

# **Welcome to UConn Physics**

**2024 Open House for new Graduate Students**

**Gerald Dunne March 8, 2024**

# Overview

## Who we are and what we do

- 45 Faculty members (from 21 different countries)
- 100+ graduate students
- Teaching, Research and Outreach in modern physics
- Atomic, Molecular, Optical (AMO) physics
- Astrophysics
- Condensed Matter Physics
- Nuclear and Particle Physics

# Our Goals

- We aim to guide you towards making new and exciting discoveries in modern physics
- Preparation in core physics courses: classical mechanics, electrodynamics, statistical mechanics, quantum mechanics
- Advanced classes in sub-fields
- Research training, mentorship, support and guidance
- Career development: writing and speaking about physics, and teaching physics

# Graduate School is Intense but Rewarding

- You will have a lot of freedom to explore and discover - take advantage of it
- You will make close and lifelong friends
- You will have research and collaboration opportunities with physicists from all over the world, from all different backgrounds
- Make the most of these opportunities

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  - Have some fun - PGSA Physics Graduate Student Association
  - UConn has many student clubs

# National Labs and Collaborations

- Modern physics is extremely collaborative and international
- Large national labs dedicated to cutting-edge research
- UConn Physics has particularly close affiliations with many: Brookhaven, Fermilab, Jefferson Lab, Argonne, Los Alamos, SLAC, Livermore, ... , JPARC, DESY, Max Planck, ...
- Astro: Hubble, Webb, ALMA, Max Planck, Flatiron Institute, ...
- Theory Collaborations: Lattice QCD, UKQCD, Simons Center, QTC Denmark, ...
- Collaborations within UConn, and with other Universities
- These provide amazing opportunities for students - take advantage of this !

# UConn Physics Events

- Friday Colloquium: get together and learn about new physics research
- Seminars: AMO, Astro, Particle/Nuclear, Condensed Matter
- Special Lectures: Katzenstein, Pollack, Reynolds
- Poster Day: spring
- Ice-cream social: fall
- Holiday party
- Regular PGSA events
- Mt. Monadnock hike: early October



Annual UConn Physics hike: Mt. Monadnock





# American Physical Society

- National Society and regional New England Section
- Conferences and Scientific Meetings
- Social events
- Career development events and resources
  
- Excellent opportunity to make connections and practice research presentations
- Get involved !

# Practical Matters

- Basic flow of a PhD
- Years 1+2: core coursework and exploring research: field and major advisor
- Year 3: advanced courses & research: dissertation proposal and plan of study
- Years 4 and 5+: intense dissertation research and writing papers, dissertation
- Annual Progress Forms to help keep you on track
- In the end it is all up to you. We will do everything to help, but it will be your degree and your achievements

# After Graduation

- What next?
- Historically: approximately 1/3 academia, 1/3 industry, 1/3 other (finance, computing, teaching, ...)
- We will help you: advice, networks, letters of recommendation, ...
- It's good to think about this early on, but keep an open mind. Physicists are extremely successful in many different careers, and your interests will evolve