Theoretical Advanced Study Institute in Elementary Particle Physics (TASI)

TASI 2023
Aspects of Symmetry

University of Colorado Boulder | June 5–30, 2023

ORGANIZERS: **IBRAHIMA BAH** (JOHNS HOPKINS), **KENNETH INTRILIGATOR** (UC SAN DIEGO), **SHU-HENG SHAO** (STONY BROOK)

Lecturers and topics

IBRAHIMA BAH (JOHNS HOPKINS) | Generalized Symmetries and Holography

MASHA BARYAKHTAR (WASHINGTON) | Dark Matter Theory and Possible Detection Opportunities

ALEJANDRA CASTRO (CAMBRIDGE) | Topics in AdS/CFT

MENG CHENG (YALE) | Gapped Phases and TQFT

CLIFFORD CHEUNG (CALTECH) | Scattering Amplitudes and Symmetry

THOMAS DUMITRESCU (UCLA) | Generalized Symmetries in Quantum Field Theory

ISABEL GARCIA GARCIA (IAS + NYU / WASHINGTON) | Particle Physics, Gravity, and Symmetries

KENNETH INTRILIGATOR (UC SAN DIEGO) | SUSY and Symmetry Constraints on RG Flows and IR Phases

HONG LIU (MIT) | Entanglement, Many-Body Systems, and Operator Algebras of Quantum Gravity

JUAN MALDACENA (IAS) | Quantum Aspects of Black Holes

JOHN MCGREEVY (UC SAN DIEGO) | Generalized Symmetries in CMT

GREGORY MOORE (RUTGERS) | Differential Cohomology and Physics

ANDREA PUHM (ECOLE POLYTECHNIQUE, CPHT) | Asymptotic Symmetries

SAKURA SCHAFER-NAMEKI (OXFORD) | Generalized Symmetry and String / M-Theory Realizations

NATHAN SEIBERG (IAS) | The Power of Symmetry

SHU-HENG SHAO (STONY BROOK) | Noninvertible Symmetry

DAVID SIMMONS-DUFFIN (CALTECH) | CFT and Observables on a Null Plane

YIFAN WANG (NYU) | 2d CFTs and Generalized Symmetries

Applications and information are available at colorado.edu/physics/TASI or email TASI@colorado.edu.

Deadline for online application submissions: March 1, 2023

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