

# Professor Team Webinar #5

October 18, 2024

Yeonjin Bae, ORNL  
Kim Trenbath, NREL

# Agenda

- Program updates
  - Student webinar
  - Due dates, Internship application & recommendation
  - Evaluation criteria and judging
  - Challenge winners/finalist/final competition
- Final competition invitation
  - National lab introduction
  - Invitation to the final competition
- Q&A

# Management Team



## U.S. Department of Energy (DOE) Building Technologies Office (BTO)



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## Oak Ridge National Laboratory Building Technologies Research and Integration Center



Dr. Yeonjin Bae



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## National Renewable Energy Laboratory Building Technologies and Science Center



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## Pacific Northwest National Laboratory Building Simulation & Design, Building Systems



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Carmen Cejudo



Dr. Yeobeom Yoon



Claire Cressman



Dr. Mini Malhotra



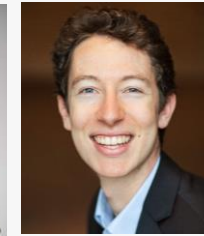
Dr. Kerry Rippy



Alyssa Bersine



Willy Heredia



Benjamin Bruxvoort

# 2024-2025 JUMP into STEM Program Updates

# Student Webinar



- Student Webinar was held on September 18.
- Recording of student webinar is available on the Student page.

The promotional graphic for the JUMP into STEM Student Webinar. It features the 'jump into STEM' logo at the top left. Below it, the text 'JUMP into STEM Student Webinar' is displayed in white on a blue background. To the right of this text is a photograph of a group of students standing next to a blue car with a charging cable plugged into it. Below the main title, the date and time 'September 18 at 3 p.m. ET' are shown next to a calendar icon. Further down, the text 'Register here:' is followed by the URL 'bit.ly/3MdYvf3' and a QR code. At the bottom right, the website 'JUMPintoSTEM.org/students' is listed. The footer contains logos for the U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy Building Technologies Office, Oak Ridge National Laboratory, NREL, and Pacific Northwest National Laboratory.

**jump** into STEM

**JUMP into STEM Student Webinar**

September 18 at 3 p.m. ET

Register here:  
bit.ly/3MdYvf3

[JUMPintoSTEM.org/students](https://jumpintostem.org/students)

U.S. DEPARTMENT OF **ENERGY** | Office of ENERGY EFFICIENCY & RENEWABLE ENERGY  
BUILDING TECHNOLOGIES OFFICE

**OAK RIDGE** National Laboratory

**NREL** Transforming ENERGY

**Pacific Northwest** NATIONAL LABORATORY

# 2024-2025 Important Dates

**August 6**

Challenges open for student submissions.

**November 8**

Challenges close for student submissions. Internship applications due.

**November 15**

Recommendations for internship applications due.

**December 6**

Challenge winners announced. Finalists invited to final competition.

**December 9**

Finalists accept or decline final competition invitation.



**January 30–31**

Final Competition hosted by NREL



# Internship Application

- Of the challenge-level winners and eligible teams, only the students who **qualify for the internship** and **submit internship applications** will be invited to the final competition.
- Internship applications are due on Nov. 8.
- **Recommendations** are due on Nov. 15.

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## 2025 JUMP into STEM Building Technologies Internship Program

**Organization** U.S. Department of Energy (DOE)

**Reference Code** DOE-JUMPintoSTEM-BTIP-2025

**How to Apply** NOTE: this opportunity is for [JUMP into STEM](#) participants only. All students enrolled in a U.S. college or university are welcome to participate in JUMP into STEM. Please see the [JUMP into STEM website](#) for details.

**The internship application will require:**


- Profile Information
- Educational details (e.g., dates of attendance/graduation, GPA, major(s))
- Awards and honors
- Internships or related experience
- Short answer questions on relevant goals, interests, experiences, and skills
- An updated resume (pdf)
- Contact information for one academic or professional recommender, including current email address
- Academic records - For this opportunity, an unofficial transcript or copy of academic records may be submitted showing name, school name, current/enrolled classes, and GPA (pdf)

All application components, including responses to all application essays and all required questions, must be completed and received in the system in order to be considered. **Applicant must also complete idea submission at [JUMP into STEM](#) to be considered for the opportunity.** Selections will be made by a screening committee based on challenge competition criteria and eligibility for the appointments at ORNL, NREL, and PNNL.

For questions, contact Chris Nelson at [JUMP-BTIP@orise.orau.gov](mailto:JUMP-BTIP@orise.orau.gov).

**Application Deadline** 11/8/2024 5:00:00 PM Eastern Time Zone

**Description** In conjunction with the Department of Energy Building Technology Office, [JUMP into STEM](#) engages students and professors from science, technology, engineering, and math backgrounds, as well as from other disciplines including architecture, art, communications, computer science, economics, policy, and the social sciences. The JUMP into STEM challenges can be presented by professors as a modular component through coursework or pursued by students as an extracurricular development opportunity.



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Information about you, the recommender

Name

Title

Institution/Organization

Phone

United States

Optional

Information about the applicant

How long and in what association have you known the applicant?

0 of 950 max characters

Compared to other individuals of comparable age and experience you have known in the last five years, how would you rate the applicant with respect to the following SCIENTIFIC CHARACTERISTICS?

Mastery of fundamental knowledge in field

Please Select

Skill/originality of research project design

Please Select

Laboratory skills and techniques

Please Select

Productivity in research

Please Select

Ability to work with others

Please Select

Add any descriptive comments that will help us understand the applicant's potential.

0 of 950 max characters

Information about the applicant

How long and in what association have you known the applicant?

0 of 950 max characters

Compared to other individuals of comparable age and experience you have known in the last five years, how would you rate the applicant with respect to the following PERSONAL CHARACTERISTICS?

Motivation and persistence toward a productive career

Please Select

Growth during total period observed

Please Select

Imagination and originality of thought

Please Select

Emotional maturity and stability

Please Select

Ability to work with others

Please Select

Independence and self-reliance

Please Select

Leadership potential

Please Select

Optional upload for additional letter of recommendation

- File must be uploaded in Adobe PDF format. Scanned items are not optimal for search engines.
- Files should not include your date of birth, Social Security number, or Student ID. These items are considered protected PII (personally identifiable information) and do not need to be shared.
- The PDF file must not require special certificates or passwords to open.
- All documents must be in English or include an English translation.
- Maximum file size is 15 MB.

PDF

Select file


Save as Draft

Submit


U.S. DEPARTMENT OF  
**ENERGY**

Office of ENERGY EFFICIENCY  
& RENEWABLE ENERGY


BUILDING TECHNOLOGIES OFFICE



OAK RIDGE  
National Laboratory



NREL  
NATIONAL RENEWABLE ENERGY LABORATORY



Pacific Northwest  
NATIONAL LABORATORY



# Evaluation Criteria and Judging

- Idea submission is evaluated by a panel of judges (3 judges per idea submission).
- Judging panels are balanced with representatives from DOE/national labs, the private sector, and academia.

## Team Diversity and Understanding Stakeholders (20%)

- Diversity statement and project team background
- Understanding stakeholders

## Submission (10%)

- Submission requirements

## Challenge Level Competition

## Solution (40%)

## Technology-to-Market (30%)

- Market characterization
- Technology-to-market plan
- Overcoming adoption barriers

- Technical solution
- Feasibility
- Novelty
- Impact

## Team Diversity and Understanding Stakeholders (20%)

- Multidisciplinary team approach
- Understanding stakeholders

## Solution (30%)

- Technical solution
- Feasibility
- Novelty
- Impact

## Final Competition

## Technology-to-Market (25%)

- Market characterization
- Technology-to-market plan
- Overcoming adoption barriers

## Presentation (25%)

- Effective delivery of ideas
- Presentation preparation
- Questions & answers

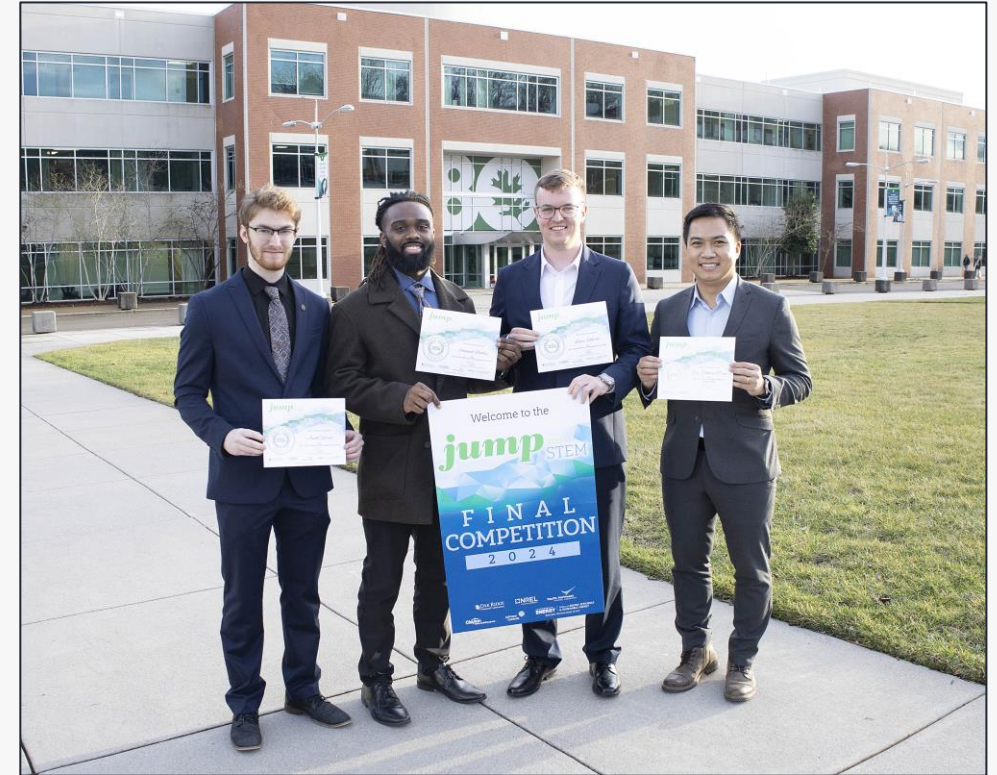
# Challenge Winners

- Challenge winners will be announced on **Dec. 6**
- Winning teams selected from each Challenge will be awarded a token of recognition and 1:1 mentorship with an industry expert from DOE, ORNL, NREL, and PNNL.



# Challenge Finalists

- Challenge winners and additional eligible teams will be selected to compete at the **Final Competition**
- Finalists will be notified on **Dec. 6**
- To be eligible to participate in the Final Event, students must complete Zintellect **internship applications**





# Final Competition



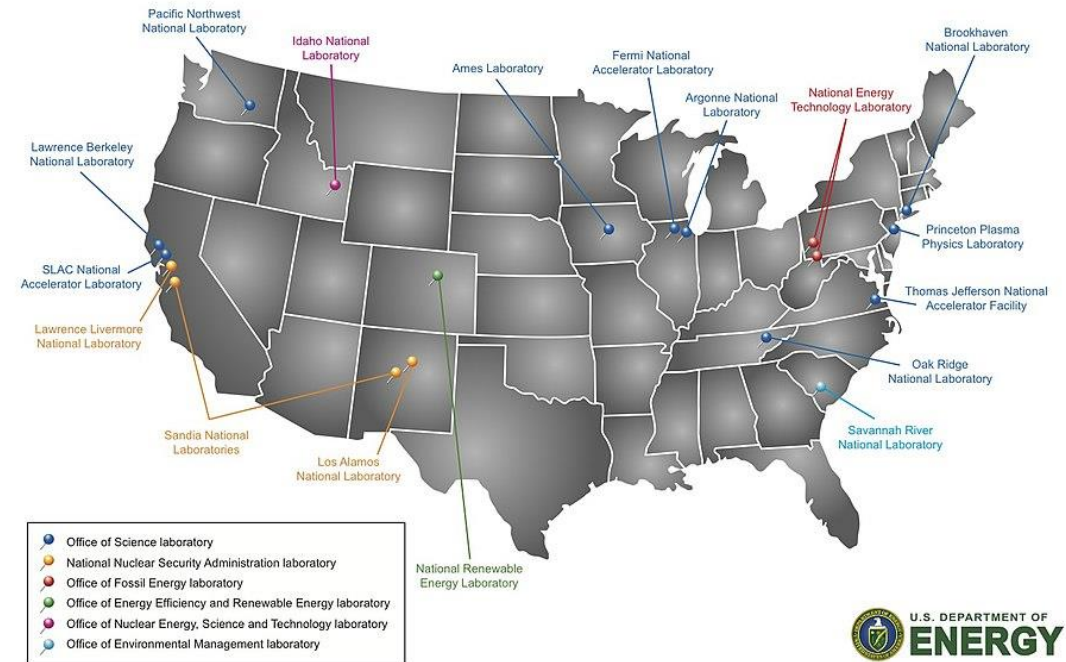
- The Final Competition will be held in person at NREL (January 30-31, 2025)
- Finalists will present ideas to a panel of judges from industry, DOE, academia, and national labs

# Final Competition Invitation

# Department of Energy National Labs

- DOE's 17 National Labs tackle the critical scientific challenges of our time
- Address large-scale, complex research and development challenges with an emphasis on translating basic science to innovation

## Department of Energy National Laboratories





# Oak Ridge National Laboratory

- Located in Oak Ridge, Tennessee
- ORNL's research encompasses many areas of scientific discovery, including building science:
  - Energy Efficiency for Homes, Buildings and Manufacturing
  - Smart Power Systems
  - Sustainable Transportation



# National Renewable Energy Laboratory



- Located in Golden, Colorado
- NREL's science drives innovation specifically for the Office of Energy Efficiency and Renewable Energy in four main energy sectors:
  - Renewable Power
  - Sustainable Transportation
  - Energy Efficiency
  - Energy Systems Integration





# Pacific Northwest National Laboratory

- Located in Richland, Washington with offices across the Pacific Northwest
- PNNL leads research for the Department of Energy in sustainable energy areas:
  - Electric Grid Modernization
  - Energy Efficiency
  - Energy Storage
  - Renewable Energy
  - Transportation



# We Invite You to the Final Competition



In-person final competition  
at NREL!

We hope to see you here  
January 30-31, 2025

**National Renewable Energy Laboratory**  
Golden, Colorado



# Final Competition Agenda

## Specific agenda track for professors:

- Learn about the National Labs and **visiting professor opportunities and internship opportunities** for your students
- **Collaborate** with university partnerships and laboratory program managers
- **Network with senior researchers** to establish research collaboration connections
- Learn about the **R&D to commercialization pipeline and applications to curriculum**
- **Campus tours and lab demonstrations** at the Energy Systems Integration Facility (ESIF), Research Support Facility (RSF) and Thermal Test Facility (TTF).
- Watch student presentations and **support student innovations**



Please register by December 9, 2024: <https://forms.office.com/g/Avq7JmQEnE>

# Thank you!



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# Questions?

## Q&A