

Physics Fields of Interest

- **Atomic, Molecular and Optical Physics** — cold atom physics, atom optics, quantum optics.
- **Biophysics & Nonlinear Dynamics** — cell physics, soft matter, multicellular systems, active matter, fluid mechanics, the mechanics of solids
- **Condensed Matter Physics** — nanoscience, scanning probe microscopies, quantum materials, ultrafast nonlinear spectroscopy, quantum information, spintronics, superconductivity.
- **Cosmology** — dark matter, inflation, CMB, dark energy, phenomenology, holography, string theory.
- **High Energy Physics** — large-scale detectors, ATLAS, neutrinos, rare decays, high-intensity laser interactions with matter, shocks, high-density plasmas in magnetic fields, wakefield acceleration.
- **Gravitational Physics** — gravitational waves, gravitational wave astrophysics, black holes, numerical relativity, LIGO, LISA.
- **Nuclear Physics** — Relativistic Heavy-Ion Experiments: STAR, sPHENIX (BNL), ALICE (LHC)
- **Plasma/Fusion Physics** — ITER, space plasmas, General Atomics.