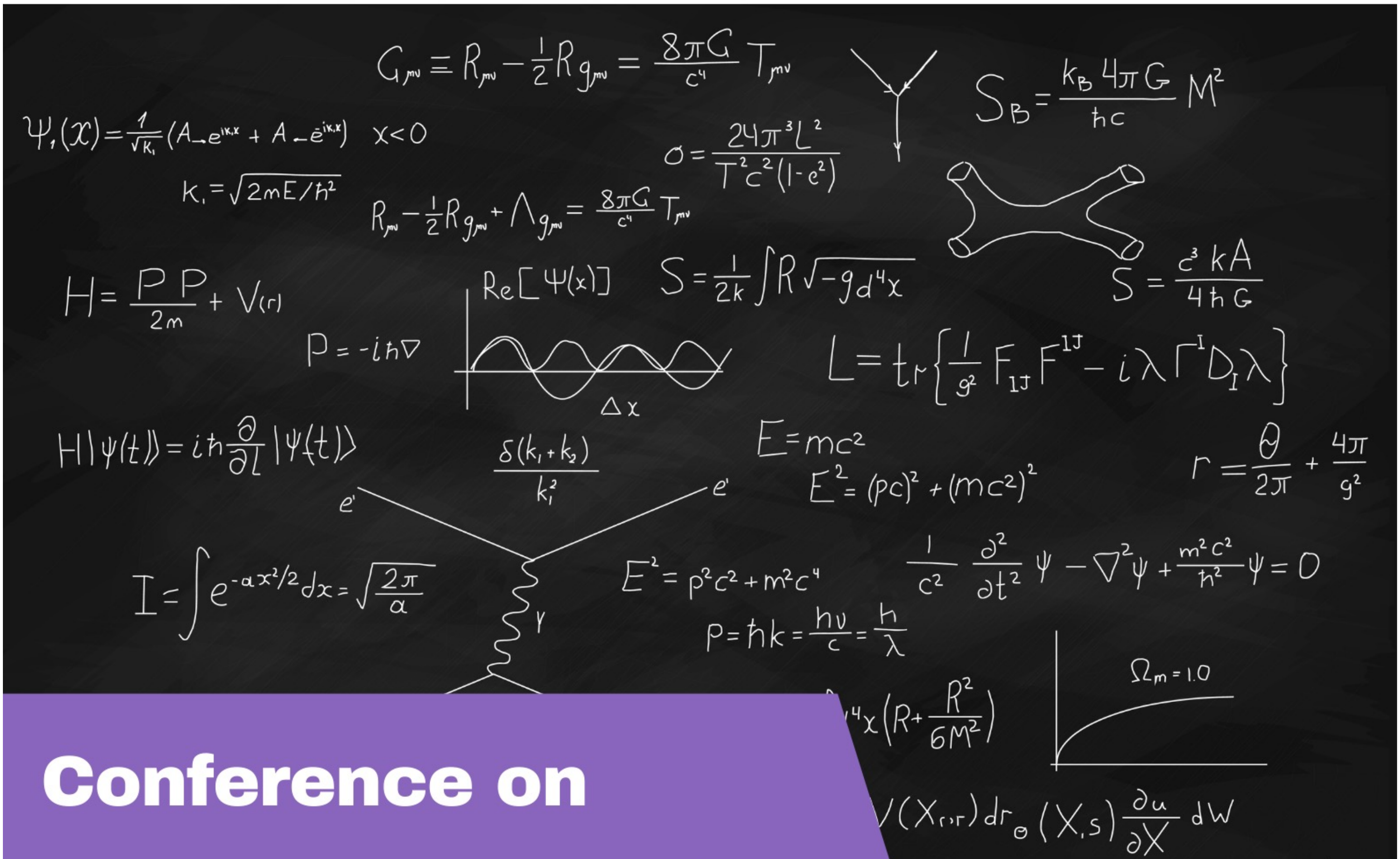
CENTER FOR QUANTUM & TOPOLOGICAL SYSTEMS



Conference on

M-THEORY AND MATHEMATICS: CLASSICAL AND QUANTUM ASPECTS

JANUARY 15-17, 2024

NYUAD A6-007

ORGANIZED BY: HISHAM SATI

The interaction between mathematics and physics has been increasingly thriving, leading to novel discoveries and perspectives. A deep goal of theoretical physics is to unify the four fundamental forces of nature, described by quantum field theory and general relativity. Einstein spent many years on this quest. While his attempts were not successful, his pursuit was certainly worthwhile and the mantle is being carried today by researchers from modern perspectives. Interestingly, mathematics has been playing an increasingly important role in this quest, allowing to probe deeper by studying emerging structures, classical and quantum. These pursuits have had a considerable and direct effect on the development of other areas of wide and applicable interest, including gauge theories, quantum field theories, condensed matter physics, and quantum computing.