

Princeton Center for Theoretical Science

The Princeton Center for Theoretical Science is dedicated to exploring the frontiers of theory in the natural sciences. Its purpose is to promote interaction among theorists and seed new directions in research, especially in areas cutting across traditional disciplinary boundaries.

The Center is home to a corps of Center Postdoctoral Fellows, chosen from nominations made by senior theoretical scientists around the world. A group of senior Faculty Fellows, chosen from science and engineering departments across the campus, are responsible for guiding the Center. Center activities include focused topical programs chosen from proposals by Princeton faculty across the natural sciences. The Center is located on the fourth floor of Jadwin Hall, in the heart of the campus "science neighborhood". The Center hopes to become the focus for innovation and cross-fertilization in theoretical natural science at Princeton.

Faculty Fellows

Ned Wingreen, Acting Director
Shinsei Ryu, Acting Associate Director
Igor Klebanov, Director
Jeremy Goodman
Duncan Haldane
Andrew Houck
Mariangela Lisanti
Thanos Panagiotopoulos
Frans Pretorius
Silviu Pufu

Center Postdoctoral Fellows

Vir Bulchandani 2020-2023
Amos Chan 2019-2022
Giorgio Cipolloni 2021-2024
Trevor GrandPre 2022-2024
Alejandro Martinez-Calvo 2021-2024
Vladimir Narovlansky 2019-2022
Carolyn Raithel 2020-2023
Nicole Shibley 2021-2024

Andrew Chael 2019-2022
Minjae Cho 2021-2024
Scott Collier 2020-2023
Brooke Husic 2020-2023
Elias Most 2020-2023
Sabrina Pasterski 2019-2022
Frank Schindler 2020-2023

To find out more about Center Postdoctoral Fellowships and Programs see: <https://pcts.princeton.edu>



Boundaries and Defects in CFT and Holography

March 28-29, 2022

In Person for PU ID holders and
Virtual on Zoom

Program Organizers

Scott A. Collier
Simone Giombi
Vladimir Narovlansky
Xinan Zhou
Bernardo Zan

Boundaries and Defects in CFT and Holography

Talks are 35 minutes + 10 minutes for questions.

Monday, March 28, 2022

9:00 Breakfast/Coffee at PCTS

9:25-9:30: Opening remarks

9:30-10:15: **Dalimil Mazac**
"Bootstrap bounds on the boundary entropy"

10:15-11:00: **Volker Schomerus**
"Spinning the defect bootstrap"

11:00-11:30: Break

11:30-12:15: **Balt van Rees (Virtual)**
"Defects and boundaries for free scalar fields"

12:15-2:00: Lunch served at PCTS

2:00-2:45: **Max Metlitski**
"Boundary criticality of the $O(N)$ model in $d = 3$ critically revisited"

2:45-3:30: **Nadav Drukker**
"An invitation to surface operators in the $(2,0)$ theory"

3:30-4:00: Break

4:00-4:45: **Davide Gaiotto (Virtual)**
"Giant gravitons in twisted holography"

5:00-7:00: Reception at PCTS

Boundaries and Defects in CFT and Holography

Talks are 35 minutes + 10 minutes for questions.

Tuesday, March 29, 2022

9:00-9:45: **Christopher Herzog (Virtual)**
"Conformal surface defects are trivial in Maxwell theory"

9:45-10:30: **Shu-Heng Shao**
"Non-invertible symmetries from higher gauging"

10:30-11:00: Break

11:00-11:45: **Zohar Komargodski**
"The taxonomy of Wilson lines in gauge theories"

11:45-12:30: **Shota Komatsu**
"Wilson Loops and Matrix Product States"

12:30-2:00: Lunch served at PCTS

2:00-2:45: **Mark van Raamsdonk (Virtual)**
"Cosmology from boundaries"

2:45-3:30: **Yifan Wang**
"New Constraints on Branes and Boundaries"

3:30-4:00: Break

4:00-4:45: **Shinsei Ryu**
"Multipartite entanglement of topologically-ordered phases and string field theory"

4:45: Conclusion and free discussions