

MCAW 2022, Saturday, November 12

Talks and coffee breaks: Chamberlin Hall, Room 2241 (1150 University Avenue)
Lunch and Poster session: Wisconsin Institute of Discovery (330 N. Orchard Street)

8:15-9:00, checking in (Chamberlin Hall, 1150 University Avenue)

9:00-10:40, oral session 1 (session chair: Deniz Yavuz)

- 9:00-9:25, Conor Bradley, University of Chicago (group of Hannes Bernien)
Mid-circuit correction of correlated phase errors on a dual-species atom array
- 9:25-9:50, Trent Graham, University of Wisconsin (group of Mark Saffman)
Quantum circuits and mid-circuit measurement in a neutral atom quantum computer
- 9:50-10:15, Mingjiamei Zhang, University of Chicago (group of Cheng Chin)
Quantum Matter Synthesizer: Seeing and arranging single atoms in an optical lattice
- 10:15-10:40, Ryan Cardman, University of Michigan (group of Georg Raithel)
Alkali Rydberg atoms in a phase-modulated optical lattice

10:40-11:00, coffee break

11:00-12:15, oral session 2 (session chair: Timothy Kovachy)

- 11:00-11:25, Hikaru Tamura, Purdue University (group of Chen-Lung Hung)
Spontaneous Formation of Ring Dark Solitons and Vortex Dipole Necklaces in a 2D Atomic Superfluid
- 11:25-11:50, Chenwei Lv, Purdue University (group of Qi Zhou)
Curving the space by non-Hermiticity
- 11:50-12:15, Samir Bali, Miami University
Observation of stochastic resonance in directed propagation of cold atoms

12:15-1:00, lunch break (WID, 330 N. Orchard Street)

1:00-2:00, poster session set-up and poster session (WID, 330 N. Orchard Street)

2:00-3:40, oral session 3 (session chair: Elizabeth Goldschmidt)

- 2:00-2:25, Matt Cambria, University of Wisconsin (group of Shimon Kolkowitz)
Common model for spin-phonon effects in nitrogen-vacancy centers
- 2:25-2:50, Botao Du, Purdue University (group of Ruichao Ma)
Driven-dissipative dynamics in superconducting circuit lattice coupled to tunable baths
- 2:50-3:15, Michael Higgins, Purdue University (group of Chris Greene)
Three and four identical fermions near the unitary limit
- 3:15-3:40 Micheline Soley, University of Wisconsin
Experimentally-realizable PT phase transitions in reflectionless quantum scattering via cold atoms in programmable traps

3:40-4:00, coffee break

4:00-5:15, oral session 4 (session chair: Jake Covey)

- 4:00-4:25, Xing Wu, University of Chicago and Harvard (groups of Dave DeMille and John Doyle)
Searching electron electric dipole moment with cold ThO molecules
- 4:25-4:50, Nicholas Miller, Northwestern University (group of Timothy Kovachy)
Searching for Ultralight Dark Matter in the Audio Band with a Cryogenic Optical Cavity Comparison Experiment
- 4:50-5:15, Tongcang Li, Purdue University
Near field sensing with an optically levitated nanodumbbell in vacuum

5:15-6:00, poster session