

KITP Conference: The Co-evolution of the Cosmic Web and Galaxies across Cosmic Time

(Feb 6-9, 2023)

Coordinators: Joanne Cohn, Nick Kaiser, Katarina Kraljic, and Dmitri Pogosyan

Monday, Feb 6, 2023

8:50am Lars Bildsten (KITP)	Welcome[Video][CC]
9:00am Christophe Pichon (IAP-Sorbonne)	Overview[Slides][Video][CC]
10:00am Clotilde Laigle (IAP-UPMC)	Unveiling the $z > 1$ cosmic web with current and upcoming deep surveys[Video][CC]
10:30am	Morning Break
11:00am Benjamin Horowitz (LBNL)	Unveiling the Dynamic High Redshift Cosmic Web with the Prime Focus Spectrograph[Video][CC]
11:30am Brent Tully (Hawaii)	Early results from Cosmicflows-4[Slides][Video][CC]
12:00pm Jaan Einasto (Tartu Obs.)	Time evolution of bias - applying various methods[Slides][Video][CC]
12:30pm	Lunch Break
2:00pm Ravi Sheth (U Penn)	Optimal Transport Reconstruction and Peaks Theory for Energy[Slides][Video][CC]
2:30pm Oliver Hahn (U Vienna)	Large-Scale Structure at the Interface of Numerical and Analytical Techniques[Slides][Video][CC]
3:00pm Istvan Szapudi (Hawaii)	Indicator Power Spectra: Surgical Excision of Non-linearities and Covariance Matrices for Counts in Cells[Slides][Video][CC]
3:30pm	Afternoon Break
4:00pm Tom Abel (Stanford)	On the phase-space sheet crumple that is the cosmic Web[Slides][Video][CC]
4:30pm Job Feldbrugge (Edinburgh)	Dissecting the cosmic web with caustics[Slides][Video][CC]
5:00pm Daria Zakharova (UNIPD)	The importance of the tracers in extracting filaments: dark matter and galaxy particles[Video][CC]
5:30pm	SHUTTLE TO BWSCI

Tuesday, Feb 7, 2023

9:00am Charlotte Mason (U of Copenhagen)	Observational constraints on the connections between the morphology of reionization and the spatial distribution of galaxies[Video][CC]
9:30am Dongwoo Chung (Toronto)	single-dish line-intensity mapping: observational and theoretical outlook at EoR[Slides][Video][CC]
10:00am Emilie Thélie (Obs. de Strasbourg)	Exploring the Epoch of Reionisation through its evolving topology[Slides][Video][CC]
10:30am	Morning Break
11:00am Avishai Dekel (Hebrew U)	Massive Galaxies at Cosmic Dawn: Cold Streams and Feedback-Free Starbursts[Slides][Video][CC]
11:30am Hyunbae Park (LBNL)	Impact of small-scale structure on reionization[Video][CC]
12:00pm Boryana Hadzhiyska (Berkeley)	The importance of the cosmic web for analyzing small-scale clustering in Stage-IV experiments[Video][CC]
12:30pm	Lunch Break
2:00pm KG Lee (IPMU)	Constraining the Cosmic Partition of IGM and CGM Baryons with FRB Foreground Mapping[Slides][Video][CC]
2:30pm Taysun Kimm (Yonsei U)	The emergence of Lyman alpha emission lines from GMCs to galactic scales[Slides][Video][CC]
3:00pm Chris Byrohl (U Heidelberg)	The faint Lyman-alpha cosmic web in TNG50[Slides][Video][CC]

3:30pm	Afternoon Break
4:00pm Corentin Cadiou (Lund)	Ex Uno Plures: direct measure of the impact of the cosmic web on individual objects to shed light on their population statistics [Slides] [Video] [CC]
4:30pm Olivia Curtis (BU)	Voids and void galaxies in the TNG300 simulation [Slides] [Video] [CC]
5:00pm Marcello Musso (U Salamanca)	The Energy Minimisation Principle. Linking protohalo shapes to anisotropic infall [Slides] [Video] [CC]
5:30pm	RECEPTION
6:00pm	SPECIAL EVENTS DINNER
8:00pm	SHUTTLE TO BWSCI

Wednesday, Feb 8, 2023

9:00am Ulrike Kuchner (Nottingham U)	Pre-processing of galaxies in galaxy cluster outskirts [Slides] [Video] [CC]
9:30am Charlotte Welker (CUNY)	Sipping baryons through the cosmic straw: the filament-galaxy connection past the virial shock [Slides] [Video] [CC]
10:00am Hannah Jhee (U Seoul)	Tracking Halo Orbits and Their Mass Evolution around Large-scale Filaments [Slides] [Video] [CC]
10:30am	Morning Break
11:00am Alexandra Dupuy (KIAS)	Anisotropic satellite accretion onto the Local Group with HESTIA [Slides] [Video] [CC]
11:30am Han Aung (Hebrew U Jerusalem)	Cold Streams in the Hot CGM of High z galaxies [Slides] [Video] [CC]
12:00pm Rieko Momose (Carnegie)	The relationship between the cosmic web environment and galaxy evolution at $z = 2$ referring to the reconstructed matter density [Video] [CC]
12:30pm	Lunch Break
2:00pm Thibaud Moutard (LAM-CNRS)	Caught in the cosmic web: framing the big picture of the slow quenching of massive galaxies [Slides] [Video] [CC]
2:30pm Farhan Hasan (New Mexico State)	How do cosmic web structures affect galaxy quenching across cosmic time? [Slides] [Video] [CC]
3:00pm Hyunmi Song (Chungnam Nat'l U)	Beyond halo mass: the role of vorticity-rich filaments in quenching galaxy mass assembly [Slides] [Video] [CC]
3:30pm	Afternoon Break
4:00pm Changbom Park (KIAS)	Emergence of the relations between galaxy morphology and environment [Slides] [Video] [CC]
4:30pm Florent Renaud (Lund U)	How cosmological filaments reset the formation of disc galaxies [Slides] [Video] [CC]
5:00pm Sukeyoung Yi (Yonsei)	Formation of thin and thick discs of galaxies [Slides] [Video] [CC]
5:30pm	RECEPTION
6:00pm	SPECIAL EVENTS DINNER
8:00pm	SHUTTLE TO BWSCI

Thursday, Feb 9, 2023

9:00am Madalina Tudorache (Oxford)	MIGHTEE-HI: The relation between the HI gas in galaxies and the cosmic web [Video] [CC]
9:30am Benjamin Zhang (U of Southern California)	Intrinsic Alignments Between Galaxies and the Cosmic Web at $z \sim 1-2$ in the IllustrisTNG Simulations [Slides] [Video] [CC]

10:00am Jounghun Lee (Seoul)

[Galaxy Spin Transition: A New Probe of Cosmology](#)[\[Slides\]](#)

10:30am

Morning Break

11:00am Dick Bond (CITA)

[The Transport of Beyond the Standard Model Cosmic Superweb Information to Correlated Lensed Websky Observables](#)[\[Slides\]](#)[\[Video\]](#)[\[CC\]](#)

11:30am Nathan Carlson (CITA)

[The Cosmic Web as a Probe of Inflationary Physics](#)[\[Slides\]](#)[\[Video\]](#)[\[CC\]](#)

12:00pm Yan-Chuan Cai (Edinburgh)

[Splitting the cosmic web for more information](#)[\[Slides\]](#)[\[Video\]](#)[\[CC\]](#)

12:30pm

Lunch Break

2:00pm **CONFERENCE END-SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location (See Registration Desk BEFORE THURSDAY TO SIGN UP)**