

# TF03: CFT and formal QFT

Snowmass 2021

Topical Conveners: David Poland and Leonardo Rastelli

# How to get involved

- Submit white paper (deadline July 31 2021): **<https://snowmass21.org/submissions>**
- Submit “Letter of Interest” (formal deadline August 31, 2020, but can be any time after): **<https://snowmass21.org/loi>**
- White papers and LOIs can be cross-listed between different subtopics of the theory frontier (e.g.: formal QFT and string theory, formal QFT and scattering amplitudes, etc.)
- Participate on Slack: **[snowmass2021.slack.com](https://snowmass2021.slack.com)**
- Participate in meetings:
  - Snowmass Planning Meeting: Virtual, Oct 5-9, 2020
  - Theory Frontier Meeting: KITP, March 17-19, 2021
  - Summer Study: Seattle, July 11-20, 2021

# Subtopics

- CFT, conformal bootstrap, and related ideas; including interfaces with the S-matrix bootstrap and quantum gravity/string theory via holography
- SUSY in various dimensions; including exact results, localization, integrability, decoupling limits of string theory
- IR phases, topological QFT; including generalized symmetries, interfaces with condensed matter, and related aspects of entanglement
- General nonperturbative methods in QFT; including resurgence, truncation methods, functional RG, dualities, interface with lattice QFT
- Interfaces between QFT and quantum information; including entanglement structure of QFTs, information-theoretic approaches to c-theorems, QNEC
- Interfaces between QFT and mathematics
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