

## Day 1

- 8:00 am Continental Breakfast, Registration, and Poster Setup**
- 8:45 am Welcome and Introduction**
- 9:00 am Latest News from the Dragonfly Telephoto Array**  
Roberto Abraham (University of Toronto)
- 9:30 am Cosmic Expansion From Spinning Black Holes**  
Chi Tian (Case Western Reserve University)
- 9:45 am Comparing Systematic-Error Mitigation Methods for Galaxy Clustering**  
Noah Weaverdyck (University of Michigan)
- 10:00 am The Influence of the Void Environment on the Ratio of Dark Matter Halo Mass To Stellar Mass In SDSS MaNGA Galaxies**  
Kelly Douglass (University of Rochester)
- 10:15 am The Local Perspective on the Hubble Tension: Local Structure Does Not Impact Measurement of the Hubble Constant**  
William Kenworthy (Johns Hopkins University)
- BREAK 10:30 - 11:00 am**
- 11:00 am Updates from the Hydrogen Epoch of Reionization Array**  
Adrian Liu (McGill University)
- 11:30 am A New Approach To Eliminate Thermal Sunyaev-zel'dovich Effect (SZ) Induced Systematic Uncertainty and Reduce SZ-Related Statistical Uncertainty**  
Sanjaykumar Patil (University of Melbourne)
- 11:45 am Constraining Fuzzy Dark Matter with Redshift Space Distortions & Galaxy Surveys**  
Alex Lague (University of Toronto)
- 12:00 pm Small Scale CMB Lensing with Local Map-Space Statistics**  
Victor Chan (University of Toronto)
- 12:15 pm Probing Structure Formation with the Cosmic Infrared Background Experiment 2 (CIBER-2)**  
Chi Nguyen (Rochester Institute of Technology)
- LUNCH 12:30 - 1:30 pm**
- 1:30 pm Secondary Anisotropies in the Cosmic Microwave Background, a Look Ahead**  
Nick Battaglia (Cornell University)
- 2:00 pm CMB Lensing Measurements from the SPTpol 500 deg<sup>2</sup> survey**  
Kimmy Wu (KICP/University of Chicago)
- 2:15 pm Transformer-coupled TES Frequency Domain Readout Prototype**  
Maclean Rouble (McGill University)
- 2:30 pm The Probe of Inflation and Cosmic Origins (PICO): Science Objectives and Design**  
Qi Wen (University of Minnesota)
- 2:45 pm Parameterizing the Recombination Visibility Function**  
Nathaniel Starkman (University of Toronto)
- BREAK 3:00 - 3:30 pm**
- 3:30 pm Current and Upcoming Ground-based Cosmic Microwave Background Experiments**  
Tom Crawford (University of Chicago)
- 4:00 pm Optical Characterization of BICEP3 and the Keck Array from 2016 to 2019**  
Tyler St. Germaine (Harvard University)
- 4:15 pm LiteBIRD's Projected Impact on Inflationary Models**  
Simran Nerval (University of Toronto)
- 4:30 pm An Excess of non-Gaussian Fluctuations in the Cosmic Infrared Background Consistent With Gravitational Lensing**  
Chang Feng (University of Illinois at Urbana - Champaign)
- 4:45 pm Using CMB Consistency Checks to Understand Tensions**  
Josh Kable (Johns Hopkins University)
- 5:00 pm Wrap up**

**PUBLIC LECTURE 7:00 pm - 9:00 pm**

University of Rochester Campus

**6:30 pm Reception**

**7:30 pm - IceCube: A Neutrino Window on the Universe**

**9:00 pm** Francis Halzen (University of Wisconsin - Madison)

**Day 2**

**8:00 am Continental Breakfast and Registration**

**9:00 am Simulations for Cluster-Based Cosmology**

Camille Avestruz (University of Chicago)

**9:30 am Downsizing of Star Formation: Weighing Dark Matter Haloes Hosting Dusty Star-Forming Galaxies**

Kirsten Hall (Johns Hopkins University)

**9:45 am Measuring the Epoch of Reionization with TIME**

Abigail Crites (Caltech)

**10:00 am Simulation Support for X-ray Follow-up Studies of DES redMaPPer Clusters**

William Black (University of Michigan)

**10:15 am Counts-in-cells Distribution of Dark Matter Halos**

Di Wen (University of Illinois at Urbana - Champaign)

**BREAK 10:30 - 11:00 am**

**11:00 am The Universe, Magnified: The Power of Gravitational Lensing**

Keren Sharon (University of Michigan)

**11:30 am Novel Approach of Predicting Exact Escape Velocity Profiles of Galaxy Clusters**

Vitali Halenka (University of Michigan)

**11:45 am Cross-Covariances Between Cluster Number Counts and 2pt Statistics**

Chun-Hao To (Stanford University)

**12:00 pm Quantifying the Performance of BAO Reconstruction Algorithms**

Xinyi Chen (Yale University)

**12:15 pm Separate Universe Techniques from High to Low Densities**

Andrew Jamieson (Stony Brook University)

**LUNCH 12:30 - 1:30pm**

**1:30 pm IceCube: A Neutrino Window on the Universe**

Francis Halzen (University of Wisconsin - Madison)

**2:00 pm Re-Analysis of Cluster rSZ Data Utilizing Herschel-SPIRE: Eliminating Cluster Coincident Dust Emission**

Victoria Butler (Rochester Institute of Technology)

**2:15 pm Cosmological Constraints With Self-Interacting Sterile Neutrinos**

Ningqiang Song (Queen's University)

**2:30 pm Hunting for Dark Matter Substructure in Strong Lensing With Neural Networks**

Joshua Yao-Yu Lin (University of Illinois at Urbana - Champaign)

**2:45 pm Macroscopic Dark Matter Detection Using Fluorescence Detectors**

Jagjit Sidhu (Case Western Reserve University)

**BREAK 3:00 - 3:30 pm**

**3:30 pm Making a Universe with Axions**

Chanda Prescod-Weinstein (University of New Hampshire)

**4:00 pm Capture of Superheavy Dark Matter by the First Stars**

Cosmin Ilie (Colgate University)

**4:15 pm Beyond CDM: Ultralight Dark Matter in Simulation**

Luna Zagorac (Yale University)

**4:30 pm Constraining the Particle Astrophysics of the Sun in TeV Gamma rays**

Mehr Nisa (Michigan State University)

4:45 pm **Tackling the Deblending Problem in Large Scale Surveys**

Fred Moolekamp (LSST)

5:00 pm **Wrap up**

**CONFERENCE DINNER 7:00 pm - 9:00 pm**

### Day 3

8:00 am **Continental Breakfast and Registration**

9:00 am **Weak Lensing: State-of-the-Art and Future Prospects**

Rachel Mandelbaum (Carnegie Mellon University)

9:45 am **An Offset Cooling Flow Exhibiting Formidable Stellar Formation Rate in a  $z=1.7$  Galaxy Cluster**

Carter Rhea (L'Université de Montréal)

10:00 am **Predictably Missing Satellites: Subhalo Abundances in Milky Way-like Haloes**

Catherine Fielder (University of Pittsburgh)

10:15 am **Stellar-to-halo Mass Relation of Cluster Galaxies**

Anna Niemiec (University of Michigan)

**BREAK 10:30 - 11:00 am**

11:00 am **Mapping the Universe with Dark Energy Survey**

Dragan Huterer (University of Michigan)

11:30 am **The Strongest Cluster Lenses: Using Lens Models To Investigate the Properties That Influence Lensing Strength**

Carter Fox (University of Michigan)

11:45 am **Measuring the Growth Rate of Structure Through Optimized Tracers and Techniques**

Faizan Mohammad (University of Waterloo)

12:00 pm **Testing General Relativity Using Kinetic Sunyaev Zel'dovich Tomography**

James Mertens (York University/CITA/PI)

12:15 pm **Measuring the Mass at the Cores of Strong Gravitational Lensing Galaxy Clusters**

Juan Remolina Gonzalez (University of Michigan)

**LUNCH 12:30 - 1:30pm**

1:30 pm **CHIME : A Status Update**

Laura Newburgh (Yale University)

2:00 pm **Intensity Mapping Tomography: Method and Application to Data**

Yi-Kuan Chiang (Johns Hopkins University)

2:15 pm **Evidence for CII Diffuse Line Emission at Redshift  $z\sim 2.6$**

Shengqi Yang (New York University)

2:30 pm **The Deep Dish Development Array: a Test Bed for Precision Radio Astronomy**

Dallas Wulf (McGill University)

2:45 pm **Full-sky Maps from CHIME**

Paula Boubel (McGill University)

**BREAK 3:00 - 3:30 pm**

3:30 pm **Dark Matter Science in the LSST Era**

Keith Bechtol (University of Wisconsin)

4:00 pm **A Lensed Proto-Cluster Candidate at Redshifts 4 and Its Diffuse Lyman-Alpha Emission, Finding the Progenitor of Regular Clusters**

Guillaume Mahler (University of Michigan)

4:15 pm **BICEP Array: a Next-Generation CMB Polarimeter for the South Pole**

Steven Palladino (University of Cincinnati)

4:30 pm **Patterns in Galaxy Distributions at the Largest Scales**

Zachery Brown (University of Rochester)

4:45 pm **Wrap up**

## Poster

- 1 **The Cosmic Web: Impacts on Galaxy Quenching in Clusters**  
Sachin Kotecha (McMaster University)
- 2 **Conditional Generative Adversarial Networks: An Alternative to Cosmological Emulators?**  
Richard Feder-Staehle (Caltech)
- 3 **Density Ion Correlations in the 21cm Power Spectrum**  
Michael Pagano (McGill University)
- 4 **Measuring the Cosmic Optical Background with New Horizons**  
Teresa Symons (Rochester Institute of Technology)
- 5 **Measuring Growth Rate of Cosmic Structure in SDSS With Corrected Fibre Collision**  
Michael Chapman (University of Waterloo)
- 6 **Comparing the Systematics of Different Void-Finding Algorithms**  
Dylan Veyrat (University of Rochester)
- 7 **Preliminary Results from ACCEPT2.0**  
Dana Koeppel (Michigan State University)
- 8 **Mitigation of Systematics for Bicep3 and Keck Array at the South Pole**  
Eric Hung-I Yang (Stanford University)
- 9 **A Synthetic WFIRST Survey: Simulation Suite and the Impact of Wavefront Errors on Weak Lensing**  
Heyang Long (Ohio State University)