

## News & Events

### Apply for a Student Award in the Department of Physics

The Physics Department offers a number of awards for undergraduate and graduate students in physics each year. Many of these awards have been made possible through generous donations by alumni and friends of the Department. The list of the physics department's awards, their descriptions, and eligibility requirements can be found at the link below. Department of Physics Awards generally range from \$250 to \$5,000 to deserving students to assist with educational expenses.

<https://www.physics.wisc.edu/department/awards/apply/>

### Application Process

#### Eligibility

- Must be enrolled as a full-time student at UW-Madison in both semesters of the Academic Year
- Must be a physics major (some awards also include astronomy majors)

Applicants will be reviewed by the Student Awards Committee. You don't need to decide which to apply for; you will automatically be matched with all awards for which you are eligible campus-wide — not just in Physics!

#### To Apply

To apply for awards, students must use WiSH — Wisconsin Scholarship Hub — in their student center. A completed application will include:

- Resume/CV
- Statement of current research/teaching activity and future plans as a physics major (one page)
- Letter of recommendation from a faculty or staff member (one page)
- The online application system will automatically prompt the letter writer to submit letter
- If indicated in the award description, a statement of need (one page)

**The deadline to submit an application is Tuesday, February 28, 2023.**

For More information, contact the Department of Physics: [info@physics.wisc.edu](mailto:info@physics.wisc.edu)

### SAVE-THE-DATE: MSPQC Program Mid-Semester Lunch

**Thursday, March 2 | 12:00 - 1:00 pm**

**Place: 5280 Chamberlin Hall**

#### Information on Internships at Argonne National Lab:

- Overview of Argonne graduate student opportunities: <https://www.anl.gov/education/graduate-programs>
- Graduate summer (computational) internship info: <https://www.anl.gov/education/graduate-internships>. **Due March 1, or until all positions are filled.**
- Current posted internship opportunities: [https://argonne.wd1.myworkdayjobs.com/EDU\\_PUB](https://argonne.wd1.myworkdayjobs.com/EDU_PUB)
- Application for a general graduate intern: [https://argonne.wd1.myworkdayjobs.com/en-US/EDU\\_PUB/job/Graduate-Research-Program-General-Application---FY2021\\_411021](https://argonne.wd1.myworkdayjobs.com/en-US/EDU_PUB/job/Graduate-Research-Program-General-Application---FY2021_411021)

- Robotics and Instrumentation Internship Program that just started this year: [https://argonne.wd1.myworkdayjobs.com/en-US/EDU\\_PUB/job/Robotics---Instrumentation-Group--Internship-Program\\_414437](https://argonne.wd1.myworkdayjobs.com/en-US/EDU_PUB/job/Robotics---Instrumentation-Group--Internship-Program_414437)
- Opportunities related to Q-NEXT: <https://q-next.org/opportunities/>. There are a number at Argonne (specifically the Givens Associate Program, which is one of our grad internship programs).

### **The Morgridge Entrepreneurial Bootcamp (MEB)**

The Wisconsin School of Business is offering the Morgridge Entrepreneurial Bootcamp (MEB) from June 5-9, 2023. This program allows UW graduate students and postdocs in the STEM and other fields to learn substantial theory and tools about technology entrepreneurship. This is a week-long total immersion, integrated experience that has consistently received top reviews from the participants.

This boot camp is suitable for Masters, PhD and Post Docs. Participants DO NOT need to have a well-thought-out startup idea, just an interest in entrepreneurship. The program has supported over 860 students between 2007-2022, engaged with 43 different instructors, and hosted 65 panelists. Graduates who have participated have found success in academia, business, and government.

The application deadline is Thursday, March 9. Due to generous gifts to honor program sponsors John & Tashia Morgridge, we are able to offer this program at no cost to the student but enrollment is limited.

Apply here: <https://business.wisc.edu/entrepreneurship/morgridge-entrepreneurial-bootcamp/>

### **Black Leaders in Clean Energy**

**Tuesday, Feb. 15 | 4:00 - 5:00 pm**

**Online**

In honor of Black History Month, we are celebrating the accomplishments of several Black leaders in the Midwest and their contributions toward a cleaner energy future. Hear from our distinguished panelists as they share their experiences, successes, challenges, and advice for younger people. While we consider the racial injustices worsened by legacy energy systems and climate change, we'll discuss the importance of having Black leadership and community voices in solutions moving forward.

**Register Here:** [https://uwmadison.zoom.us/webinar/register/WN\\_BDKeAVwJSWKJPDOOI9JI2g](https://uwmadison.zoom.us/webinar/register/WN_BDKeAVwJSWKJPDOOI9JI2g)

### **Graduate Research Showcase at UW-Madison Day at the Capitol**

The UW-Madison Office of State Relations is seeking graduate student and postdoctoral researchers interested in sharing their research with state legislators and legislative staff this spring as part of the annual UW-Madison Day at the Capitol on April 26, 2023. This event will be held fully in-person and will consist of poster presentations, the opportunity to meet with legislators, and a luncheon. This is an excellent opportunity for researchers to present their work to a non-scientific audience and show legislators, staffers, and the public the cutting edge research occurring on campus and why it is important to Wisconsinites.

The application is due no later than 11:59pm on March 3, 2023. If you are selected to present a poster, there will be a training event in mid-April to provide resources for communicating with legislators.

Application: <https://docs.google.com/forms/d/e/1FAIpQLSdIMePw3z-aZ3g0sJzbSUZMQAVBRON-RV8Uk0ABoruvM6t2Mw/viewform>

For more information see the event website: <https://staterelations.wisc.edu/uw-madison-day-at-the-capitol/>

If you have questions about the event or application, please email Chris Dade, CaSP co-President

(cdade@wisc.edu), or Crystal Potts, Director of State Relations at UW-Madison (crystal.potts@wisc.edu).

### Physics Department Colloquium

Compact Linear Accelerators for the Ultrabright Light Sources and the Cool Copper Collider

**Friday, March 3 | 3:30 pm**

**Place: 2241 Chamberlin Hall**

**Speaker:** Emilio Nanni, SLAC, Stanford University

### R. G. Herb Condensed Matter Seminar

Single Photon Computation Imaging and Quantum Information

**Thursday March 9 | 10:00 am**

**Place: 5310 Chamberlin**

**Speaker:** Andreas Velten, UW-Madison

**Host:** Thad Walker

### Physics Department Colloquium: Imprints of the Quantum Physics on the Universe

**Friday, March 10 | 3:30 pm**

**Place: 2241 Chamberlin Hall**

**Speaker:** Jun'ichi Yokoyama, University of Tokyo

**Abstract:** Our Universe is big, old, and full of structures. All of them are big mysteries in the classical Big Bang Cosmology. Inflationary cosmology, which postulates accelerated expansion in the early Universe, explain all of them. Inflation is driven by a quantum field, whose quantum fluctuations are stretched to fill the entire Universe. Their trace is observed in the Cosmic Microwave Background (CMB), and they also yield density fluctuations to form galaxies etc. Furthermore, where the fluctuations were large, they may have formed primordial black holes and may have been the origin of the black holes found by LIGO and Virgo. We have calculated not only the lowest-order perturbations, but also the loop effects, and found that the distribution of fluctuations must be highly Gaussian, and that the formation of primordial black holes would be inconsistent with the CMB.

**Host:** Daniel Chung

### Department of Physics Events Web Page

Check out the Department of Physics Events page to find more upcoming talks, thesis defense presentations, department gatherings, and more...

<https://www.physics.wisc.edu/events/>

## Get Involved

### Announcing the Wisconsin Quantum Computing Club (WQC)!

<https://wqi.wisc.edu/2023/02/06/announcing-the-wisconsin-quantum-computing-club-wqcc/>

### Gender Minorities and Women in Physics (GMaWiP)

GMaWiP is a group for women and gender minorities (including trans and nonbinary people) at all levels in academia interested in physics. Our meetings have been made up of grad students, undergrads, faculty, staff, and postdocs. We provide support and advocacy for all GM&W and other minoritized groups in physics. Join our email list (for both GM&W and allies) to hear about all our events and activities!

### Physics Graduate Student Council (PGSC)

PGSC is a group of physics graduate students at UW-Madison working to improve the well-being and success of graduate students in the Department of Physics. Current Physics graduate students can participate in or help organize one of many activities we plan to host this year. Consider joining one or more of our four committees if you would like to get involved.

### The Data Science Hub at UW-Madison

The Data Science Hub at UW-Madison offers a variety of services to help researchers (students, staff, faculty) advance their computational and data analysis skills. See below to learn how you can get involved!

<https://datascience.wisc.edu/hub/>

### Memberships Available: UW-Madison APS Chapter

The American Physical Society (APS) has approved UW-Madison for an APS Chapter, which is a new program for graduate students and early career scientists (defined as having received their PhD within the past five years). There are no fees or responsibilities required to be a member of the chapter and the chapter can request speakers from the APS and will receive a small grant every 6 months. In addition, chapter members who are also APS members may have the opportunity to apply for certain travel grants. More information on the program can be found here. For more information, contact Luca Riitano.

## Important Dates

**February 17:** Deadline to drop a Spring course and receive 50% tuition adjustment

**March 11 - 19:** Spring Recess (Break)

**March 27:** Summer enrollment times assigned to students (throughout week)

**April 3:** Summer term enrollment begins according to appointment time

**April 3:** Fall enrolment times assigned to students (throughout week)

**April 10:** Fall term enrollment begins according to appointment time

**April 20:** Deadline for graduate student to request pass/fail or credit/audit options

**April 20:** Deadline for graduate students to change variable credits

**April 21:** Deadline to drop a Spring course

- April 21:** Deadline to add a Spring course without department permission
- May 5:** Deadline for graduate students to withdraw from Spring term
- May 5:** Last day of instruction for Spring 2023 term
- May 6:** Study Day
- May 7 - 12:** Final Exams
- May 14:** Official degree conferral date on diploma for Spring 2023 graduates
- May 15:** Spring 2023 Grading Deadline

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## Professional Development

### Co-design Center for Quantum Advantage Quantum Computing Summer School

Brookhaven National Lab offers a six-week workshop to introduce undergraduate and graduate students to the exciting world of quantum information science. Through a series of demonstrations and hands-on programming labs, students will learn how quantum algorithms, when applied to specific problem domains, can outperform classical computers. Students will learn IBM Qiskit, a world-class software package for working with quantum computers at the level of pulses, circuits, and application modules. The workshop will run for six weeks and be conducted entirely remotely using Zoom web conferencing. Students must have previously completed courses in computer science, integral calculus, and introductory physics. Students will download and install the 100% open-source courseware and development tools on their personal computers, which they will use during the program. Students will be provided a weekly stipend and those who successfully complete the workshop will be presented a certificate from Brookhaven Lab attesting to their skills in the Foundations of Quantum Programming.

For more information and to apply please visit [C2QA Quantum Computing Summer School](#)

### Upcoming Software Training for Students (STS) courses:

R  
Python  
CSS 1  
Excel 1

<https://sts.doit.wisc.edu/workshops/>

## Employment and Funding Opportunities

### Badger PreCollege Summer Instructor

Badger Summer Scholars (<https://precollege.wisc.edu/badger-summer-scholars/>) is a two week summer program for motivated high schoolers. **It runs June 18 – 30.** The class is called Where Art meets Physics (<https://precollege.wisc.edu/classes/where-art-meets-physics/>) The course description is very general because we have not run it before and we wanted to give an instructor some room to make it what they want but it was “borrowed” from PHY109.

Interested Physics graduate students or Previous PHYS 109 Teaching Assistants that taught the course are encouraged to apply:

<https://studentjobs.hr.wisc.edu/en-us/job/503789/high-school-youth-program-instructor-where-art-meets-physics>

Help us encourage the next generation of young physics majors!

### Full-Time Positions and Part-Time Internships at Ernst & Young

The QTB group at Ernst & Young provides professional services to large global/US banks with a specialized focus on quantitative methods and capital market products, including front-office pricing, Market, Counterparty Credit, and other risk models.

The following are among the list of experiences and skills preferred in candidates:

- Statistical and numerical techniques, theory of probability and stochastic calculus
- Financial engineering/research and development, Derivatives products
- Database languages (e.g., SQL/Excel) and statistical tools / languages (e.g., Python/R)
- Programming proficiency (e.g., C/C++, Python, R, Java, Linux)
- Big data/machine learning and AI techniques, including neural network and deep learning frameworks and machine learning tools (e.g., PyTorch, TensorFlow, Theano, Torch, Keras)

Contact Rui Tang ([rui.tang@ey.com](mailto:rui.tang@ey.com)) and Xinxin Yu ([xinxin.yu@ey.com](mailto:xinxin.yu@ey.com)) with questions about the group and position. For application, send the info below to [xinxin.yu@ey.com](mailto:xinxin.yu@ey.com):

- Most updated resume
- Position to apply (fulltime or intern)
- Program of study at UW-Madison
- Expected graduation date

### Qubit x Qubit is Hiring Quantum Teaching Assistants!

**Qubit by Qubit (QxQ) is a nonprofit organization** dedicated to training the future diverse quantum workforce. We are pioneering innovative programs for students in middle school through college with the goal of making quantum computing accessible to students around the world, particularly students historically underrepresented in STEM.

**We are looking for Teaching Assistants (TAs)** who will support our Summer 2022 and Academic Year 2022-2023 programs. TAs are an integral part of all of our educational programs. They lead lab sections - guiding students through quantum coding exercises and reviewing concepts introduced in lecture - and support other teaching and curriculum development needs. TAs are often asked to participate in special events to talk with students about their personal experiences in college and graduate school. As an

organization that serves a diverse group of students, we are strongly focused on ensuring our instructional team reflects the diversity of our students.

**Working with QxQ**, TAs will refine their own quantum computing skills, get the chance to work with leaders in quantum education, and make a lasting impact on students around the world.

**This role is entirely remote.** TAs will be paid a stipend commensurate with experience and based on the amount of time they work weekly. For all programs, TAs will be required to participate in training on the curriculum and teaching best practices.

Interested applicants can apply here:

<https://airtable.com/shryuJki9swjOJnA9>

### **Careers in Physics, APS Physics**

Visit the APS Physics website to explore Physics jobs and to find resources for job seekers.

<https://www.aps.org/careers/index.cfm>

### **Chicago Quantum Exchange: Job Opportunities**

Visit the Chicago Quantum Exchange (CQE) website to explore job postings in Quantum information:

<https://chicagoquantum.org/resources/job-opportunities>

### **QED-C, Quantum Jobs**

Check out available listings of employment opportunities at QED-C members companies. Members include corporations, academic institutions, national laboratories and government agencies working in quantum.

<https://quantumconsortium.org/quantum-jobs/>

### **Careers at Qunasys**

Visit the Qunasys website to explore job postings in Quantum Computing:

<https://qunasys.com/en/careers>

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## Graduate Student Resources

### Graduate Student Support and Assistance

The Dean of Students Office provides resources to students struggling with a variety of issues and can be your go-to spot for assistance as a graduate student. To contact the Graduate and Professional Student Assistance Specialist Elaine Goetz-Berman directly, email [egoetz2@wisc.edu](mailto:egoetz2@wisc.edu)

### University Health Services (UHS)

UHS offers a variety of identity-based support groups specifically for graduate students. Visit the UHS website to learn more and register for events or services.

<https://www.uhs.wisc.edu/mental-health/group-counseling/schedule/>

- UHS 24-hour Crisis Services. On-call crisis counselors can help address your most pressing concerns, address your safety, and help you connect with follow-up service needs. It's available every day, including weekends, holidays, and semester breaks. Call the UHS crisis line at 608-265-5600. For situations that are immediately life-threatening, call 911. <https://www.uhs.wisc.edu/mental-health/24-hour-crisis-services/>
- SilverCloud. This online, self-guided resource provides treatment options 24 hours a day through evidence-based modules on anxiety, depression, body image, and stress. SilverCloud is designed to help students manage day-to-day stresses and improve resilience. <https://www.uhs.wisc.edu/mental-health/silvercloud/>
- YOU@WISC. This portal has tools and information to help you be well, with modules on stress management, self-care, social support, suicidal thoughts, mindfulness, academic wellness, and more. <https://www.uhs.wisc.edu/mental-health/you/>

### Multicultural Graduate Student Support

The Office of Diversity, inclusion, and Funding is a great resource for UW-Madison graduate students for social networking, learning, and professional development opportunities.

[Learn more about graduate student support and upcoming events:](https://grad.wisc.edu/diversity/inclusion-and-engagement/)

<https://grad.wisc.edu/diversity/inclusion-and-engagement/>

### Hostile and Intimidating Behavior

The University of Wisconsin–Madison is committed to preventing hostile and intimidating behavior (HIB) and will take prompt and appropriate corrective action whenever it learns that it has occurred. If you have experienced HIB, there are resources to help and staff available to talk ([erwin.cox@wisc.edu](mailto:erwin.cox@wisc.edu)).

<https://hr.wisc.edu/hib/>

### Graduate School Fellowships Page

<https://grad.wisc.edu/funding/fellowships/#graduate-school-fellowships>

This page offers important information on available sources of fellowship funding for graduate students and direct links to places like the Wisconsin Scholarship Hub, FastWeb, and more.

### Resources for assessing the impact of your research and scholarship

The UW-Madison Libraries can help you build visibility and assess the impact of your scholarship. Impact is best understood as a story, and intentional use of metrics can help tell pieces of it. Resources include curated online profiles, open access publishing, and public engagement

<https://www.library.wisc.edu/research-support/measuring-maximizing-impact/>



**Childcare Tuition Assistance Program (For Students who are Parents)**

<https://occf.wisc.edu/financial-assistance/uw-madison-students/child-care-tuition-assistance-program-cctap/>

**University Veterans Services**

<https://veterans.wisc.edu/current-students/>

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**Useful Links**

**Dates and Deadlines from the Office of the Registrar**

**Warrant Request Form**

**Graduate School Degree Deadlines**

**Tax Tips for Students Webinar Recording:**

[https://mediaspace.wisc.edu/media/Tax+Tips+for+Graduate+Students+2021+tax+year/1\\_4bwkyvkt](https://mediaspace.wisc.edu/media/Tax+Tips+for+Graduate+Students+2021+tax+year/1_4bwkyvkt)

**UW System Tax Filing Resources for Students:** <https://uwservice.wisconsin.edu/tax/filing-resources.php>

**ISS Tax Resources for International Students:** <https://iss.wisc.edu/employment/taxes/>

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