

## 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 and is celebrating its tenth anniversary in 2016.

### Faculty Fellows

Paul Steinhardt, Director  
Igor Klebanov, Associate Director  
Andrei Bernevig  
Curtis Callan  
Pablo Debenedetti  
Eve Ostriker  
Howard Stone  
Herman Verlinde  
Ned Wingreen

### Center Postdoctoral Fellows

Barry Bradlyn 2015-2018  
Jennifer Cano 2015-2018  
Anna Frishman 2016-2019  
Anna Ijjas 2014-2017  
Bruno Le Floch 2015-2018  
Daniel Lecoanet 2016-2019  
Zhiyuan Li 2015-2108  
Mark Mezei 2014-2017  
Titus Neupert 2013-2016  
David Pinner 2014-2017  
Pierre Ronceray 2016-2019  
Curt von Keyserlingk 2014-2017  
Yaojun Zhang 2015-2018

To find out more about Center Postdoctoral Fellowships and Programs see:

<http://pcts.princeton.edu/pcts>



## “Non-WIMP Dark Matter”

**11-13 November 2016**  
**Jadwin Hall, Room 407**

### Workshop Organizers

Yonatan Kahn  
Mariangela Lisanti

# Non-WIMP Dark Matter

## Friday, November 11, 2016

9-9:45am: Continental Breakfast

**9:45-11:45am: Overview of non-WIMP models (15min talk + 15 min discussion)**

9:45-10:15 Matthew Reese - sub-eV

10:30-11:00 Gordan Krnjaic - light dark sectors

11:15-11:45 Mathew Buckley - heavy DM

11:45am-2pm: Lunch + Discussions

**2pm-4pm: Relic Density Constraints**

2-2:30 Yonatan Kahn - misalignment, domain walls, and inflationary production

2:45-3:30 Raffaele D'Agnolo - keV-MeV bosons/fermions

4-4:30pm Break

**4:30-6pm: Open Discussion on CMB constraints**  
Led by Neal Weiner and Jo Dunkley

## Saturday, November 12, 2016

9-10am: Continental Breakfast

**10-12pm: sub-eV Detection (15 min talks + 15 min discussion)**

10-10:30 Asimina Arvanitaki - spin-dependent force, superradiance, etc

10:45-11:15 Gray Rybka - ADMX and related ideas

11:30-12 Kerstin Perez - Terrestrial and astrophysical probes of ALPs

12-1pm: Lunch

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## Saturday, November 12, 2016 (cont.)

**1pm-3pm: keV-MeV Detection**

1-1:30 Mariangela Lisanti - superconductors/superfluid He/graphene

1:45-2:15 Rouven Essig - XENON/semiconductors/crystals

2:30-3 Chris Tully - Experimental challenges for keV-MeV DM

3-3:30pm: Break

**3:30-5:30pm: Gravitational Interactions**

3:30-4 Jo Bovy - stellar astrophysics

4:15-4:45 Leonidas Moustakas – lensing

5-5:30 Alyson Brooks - N-body simulations

## Sunday, November 13, 2016

9-10am: Continental Breakfast

**10am-12pm: Gaps in DM detection** (working groups)

12pm: Lunch and Departure