

Combinatorics of Fundamental Physics Workshop

November 18-22, 2024

All lectures in Wolfensohn Hall unless noted otherwise

(Draft as of 10/30/24)

Time:	Monday, November 18th	Tuesday, November 19th	Wednesday, November 20th	Thursday, November 21st	Friday, November 22nd
9:00 – 9:30 am	Registration				
9:30 – 10:00 am	Welcome and Introduction				
10:00 – 11:00 am	“Amplituhedra and origami” Pavel Galashin	“Lecture” Austin Joyce	“Hopf algebras in the cohomology of A_g ” Melody Chan	“Lecture” Lauren Williams	“Aspects of Correlators and Amplitudes” Song He
11:00 – 11:30 am	Coffee Break (Rubenstein Commons)	Coffee Break (Rubenstein Commons)	Coffee Break (Rubenstein Commons)	Coffee Break (Rubenstein Commons)	Coffee Break (Rubenstein Commons)
11:30 am – 12:30 pm	“The commutative graph complex, the top weight cohomology of M_g , and a matrix model” Michael Borinsky	“Lecture” Jaroslav Trnka	“Cluster structures on kinematic spaces” Lara Bossinger	“Loop Integration: Phenomenology, Polemics, and Prospects Ahead” Jacob Bourjaily	“Lecture” Alex Postnikov
1:00 – 2:00 pm	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)
2:00 – 3:00 pm		“Euler discriminant of complements of hyperplanes” Claudia Fevola	“Adjoint and canonical differential forms” Simon Telen	“Combinatorics on words in string amplitudes” Oliver Schlotterer	End of Program
2:30 – 3:30 pm	IAS High Energy Physics Seminar Thomas Lam				
	Afternoon Tea (Rubenstein Commons) 3:30 – 4:00 pm	Afternoon Tea (Rubenstein Commons) 3:00 – 3:30 pm	Afternoon Tea (Rubenstein Commons) 3:00 – 4:00 pm	Afternoon Tea (Rubenstein Commons) 3:00 – 3:30 pm	
3:30 – 4:30 pm		“Canonical forms of oriented matroids” Chris Eur		“Topological aspects in algebraic optimizations” Botong Wang	
4:00 – 5:00 pm	“Lecture” Anastasia Volovich		“Multivariate residues, oriented matroids and tropical moduli spaces” Nick Early		
4:30 – 6:00 pm		Reception (Rubenstein Commons)		Short Talks*	
5:30 – 8:00 pm			Pizza Night (Rubenstein Commons)		

*Schedule for Short Talks:

4:35-4:50pm: Shounak De "A canonical basis for cosmological correlators from the positive geometry of cuts"

4:55-5:10pm: Dawei Shen "Points on rational normal curves and the ABCT variety"

5:15-5:30pm: Qu Cao "TBA"

5:35-5:50pm: Raluca Vlad "Wondertopes"