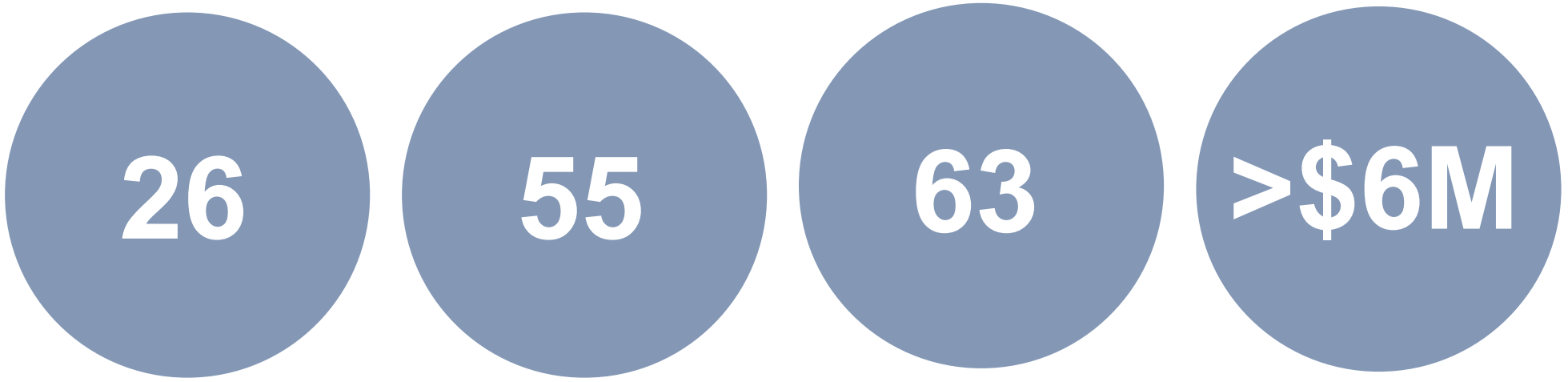
COLORADO SCHOOL OF MINES
EARTH • ENERGY • ENVIRONMENT

Welcome to our Spring 2021 Physics Colloquium Series

Physics Department Information



Full-Time Physics Faculty

Average Physics Bachelor's Recipients per year

Full-Time Graduate Students

Yearly Research Expenditure

Colorado School of Mines is a public university focused on science and engineering, dedicated to pioneering research that addresses the great challenges society faces today—particularly as they relate to the Earth, energy and the environment—and committed to educating students who will do the same.

Research Programs and Funding

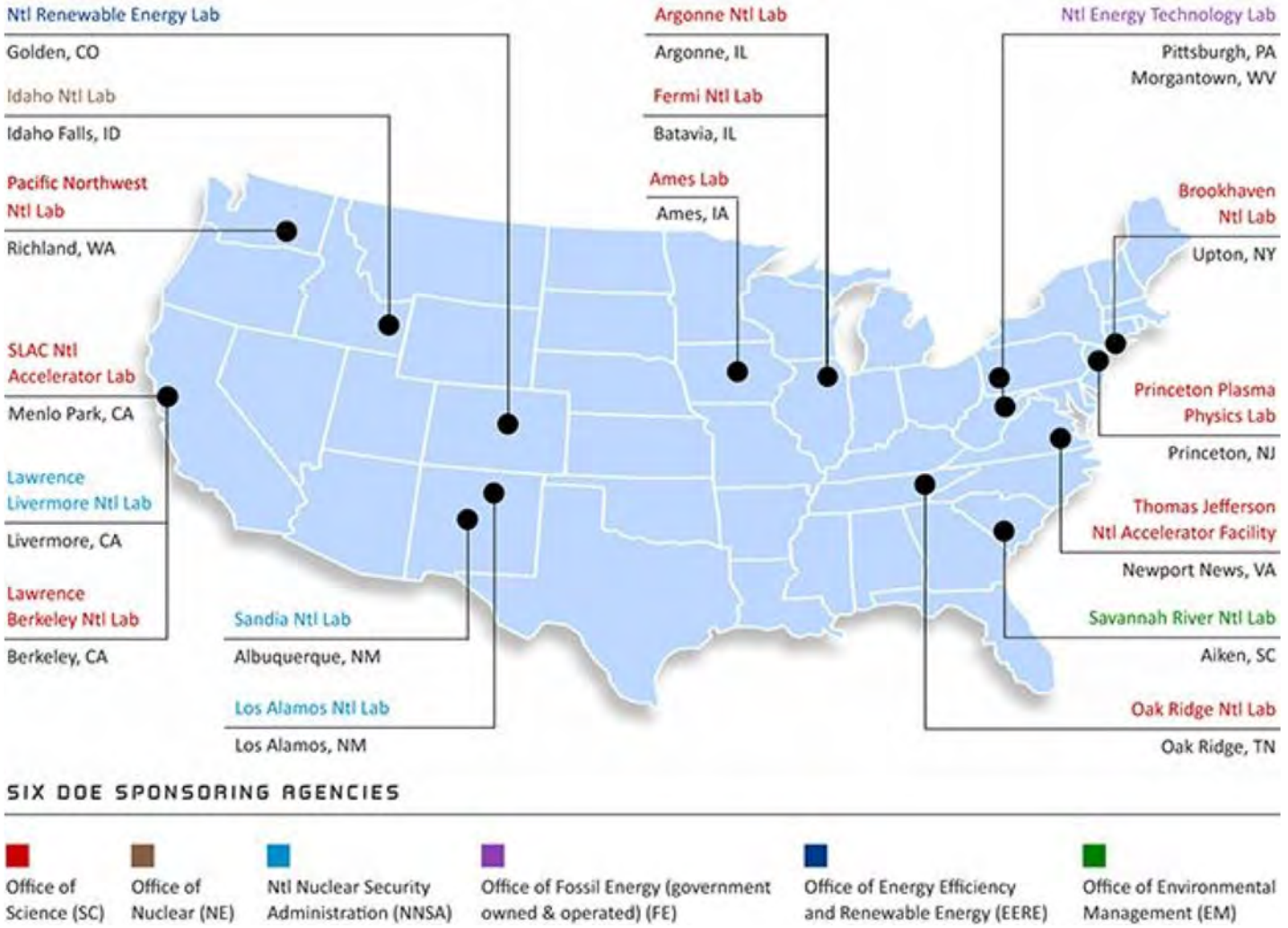
- Quantum and Condensed Matter Physics (~50%)
  - Quantum Information Science
  - Solid State Physics
  - Renewable Energy Materials

- Experimental Optical Physics/Biophysics (~25%)
  - Applied Optics
  - Ultrafast Laser Physics
  - Computational Imaging

- Experimental Subatomic Physics (~25%)
  - Particle Astrophysics
  - Nuclear Structure & Astrophysics
  - Applied Nuclear Physics
  - Fundamental Symmetries and Interactions

Ties to National Laboratories

- In addition to NREL (located 10 minutes away), faculty lead or are heavily involved in research across the US.
- Our major partners are:
  - National Renewable Energy Laboratory
  - National Institute of Standard & Technology
  - Lawrence Livermore National Laboratory
  - Stanford Linear Accelerator Center
  - Los Alamos National Laboratory
  - Argonne National Laboratory
  - Sandia National Laboratory
  - Oak Ridge National Laboratory
  - Pacific Northwest National Laboratory
  - Brookhaven National Laboratory
- We also perform work with major international laboratories across the globe.



Daniel Adams
Optical Physics

Kristine Callan
Teaching Professor

Lincoln Carr
Quantum Physics

Reuben Collins
C-M Physics

Todd Ruskell
Teaching Professor

Frederic Sarazin
Subatomic Physics

Susanta Sarkar
Biophysics

Meenakshi Singh
Quantum Physics

Charles Durfee
Optical Physics

Serena Eley
C-M Physics

Alex Flournoy
Teaching Professor

Thomas Furtak
C-M Physics

Emily Smith
Teaching Professor

Jeff Squier
Optical Physics

Xerxes Steirer
Material Science

Charles Stone
Teaching Professor

Zhexuan Gong
Quantum Physics

Uwe Greife
Subatomic Physics

Eliot Kapit
Quantum Physics

Patrick Kohl
Teaching Professor

P. Craig Taylor
Material Science

Eric Toberer
Material Science

Lawrence Wiencke
Subatomic Physics

Vince Kuo
Teaching Professor

Kyle G. Leach
Subatomic Physics

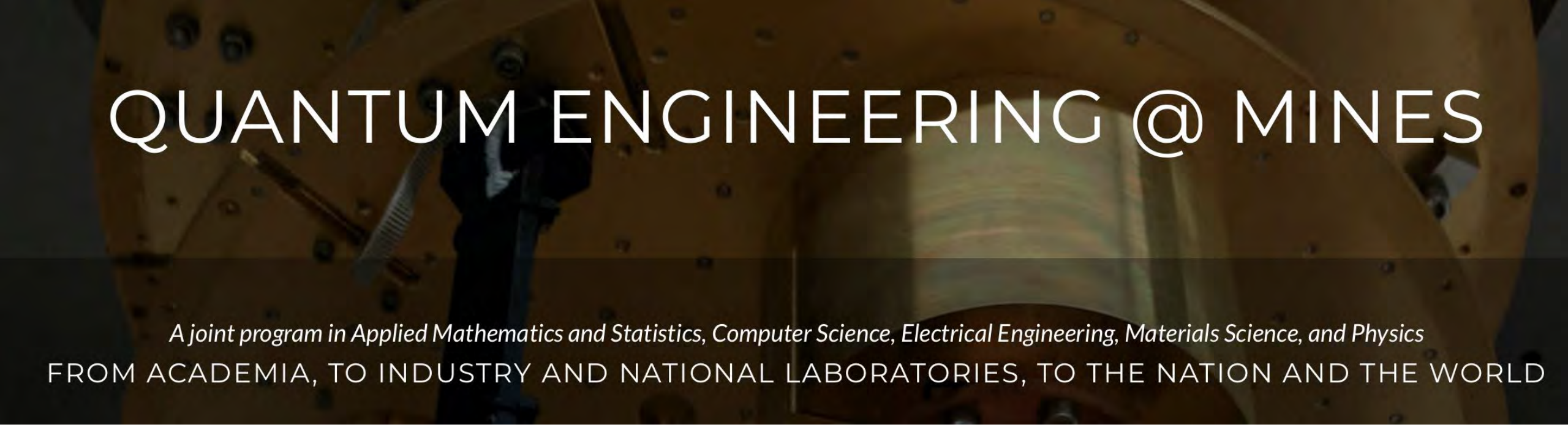
Mark Lusk
Quantum Physics

Tim Ohno
Renewable Energy Physics

Jeramy Zimmerman
Material Science

Wendy Adams
Education Research

Nitin Kumar
Renewable Energy Physics



QUANTUM ENGINEERING @ MINES

A joint program in Applied Mathematics and Statistics, Computer Science, Electrical Engineering, Materials Science, and Physics

FROM ACADEMIA, TO INDUSTRY AND NATIONAL LABORATORIES, TO THE NATION AND THE WORLD

The new, interdisciplinary Quantum Engineering Graduate Program at the Colorado School of Mines prepares students for careers in emerging quantum technologies. Developed through collaboration between the departments of Physics, Materials Science, Computer Science, Electrical Engineering, and Applied Mathematics, students will be introduced to the quantum information sciences, programming on quantum computers, quantum many-body physics, microelectronics fabrication techniques in a class-1000 cleanroom, as well as low temperature and microwave measurements. Additionally, we offer a range of elective courses covering solid-state materials, optical engineering, and computer science. The program is offered in both a hardware track and a software track.

For more information, see https://quantum.mines.edu or contact quantum@mines.edu

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The Department of PHYSICS at the Colorado School of Mines

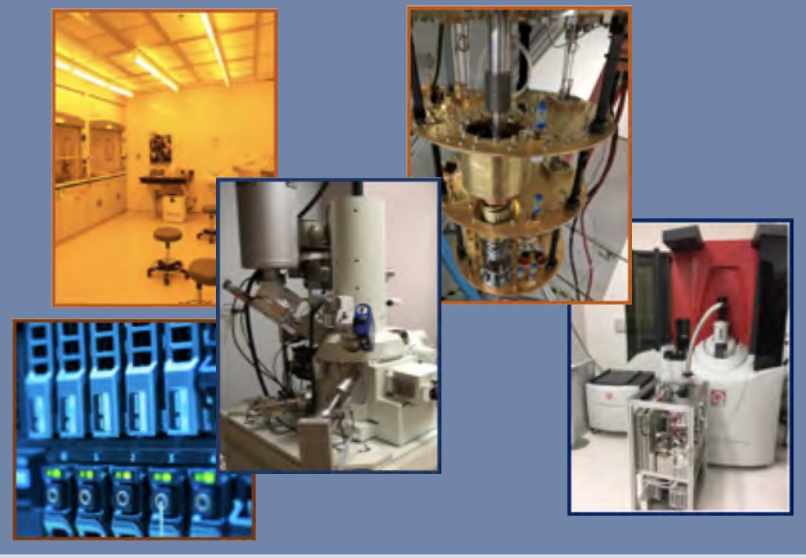
IS RECRUITING GRADUATE STUDENTS in Physics and Quantum Engineering

The Colorado School of Mines

- Is ranked #2 in the country by Wall Street Journal for combining scholarly research with instruction and #1 Engineering School in the country by College Factual.

The Mines Department of Physics

- Has cutting-edge facilities for nanofabrication, electron microscopy, low-temperature physics, high performance computing, and more.
- Offers a Ph.D. in Physics and M.S. degrees in Applied Physics, Quantum Engineering, and Nuclear Science & Engineering.
- Has numerous collaborations with national labs, including the nearby NREL and NIST (Boulder).



Research positions available in –

- Condensed Matter and Materials Physics: superconductors, thermoelectrics, photovoltaics ...
- Quantum Information: solid-state qubits, noisy quantum computing, quantum simulators ...
- Ultrafast Optics: structured light, plasma physics, computational imaging, biophysics ...
- Sub-atomic Physics: dark matter research, nuclear physics, multi-messenger astronomy...

Application Deadline: December 15, 2020

physics.mines.edu/graduate-program

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For more information contact:
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Quantum Information - gong@mines.edu,
Optics – cdurfee@mines.edu
Sub-atomic Physics - kleach@mines.edu