Opportunity Title: Arctic Advanced Manufacturing Innovator - Early Career Research Experience 2021
Opportunity Reference Code: DOE-EERE-RPP-AMO-2020-1102

Organization U.S. Department of Energy (DOE)

Reference Code DOE-EERE-RPP-AMO-2020-1102

How to Apply *Click the button below to apply*

Application Deadline 1/10/2021 11:59:00 PM Eastern Time Zone

Description The *Arctic Advanced Manufacturing Innovator Program* supports early career innovators with fresh ideas and innovative approaches to address fundamental hard technology manufacturing challenges in Alaska. Hard technology is defined as physical devices. With support from the U.S. Department of Energy (DOE) Advanced Manufacturing Office (AMO) and in collaboration with the University of Alaska Fairbanks (UAF), you will have a unique opportunity to advance your early stage concept to a potentially commercialize-able opportunity with support from mentors at the UAF and at a participating DOE National Laboratory.

What will I be doing?

As an *Arctic Advanced Manufacturing Innovator*, you will be paired with a UAF researcher and a DOE National Laboratory researcher who are well aligned with your hard technology focus area, and who will serve as a mentor and collaborator for your project. You will also receive commercialization and entrepreneurial support from UAF.

Who do we want?

- Outcome-oriented, entrepreneurial technical innovators who have the drive and ability to build a foundational technology vision.
- Innovators with a project concept that is technically sound, reasonably differentiated, and addresses a well-framed problem with potential significant long-term impact and applicability to the Alaska market.

Where will I be?

During your first year appointment, you will be expected to spend the first three to four months at UAF, and the balance of your time at a DOE National Laboratory. The appointment is for two years. The second year is dependent on funding availability and your ability to meet program expectations. During the appointment, you will be expected to travel to UAF periodically to ensure continuation and support from UAF. Your travel periods may vary based on programmatic and project/research needs. This travel will be supported by the Travel and Training Allowance.

Why should I apply?

As an Arctic Innovator, you will get to focus full-time on your advanced manufacturing idea, enhance your education and training at top tier facilities, increase your marketability, gain access to top scientists and state-of-the-art equipment, gain insight into research and career opportunities, and collaborate and learn from experts researching, developing, and testing emerging hard technologies.

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Financial Support

As an Arctic Innovator, you will receive:

- A competitive stipend ranging from $72,000-$110,000/year based on academic level and experience
- Travel and training allowance of $15,000 per appointment period
- Health insurance allowance
- Relocation allowance up to $4,000
- Laboratory space and technical collaboration support from UAF and your assigned DOE National Laboratory
- Arctic Innovator programming and mentorship.

This opportunity is available to U.S. Citizens or Lawful Permanent Residents (LPR).

Nature of Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOE, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

For more information about program details, please visit the program website at https://orise.orau.gov/arctic-innovators.

Qualifications Applicants must:

- Be a U.S. Citizen or Lawful Permanent Resident.
- Have completed requirements for a Master or PhD or received a Master or PhD in a science, technology, engineering or mathematics field by the anticipated start date of the appointment.
- Demonstrate interest in research with potential for broad impact that aligns with AMO's mission to advance the energy and material efficiency, productivity, and competitiveness of manufacturers across the industrial sector.
- Demonstrate interest in research and development of hard technologies to advance materials or manufacturing-based energy technology to address Alaska-specific challenges, such as seafood processing, additive manufacturing that may be particularly useful in remote locations, metal fabrication, and oil and gas industry supply chain support. Technology or area of research must align with the U.S. Department of Energy's Advanced Manufacturing Office Strategic Goals (energy.gov/eere/amo/about-us)
- Be an early career Innovator, with early career defined as one of the following:
  - Have no more than five years since receipt of graduate degree as of the application deadline.
  - If more than five years since receipt of graduate degree, applicant must have an academic background and technical experience in a field applicable to advanced manufacturing innovations who have not previously founded a hard technology company within five years.

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Hard technology is defined as physical devices. The program will not support projects focused in the development of software, processes, or deal with human and social factors.

Important Information

- Preference will be given to applicants with strong ties to Alaska (former/current residency, college attendance, work experience, active exploration of Alaska challenges or engagement with Alaska technology applications).
- You must apply as an individual, not as a company or organization. Companies and organizations may not apply, although individuals that apply may have already established a company as long as it has been within the last 5 years and have NOT raised more than $1M in private-sector equity.
- Applicants that have started a company and has raised less than $500,000 to date are encouraged to apply.
- You must go through a conflict of interest due diligence review and must comply with the policies of the participating host National Laboratory and UAF concerning intellectual property and release of information.
- Employees of a DOE National Laboratory or employees of University of Alaska are not eligible to participate in this program.

For more information about program details, please visit the program website at https://orise.orau.gov/arctic-innovators.

A complete application consists of:

- Zintellect Profile
- Complete Application
- Project Plan
- Transcripts: Transcripts may be unofficial transcripts issued to the students. If you are a student at the time of application, transcripts must include courses in progress. If you have completed your master or doctoral degree, transcripts must include degree and date degree was awarded. Selected candidate must provide proof of completion of their master/doctoral degree before the appointment can start.
- Resume/CV (2-page limit)
- Two relevant letters of recommendation: These letters should address your academic record and potential for success in an appointment.

Project Plan Requirements:

Do not exceed the maximum number of pages for each section. Use 12-point font. Address each of the following topics and label each section with the appropriate title.

- **You (1 page max):** Provide the back story on you and your project. Where did the idea originate? What is the current status of your technology? Why do you want to pursue this effort and what makes you qualified to do so? Describe your experience as an entrepreneur or bringing a technology to the market, if any. Describe your ties to

Alaska, if any.

- **Your vision (1-5 pages max):** Describe the technology concept you want to pursue. Include what you are trying to do, what is the state of the art technology today, what is new in your approach and why you believe it will be successful, what are the risks, and what potential impact will there be on U.S. energy and manufacturing competitiveness. What problem is your technology solving? How does it solve the problem? Who has this problem / what is your anticipated market? Describe how this technology will benefit and is applicable to the challenges facing Alaska.

- **Describe why the Arctic Advanced Manufacturing Innovator Program is right for you (1 page max):** What attracts you the most to the *Arctic Advanced Manufacturing Innovator Program*? How does your technology concept align with AMO's mission to advance the energy and material efficiency, productivity, and competitiveness of manufacturers across the industrial sector? Why would this Program be the ideal home for you and your project (vs. alternative paths)? If known, which people or facilities at University of Alaska and within the DOE National Laboratory network may be particularly valuable in supporting your work?

- **Your energy or manufacturing technology (1 page max):** Describe how you envision making your technology a market reality. Please describe the market you intend to reach, its customers, potential suppliers/distributors/manufacturers, relevant intellectual property (and identification or status of any licenses, per the program eligibility requirements), barriers to entry, sophistication of market, market incumbents, etc.

All documents must be in English or include an official English translation. Documents sent by email, postal mail, or fax will not be considered. All supporting materials must be uploaded as PDF files so the document can be searched by Zintellect's search engine. Scanned items are not optimal for search engines. PDF must not require special certificates or passwords to open. Max file size is 10MB.

If you have questions, please send an email to DOE-RPP@orise.orau.gov. Please list the reference code for this opportunity in the subject line of your email.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (13 👁)
  - **Mathematics and Statistics** (10 👁)

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- **Physics** (16 👁)
- **Science & Engineering-related** (1 👁)

- **Age:** Must be 18 years of age

Affirmation I certify that I will have received my Masters or Doctoral degree by June 14, 2021.