2023 Program

Public Live Stream

https://www.youtube.com/@cxcvideo1999/live

Remote/Virtual Presentation

Monday, Sept 18

9:00 - 9:50  Breakfast (Fellows and Presenters Only)

10:00-10:45  Welcome (Session Chair: Paul Green)
               Mark Clampin
               Nancy Levenson
               Pat Slane
               NHFP Leads

10:45-11:45  Instrumentation (Session Chair: Gudmundur Stefánsson)

10:45  Jessica Zebrowski - Commissioning Strategy of SPT-SLIM

11:00  Emiel Por - High-performance coronagraphs for the Habitable Worlds Observatory

11:15  Pradip Gatkine - Quest for High Resolution with Astrophotonic Spectrographs

11:30  Carlos Blanco - Developments in sub-GeV dark matter detection
11:45-12:00  Break

12:00-13:00  Cosmology (I) (Session Chair: Justin Pierel)
12:00  Mikhail Ivanov - Testing Dark Matter with Galaxy Surveys
12:15  Hayley Macpherson - Cosmological weak lensing in full general relativity
12:30  Andrei Cuceu - Measuring the cosmic expansion rate at high redshift with Lyman-alpha forests
12:45  Anowar Shajib - Resolving the Hubble tension with strong-lensing time delays and the JWST

13:00-14:00  Lunch

14:15-15:30  Planet formation and disks (Session Chair: Hayley MacPherson)
14:15  Maggie Thompson - Simulating Young, Rocky Planets in the Laboratory ✪
14:30  Feng Long - Revealing young planets from disk substructures
14:45  Charles Law - Chemical Signatures of Ongoing Planet Formation in Protoplanetary Disks
15:00  Raluca Rufu - Origin of compact exoplanetary systems during disk infall
15:15  Michael L. Wong - A natural law of evolving systems and a novel in-situ biosignature technique

15:30-15:45  Break

15:45-17:00  Fellows Only Session: Mentoring/DEI (Session Chair: Joel Ong)
Saavik Ford (ScienceBetter consulting)

Tuesday, Sept 19
9:00 - 9:50  Breakfast (Fellows and Presenters Only)

10:00-11:30  Black Holes and Gravitational Waves (Session Chair: Ekta Patel)
10:00  Kristen Dage - Hunting Intermediate Mass Black Holes in Young Star Clusters ✪
10:15  Matthew Liska - How Do the Most Luminous Black Holes Accrete and Expel Gas?
10:30  Sara Issaoun - Unraveling the Mysteries of Sgr A*
10:45  Lia Medeiros - A Sharper Look at the Black Hole in M87
11:00  Kyle Kremer - Gravitational-wave and electromagnetic transients in dense star clusters
11:15  Sylvia Biscoveanu - The gravitational-wave population of neutron star-black hole mergers

11:30-12:00  Break

12:00-13:00  **Stars and stellar evolution (Session Chair: Ryan MacDonald)**
12:00  Adina Feinstein - Flare Statistics for Stars Younger than 200 Myr observed with TESS ✪
12:15  Tim Cunningham - White Dwarfs as Probes of Convective Overshoot and Evolved Exoplanetary Systems
12:30  Joel Ong - Asteroseismic Signatures of Post-Main-Sequence Planetary Engulfment
12:45  Melinda Soares-Furtado - Stellar Epitaphs: The Final Testimonies of Devoured Worlds

13:00-14:00  Lunch

14:00-15:30  **Exoplanets (Session Chair: Charles Law)**
14:00  Danica Adams - Crustal Hydration Primed Early Mars with Warm and Habitable Conditions
14:15  Jon Zink - Hot Jupiters. Are They Alone?
14:30  Marc Hon - The Great Escape of A Giant Planet from Planetary Engulfment
14:45  Jake Turner - The Ongoing Hunt to Detect Exoplanetary Magnetic Fields
15:00  Gudmundur Stefansson - A Close-in Neptune Orbiting an Ultracool Star
15:15  Fei Dai - Taking the Dynamical Temperature of Young Planetary Systems with KPF ✪

15:30-15:45  Break

15:45-17:00  **Fellows Only Session: Grants and Benefits (Session Chair: Andy Fruchter)**
Wednesday, Sept 20

9:00 - 9:50  Breakfast (Fellows Only)

10:00-11:30  Exoplanet Atmospheres (Session Chair: Raluca Rufu)
10:00  Zhoujian Zhang - Probing the formation of gas-giant exoplanets via atmospheric composition
10:15  Luis Welbanks - Swimming Through New Chemical Species in Exoplanetary Atmospheres with JWST
10:30  Megan Mansfield - The first spectroscopic eclipse map of an exoplanet
10:45  Ward Howard - Constraining Exoplanet Atmospheres with Multi-wavelength Flare Campaigns
11:00  Jessica Spake - Tails of escaping exoplanet atmospheres
11:15  Ryan MacDonald - A JWST Spectrum of a White Dwarf Exoplanet

11:30-12:00  Break

12:00-13:00  Transients and FRBs (Session Chair: Riccardo Arcodia)
12:00  Tarraneh Eftekhari - Unveiling the Transient Sky at Radio and Millimeter Wavelengths
12:15  Kishalay De - The transient mid-infrared sky seen with WISE
12:30  Calvin Leung - Fast radio bursts with CHIME/FRB Outriggers
12:45  Justin Pierel - Discovery of a Triply-imaged Type Ia Supernova at z = 1.78

13:00  Free Time all Afternoon

14:00  Fellows Only: Optional Harvard Great Refractor Tour, Plate Stacks Exhibition with artist Aura Satz

Thursday, Sept 21

9:00 - 9:50  Breakfast (Fellows and Presenters Only)

10:00-11:15  Galaxy Evolution/Galactic Archaeology (Session Chair: Rohan Naidu)
10:00  Cassi Lochhaas - *Simulated Galactic Accretion through the Circumgalactic Medium*

10:15  Arianna Long - *NIRCam Selected Quiescent Galaxies at 3 < z < 5 in CEERS, COSMOS, and PRIMER*

10:30  Ekta Patel - *Effects of the Large Magellanic Cloud on Orbits of Milky Way Satellite Galaxies*

10:45  Emily Cunningham - *Chemical Cartography of the Sagittarius Stream with Gaia*

11:00  Iryna Butsky - *What in the Galaxy is Scattering Cosmic Rays?*

11:15-11:45  Break

11:45-13:00  *Cosmology (2) (Session Chair: Anowar Shajib)*

11:45  Maria Vincenzi - *SN Cosmology from the Dark Energy Survey*

12:00  Thales Gutcke - *Cosmological cluster formation and accretion in early-forming dwarf galaxies*

12:15  Seiji Fujimoto - *First ALMA Looks at the JWST High-z Sources at z=8-17*

12:30  Nicholas Kern - *New Insights on Cosmic Dawn Astrophysics from 21 cm Radio Telescopes*

12:45  Sultan Hassan - *Implication of JWST constraints on UV luminosity density at Cosmic Dawn for 21cm*

13:00-14:15  Lunch

14:15-14:45  *Star Formation (Session Chair: Elias Aydi)*

14:15  Mike Grudic - *Why are Stars?*

14:30  Kartheik Iyer - *Towards a self-consistent physical model for star formation in galaxies*

14:45-15:30  Break

15:30-17:00  *Fellows Only Session: Career Panel (Session Chair: Calvin Leung)*

15:30  Kim McLeod (Wellesley College), Francesca D'Arcangelo (MIT Lincoln Laboratory), Monica Young (Sky & Tel)

18:00-21:00  *Fellows and Panelists Only: Dinner at Gustazo Restaurant, Cambridge*
Friday, Sept 22

9:00-9:50  Breakfast (Fellows and Presenters Only)

10:15-11:30  High Energy Phenomena (Session Chair: Sara Issaoun)
10:15  Ariadna Murguia Berthier - Accretion onto Neutron stars: simulations of oblique rotators ✪
10:30  Riccardo Arcodia - X-ray bursts from galactic nuclei
10:45  Lea Marcotulli - The most powerful persistent jets through cosmic time
11:00  Elias Aydi - Exploring the formation and characteristics of shocks in novae
11:15  David Vartanyan - Supernovae: From Bounce to Breakout

11:30-12:00  Break

12:00-13:00  High-redshift Galaxies & Galactic Evolution (Session Chair: Joel Ong)
12:00  Rohan Naidu - Revealing the Protagonists of Cosmic Reionization with JWST
12:15  Wren Suess - A JWST view of massive quiescent galaxies at cosmic noon
12:30  Viraj Pandya - Galaxies Going Bananas: Inferring the 3D Shapes of High-Redshift Galaxies with JWST-CEERS
12:45  Sinclaire Manning - SCUBA-Diving for JWST-Faint Dusty Galaxies in the First COSMOS-Web Release

13:00-14:00  Lunch

14:00-16:00  Fellows Only Session: Open Mic - Music, stories, poetry, art, outreach, dance, whatever! (Session Chair: Dawn Gelino)