

PiTP 2024 “Ultra-Quantum Matter”

All lectures in Wolfensohn Hall unless noted otherwise

Week #1 - July 8 – 12

(As of 07/05/24)

Time:	Monday, July 8th	Tuesday, July 9th	Wednesday, July 10th	Thursday, July 11th	Friday, July 12th
8:00 - 9:00 am	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)
8:00 - 9:00 am	Registration (Wolfensohn Hall)				
9:00 – 9:15 am	Welcome and Introduction				
9:15 – 10:30 am	“Tensor Networks” Ignacio Cirac				
9:00 – 10:15 am		“Effective field theories in condensed matter” Dam Thanh Son	“Tensor Networks” Ignacio Cirac	“Effective field theories in condensed matter” Dam Thanh Son	“Generalized symmetry -- a bird- eye perspective” Xiao-Gang Wen
10:30 – 11:00 am	Break (Rubenstein Commons)				
10:15 – 11:00 am		Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)
11:00 am – 12:15 pm	“Quantum Phase Transitions of Metals” Subir Sachdev	“Quantum Phase Transitions of Metals” Subir Sachdev	“Effective field theories in condensed matter” Dam Thanh Son	“Quantum Phase Transitions of Metals” Subir Sachdev	Carolyn Zhang
12:30 – 1:30 pm	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)
1:30 - 3:15 pm	Open	Gong Show	Open	Poster Session (Rubenstein Commons)	Open
3:15 – 3:45 pm	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)
3:45– 5:00 pm	“Higher Berry Phase” Shinsei Ryu	“Tensor Networks” Ignacio Cirac	“Mixed-state quantum phases” Meng Cheng	“Non-invertible symmetries” Shu-Heng Shao	“Non-invertible symmetries” Shu-Heng Shao
5:30 – 7:00pm	Dinner (Simons Hall)	Dinner (Simons Hall)	Dinner (Simons Hall)	Dinner (Simons Hall)	Dinner (Simons Hall)

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Week #2 - July 15 – 19

Time:	Monday, July 15th	Tuesday, July 16th	Wednesday, July 17th	Thursday, July 18th	Friday, July 19th
8:00 – 9:00 am	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)	Breakfast (Simons Hall)
9:00 – 10:15 am	“Introduction to moiré materials” Eslam Khalaf	“Introduction to moiré materials” Eslam Khalaf	“The Physics of LDPC codes” Vedika Khemani	“The Physics of LDPC codes” Vedika Khemani	“Duality in the Symmetry Topological Field Theory Framework” Xie Chen
10:15 – 11:00 am	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)
11:00 am – 12:15 pm	“Applications of Flux-Insertion and Large Gauge Invariance: from Luttinger theorem to conductivity sum rules” Masaki Oshikawa	“Quantum geometry in linear response” Raquel Queiroz	“Introduction to moiré materials” Eslam Khalaf	“Duality in the Symmetry Topological Field Theory Framework” Xie Chen	“Applications of Flux- Insertion and Large Gauge Invariance: from Luttinger theorem to conductivity sum rules” Masaki Oshikawa
12:30 – 1:30 pm	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)	Lunch (Simons Hall)
1:30 - 3:15 pm	Open	Gong Show	Open	Poster Session (Rubenstein Commons)	
3:15 – 3:45 pm	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	Break (Rubenstein Commons)	
3:45– 5:00 pm	“Non-invertible symmetries” Shu-Heng Shao	“The Physics of LDPC codes” Vedika Khemani	“Duality in the Symmetry Topological Field Theory Framework” Xie Chen	“Applications of Flux-Insertion and Large Gauge Invariance: from Luttinger theorem to conductivity sum rules” Maskai Oshikawa	
5:30 – 7:00pm	Dinner (Simons Hall)	Dinner (Simons Hall)	Pool/Pizza Party (97 Olden Lane) (5:30 – 8:30 pm)	Dinner (Simons Hall)	