff member will be on hand to welcome you and distribute badges.

**DAY 1**

**Monday, July 22, 2024**

**Session 1**

**Chair: Wladek Minor**

9:00a.m. – 9:10a.m. **Mark Kozak – Telluride Science Research Center**

Introduction

9:10a.m. – 9:40a.m. **Lukasz Joachimiak – UT Southwestern Medical Center** (In-Person)

Engineering proteins to control amyloid assembly

9:40a.m. – 10:10a.m. **Jin Wang – Stony Brook University** (Virtual)

Exploring protein evolution landscapes

10:10a.m. – 10:40a.m. **George** **Stan – University of Cincinnati (**Virtual)

Coupling between allosteric-driven conformational dynamics and protein translocation mediated by AAA+ nanomachines

**DAY 2**

**Tuesday, July 23, 2024**

**Session 2**

**Chair: Olivier Lichtarge**

9:00a.m. – 9:30a.m. **Marina** **Guenza – University of Oregon** (Virtual)

Recent Advancements in the Langevin Dynamics of Coarse-Grained Proteins

9:30a.m. – 10:00a.m. **Andrzej Joachimiak – The University of Chicago / Argonne** (In-Person)

Revealing reaction intermediates in one-carbon elongation by thiamine diphosphate/CoA-dependent enzyme family

10:00a.m. – 10:30a.m. **Shi-Jie Chen - University of Missouri-Columbia** (Virtual)

Machine learning-inferred and energy landscape-guided analyses reveal kinetic determinants of CRISPR/Cas9 gene editing

10:30a.m. – 10:50a.m. **BREAK**

**Session 3**

**Chair:** **Andrzej Joachimiak**

10:50a.m. – 11:20a.m. **Mubasher Hassan – Nationwide Children’s Hospital** (Virtual)

TBA

11:20a.m. – 11:50a.m. **Wladek Minor - University of Virginia** (In-Person)

Arificial Intelligence in Structural Biology: The Good, The Bad and The Ugly

11:50a.m. – 12:20p.m. **Olivier Lichtarge – Baylor College of Medicine (**In-Person)

Statistical Mechanics of Mutational Ensembles and the Thermodynamics Structure of Evolution and Diseases

12:20pm – 12:50 pm  **Jeffrey Skolnick – Georgia Institute of Technology** (Virtual)

Improved deep learning prediction of antigen-antibody Interactions

6:30pm – 7:30pm **Telluride Science Town Talk**

Location: Telluride Conference Center in Mountain Village

Cash Bar, Doors Open at 6:00pm

Speaker **Peter Ladwig** of Niron Magnetics

The talk is titled "Dirty Magnets: The Source and A Solution."

**DAY 3**

**Wednesday, July 24, 2024**

**Session 4**

**Chair:** **Ilya Vakser**

9:00a.m. – 9:30a.m. **Silvina R. Matysiak - University of Maryland** (In-Person)

The role of lipid surfaces and polysaccharides in amyloidogenic peptide aggregation

9:30a.m. – 10:00a.m. **Xiaoqin Zou** **- University of Missouri-Columbia** (Virtual)

An Iteratively Derived Knowledge‐based Scoring Function for Evaluating Protein‐DNA Complex Structures

10:00a.m. – 10:30a.m. **Ruxandra Dima - University of Cincinnati** (Virtual)

Modeling the allosteric response in microtubule severing enzymes

10:30a.m. – 10:50a.m. **BREAK**

**Session 5**

**Chair: Silvina Matysiak**

10:50a.m. – 11:20a.m. **Ilya Vakser – University of Kansas** (In-Person)

Highly optimized simulation of atomic resolution cell-like protein environment

11:20a.m. – 11:50a.m. **Toshiya Senda – KEK High Energy Accelerator Research Org** (In-Person)

Cellular GTP Sensor - From Enzyme Character to Evolution

11:50a.m. – 12:20p.m. **Discussion**

5:30pm - 7:30pm **All Telluride Science Picinic**

Free BBQ, Beer, Wine, and Non-Alcoholic Beverages. Friends and Family are invited free of charge.

Location: Tent behind the Intermediate School (which is the location for all workshops - 725 W Colorado Ave)

**DAY 4**

**Thursday, July 25, 2024**

**Session 6**

**Chair: Toshiya Senda**

9:00a.m. – 9:30a.m. **Miki Senda – KEK High Energy Accelerator Research Org** (In-Person)

MR-native SAD method at the Photon Factory

9:30a.m. – 10:00a.m.  **Robert Jernigan – Iowa State University** (In-Person)

Finding the relationships among protein sequences

10:00a.m. – 10:30p.m. **Mesih Kilinc – Iowa State University** (In-Person)

Exploring the utility and effectiveness of protein language models on protein relations

10:30a.m. – 10:50a.m. **BREAK**

**Session 7**

**Chair: Robert Jernigan**

10:50a.m. – 11:20a.m. **Andrzej Kloczkowski – Nationwide Children’s Hospital** (Virtual)

Machine Learning-Based Tool for Efficient Discrimination Between Deleterious and Neutral Missense Mutations

11:20a.m. – Possibly Dima Kozakov and Dima Kozakov students

**ZOOM LINK:**

Topic: Coarse-Grained Modeling  
Time: Jul 22, 2024 07:00 AM Mountain Time (US and Canada)  
        Every day, until Jul 26, 2024, 5 occurrence(s)  
        Jul 22, 2024 07:00 AM  
        Jul 23, 2024 07:00 AM  
        Jul 24, 2024 07:00 AM  
        Jul 25, 2024 07:00 AM  
        Jul 26, 2024 07:00 AM  
Please download and import the following iCalendar (.ics) files to your calendar system.  
Daily: [https://us06web.zoom.us/meeting/tZEpd-mopjgjE9Oxj3LlmSWE-heNklZtvebx/ics?icsToken=98tyKuGtqjsqGtyWuRCARpwMBoigc\_TxiHZEj\_pyhBW2LyxeUTTTe-pHHLlzKszG](https://urldefense.com/v3/__https:/us06web.zoom.us/meeting/tZEpd-mopjgjE9Oxj3LlmSWE-heNklZtvebx/ics?icsToken=98tyKuGtqjsqGtyWuRCARpwMBoigc_TxiHZEj_pyhBW2LyxeUTTTe-pHHLlzKszG__;!!NiUAmZJ8c1GNWg!SMkKUoAG9rllaivbImxtfmi1dYZA7oIsyg4tEEJJ7Ge21QJ3E3BJlAlramMpI4pEOoErNzBApCg-Z0AXqYWWT5aVhVcnssUeIWyjKWYd$)  
  
Join Zoom Meeting  
[https://us06web.zoom.us/j/85400083997?pwd=Lyw0jUAoHZjH6xxd73X1ZX6GQyWXqa.1](https://urldefense.com/v3/__https:/us06web.zoom.us/j/85400083997?pwd=Lyw0jUAoHZjH6xxd73X1ZX6GQyWXqa.1__;!!NiUAmZJ8c1GNWg!SMkKUoAG9rllaivbImxtfmi1dYZA7oIsyg4tEEJJ7Ge21QJ3E3BJlAlramMpI4pEOoErNzBApCg-Z0AXqYWWT5aVhVcnssUeIS3WCv9r$)  
  
Meeting ID: 854 0008 3997  
Passcode: 232541  
  
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One tap mobile  
+17193594580,,85400083997# US  
+12532158782,,85400083997# US (Tacoma)  
  
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Dial by your location  
• +1 719 359 4580 US  
• +1 253 215 8782 US (Tacoma)  
• +1 346 248 7799 US (Houston)  
• +1 408 638 0968 US (San Jose)  
• +1 669 444 9171 US  
• +1 669 900 6833 US (San Jose)  
• +1 253 205 0468 US  
• +1 312 626 6799 US (Chicago)  
• +1 360 209 5623 US  
• +1 386 347 5053 US  
• +1 507 473 4847 US  
• +1 564 217 2000 US  
• +1 646 876 9923 US (New York)  
• +1 646 931 3860 US  
• +1 689 278 1000 US  
• +1 301 715 8592 US (Washington DC)  
• +1 305 224 1968 US  
• +1 309 205 3325 US  
  
Meeting ID: 854 0008 3997  
  
Find your local number: [https://us06web.zoom.us/u/kbALINBqbr](https://urldefense.com/v3/__https:/us06web.zoom.us/u/kbALINBqbr__;!!NiUAmZJ8c1GNWg!SMkKUoAG9rllaivbImxtfmi1dYZA7oIsyg4tEEJJ7Ge21QJ3E3BJlAlramMpI4pEOoErNzBApCg-Z0AXqYWWT5aVhVcnssUeIdb7v3NU$)