

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • JUNE 2019

Welcome Message

Greetings NETL RWFI stakeholders,

In this month's E-note you will find new funding opportunities from the National Institute of Food and Agriculture, the National Science Foundation and the Department of Labor as well as news from the Department of Energy's STEM Rising blog about different STEM activities occurring across the DOE's network of national laboratories.

As always, feel free to reach out to us at NETL.RWFI@netl.doe.gov if you have any suggestions for information to present in future E-notes.

— Sincerely, The NETL Regional Workforce Initiative Team

Workforce Funding Announcements



National Food and Agricultural Sciences Teaching, Extension, and Research Awards (TERA)

National Institute of Food and Agriculture,
Deadline, July 3, 2019

The National Food and Agricultural Sciences TERA program is authorized in section 1417(i) of the National Agricultural Research, Extension, and Teaching Policy Act (7 U.S.C. 3152(i)) amended by Section 7108 of P.L. 110-246. The Secretary of Agriculture has delegated the authority to administer the program to NIFA the annual TERA that honors excellence in College or University Teaching. The purpose of TERA is to recognize and promote excellence in teaching, extension, and research in the food and agricultural sciences at a college or university. The Secretary is required to make at least 1 cash award in each fiscal year to a nominee selected by the Secretary for excellence in each of the areas of teaching, extension, and research of food and agricultural science at a college or university.

Joint Directed Energy Transition Office (DE-JTO) Educational Initiative

Department of Defense, Deadline, July 5, 2019

The DE-JTO, Albuquerque, NM, seeks proposals for the development, implementation, and operation of an Educational Initiative program. This program announcement is issued under the authority of 10 USC §2358, which provides for competitive selection of grants and cooperative agreements. The Government anticipates this program announcement will result in the award of one (1) grant. The objective of the DE-JTO Educational Initiative Program is to provide opportunities to foster interest and education in High Energy Laser and High Power Microwave related technologies to the future workforce at all educational levels, particularly the undergraduate and graduate college level, and to the existing workforce for professional and technical development in HEL technology.

Women in Apprenticeship and Nontraditional Occupations Technical Assistance Grant Program

Department of Labor, **Deadline, July 8, 2019**

This program is intended to provide technical assistance (TA) to employers and labor unions to encourage employment of women in apprenticeable occupations and nontraditional occupations (A/NTO), specifically by developing (establishing, expanding, and/or enhancing) pre-apprenticeship, apprenticeship, or other nontraditional skills training programs designed to prepare women for careers in A/NTO; providing ongoing orientations or other resources for employers, unions, and workers on creating a successful environment for women in A/NTO; and/or setting up support groups, facilitating networks, and/or providing supportive services for women in A/NTO to improve their retention. Applicants may propose to provide technical assistance to support women's participation and success in the full range of industries in which women are historically underrepresented or where women are disproportionately concentrated in the lower-wage occupations. Such industries include but are not limited to advanced manufacturing, construction, energy, health care, information technology, finance, and transportation

Science of Learning (SL) Program

National Science Foundation, **Deadline, July 10, 2019**

The SL program supports potentially transformative basic research to advance the science of learning. The goals of the SL Program are to develop basic theoretical insights and fundamental knowledge about learning principles, processes and constraints. Projects that are integrative and/or interdisciplinary may be especially valuable in moving basic understanding of learning forward but research with a single discipline or methodology is also appropriate if it addresses basic scientific questions in learning. The possibility of developing connections

between proposed research and specific scientific, technological, educational, and workforce challenges will be considered as valuable broader impacts but are not necessarily central to the intellectual merit of proposed research. The program will support research addressing learning in a wide range of domains at one or more levels of analysis including molecular/cellular mechanisms; brain systems; cognitive, affective, and behavioral processes; and social/cultural influences.

Workforce Opportunity for Rural Communities: A Grant Initiative for the Appalachian and Delta Regions

Department of Labor, **Deadline, July 15, 2019**

Employment and Training Administration/U.S. Department of Labor, in partnership with the Appalachian Regional Commission and the Delta Regional Authority, announce the available funds for demonstration grant projects supporting alignment of workforce development with existing strategies and plans for economic development and diversification in rural communities from the following areas hard hit by economic transition and recovering slowly: (1) The Appalachian region, as defined in 40 U.S.C. 14102(a)(1), and (2) The Lower Mississippi Delta (Delta) region, as defined in 7 U.S.C. 2009aa(2). These grants will enable eligible applicants within the Appalachian and Delta regions to expand the impact of existing workforce development initiatives, as well as provide valuable career, training, and support services to eligible individuals in counties and parishes and/or areas currently underserved by other resources. These grants support workforce development activities that prepare dislocated workers, new entrants to the workforce, and incumbent workers for good jobs in high-demand occupations aligned with a regional or community economic development strategy.

CyberCorps Scholarship for Service

National Science Foundation, **Deadline, July 31, 2019**

The goals of the CyberCorps: Scholarship for Service (SFS) program are aligned with the *U.S. National Cyber Strategy* to develop a superior cybersecurity workforce. The SFS program welcomes proposals to establish or to continue scholarship programs in cybersecurity. All scholarship recipients must work after graduation for a federal, state, local, or tribal Government organization in a position related to cybersecurity for a period equal to the length of the scholarship. A proposing institution must provide clearly documented evidence of a strong existing academic program in cybersecurity. Such evidence can include designation by the National Security Agency and the Department of Homeland Security as a Center of Academic Excellence in Cyber Defense, in Cyber Operations, or in Research; or equivalent evidence documenting a strong program in cybersecurity. The SFS program also supports efforts leading to an increase in the ability of the United States higher education enterprise to produce cybersecurity professionals. Funding opportunities in this area are provided via the *Secure and Trustworthy Cyberspace — Education Designation* and other programs.

Apprenticeships: Closing the Skills Gap

Department of Labor, **Deadline, September 24, 2019**

This Announcement solicits applications for the Apprenticeships: Closing the Skills Gap grant program. The purpose of this program is to promote apprenticeships as a significant workforce solution in filling current middle- and high-skilled job vacancies and closing the skills gap between employer workforce needs and the skills of the current workforce. In June 2017, the President issued Executive Order 13801 on Expanding Apprenticeship in America, which lays out an expansive vision for apprenticeship that would increase the number of apprentices in the nation to an unprecedented level across all industries. The overarching goals of this grant program are threefold: (1) to accelerate the expansion of apprenticeships to new industry sectors and occupations, such as cybersecurity and those involving artificial intelligence; (2) to promote the large-scale expansion of apprenticeships across the nation to a range of employers, including small- and medium-sized employers; and (3) to increase apprenticeship opportunities for all Americans.

NETL News



NETL Researchers Cut Costs by Enhancing Gasifier Performance

NETL's work with oxygen carrier technology is making waves in the alternative energy field. The Lab's material research is cutting costs while maximizing efficiency and contributing to America's future in clean energy while working to mitigate environmental impact. Specifically, NETL is exercising its world-class expertise through the investigation of special materials known as metal oxides, which are important due to their unique properties and energy applications. These oxides can serve multiple purposes as oxygen carriers, which provide oxygen during gasification.

NETL Research Team's Rapid Kick Detection Technology Granted Patent

An NETL research team was recently granted a patent for their groundbreaking invention for rapid kick detection, which results in safer drilling operation and significant cost savings for both consumers and operators by providing real-time updates of downhole conditions to aid in maintaining control of an oil or gas well.

DOE Announces \$5.4M for University-Based Research and Development Project Selections

The U.S. Department of Energy's Office of Fossil Energy and NETL is announcing selections of seven projects to receive \$5.4 million in federal funding for university-based research and development under funding opportunity announcement DE-FOA-0001993, University Turbine Systems Research. The projects will address and resolve scientific challenges and applied-engineering technology issues associated with advancing the performance and efficiency of combustion turbines and turbine-based power cycles in fossil fuel power generation. DOE selected these projects as part of the University Turbine Systems Research program, which manages a research, development, and demonstration portfolio designed to remove environmental concerns over the future use of fossil fuels by developing revolutionary, near-zero-emission advanced turbines technologies.

NETL-Sponsored Research to Develop Smart Sensor Systems Expands

NETL-sponsored research aimed at developing smart sensing systems for harsh-environment applications is expanding to provide critical performance information and meet industry needs. As part of a \$1.6 million *project managed by NETL*, researchers at West Virginia University developed a smart refractory sensor system for wireless monitoring of temperature, degradation and overall health of slagging gasifiers. Although the project wrapped up in 2018, the research team continues to build upon its work to explore new materials for improved sensor systems with broad applicability for harsh-environment sensing, including coal-fired boiler technology, biomass gasification, and steel and glass manufacturing. Harsh-environment sensors with real-time monitoring capabilities can provide valuable insight into the performance of advanced energy systems, identifying opportunities to improve operations, cut costs and reduce downtime.

2019 National Historically Black Colleges and Universities (HBCU) Week Conference

Renaissance Washington DC Downtown, Washington, District of Columbia, September 9–10, 2019

The annual National HBCU Week Conference is planned under the direction of the White House Initiative on HBCUs and with input from the Chairman of the President's Board of Advisors on HBCUs and other supporters. It provides a forum to exchange information and share innovations among and between institutions. This year's event will bolster HBCUs as they connect to federal and other opportunities that enhance the shared prosperity — as well as the overall competitiveness — of the United States of America.

Reports and Resources



March 2019 LinkedIn Workforce Report

LinkedIn

The LinkedIn Workforce Report is a monthly report on employment trends in the U.S. workforce. It is divided into two sections: The first national section that provides insights into hiring, skills gaps, and migration trends across the country, and the second is a city section that provides insights into localized employment trends in 20 of the largest U.S. metro areas.

- **Overall hiring is down in May, but the challenges aren't evenly distributed across industries.** Gross hiring was down 0.9% year-over-year in May. But looking at the industry level, hiring continues to grow in the software & IT services (+6.7% Y/Y) and corporate services industries (+7.6% Y/Y). At the same time, export-producing goods industries — like agriculture and manufacturing — are facing rapid declines in hiring: manufacturing is down 5.6% year-over-year and is at its weakest since January 2018, while agriculture is down 6.7% year-over-year and is at its weakest since November 2017.
- **Entrepreneurship continues to fuel hiring, and high-growth startups are a key driver of that segment.** In 2018, high-growth startups — companies less than seven years old with more than 15% growth in employees over the past year, with a minimum of 50 employees at the end of that year — comprised only 0.35% of all startups but hired more than 10% of all startup workers.

Upcoming Workforce Conferences, Meetings, and Summits



An Appalachian Regional Commission Summit Hosted by the State of North Carolina

Asheville, North Carolina, September 4–6, 2019

The 2019 *Appalachia Strong* summit will include strategic workshops, site visits, panel discussions, and other ideas to continue Appalachia's prosperity, progress, and growth.

- **Location matters for these startups: high-growth startups are highly clustered within a few regions.** Eighty percent of high-growth startup employees are hired by companies headquartered in only 15 regions in the country. San Francisco and New York account for 40 percent of all high-growth startup hires.
- **Secondary markets are developing industry niches.** Provo, Utah — which is second only to San Francisco when it comes to the share of high-growth startup hiring by population — has a large concentration of high-growth startups in the renewables & environment space. Atlanta has a large share of high-growth real estate startups, and Denver has a large share in the oil & energy industry. These thriving secondary markets for high-growth startups could provide higher-margin opportunities for VC investors.
- **The path to working at a high-growth startup isn't necessarily technical.** One factor that sets high-growth startups ahead of all startups is that they invest in talent to grow their businesses. High-growth startups hire a greater share of roles in Sales Dev, Customer Success, Business Development that require strong communication and cross-functional collaboration skills, and often don't require college degrees.

DOE STEM Rising



Using Computing Power to Understand the Weather: A Middle School Workshop

With its complexity, power, and ability to change quickly (especially in Illinois), the weather is something that captivates us all. Scientists rely heavily on computation, including supercomputers at [Argonne National Laboratory](#), for the challenging task of understanding and predicting the weather. Surprisingly, the same process by which scientists attempt to model and predict the weather is a skill that can be learned by middle school students.

Two-week workshop lets University of California Merced (UC Merced) Students Step into Shoes of Lab Computer Scientists

UC Merced student Asmaa Mohamed, who immigrated to the U.S. from Egypt in 2013, recently graduated with a bachelor's degree in developmental biology. She plans on pursuing her Ph.D. through Dartmouth College and is studying immunology in hopes of someday creating novel cancer immunotherapies. When Mohamed found out [Lawrence Livermore National Laboratory \(LLNL\)](#) would be holding its first-ever [Data Science Challenge Workshop](#), a two-week crash course in what it's like to work in data science at LLNL, she jumped at the opportunity to learn more about how biology and computation can intersect, and find out about the Lab, of which she was only vaguely aware.

Students Get an Inside Look at the Heart of Innovation at the Advanced Research Projects Agency–Energy (ARPA-E) Summit

Ten years running, the annual [ARPA-E Energy Innovation Summit](#) is the place to be if you want to see the cutting-edge ways America is addressing our energy challenges and changing how we think about traditional energy technologies. This year, 50 graduate and Ph.D. students from across the country will be part of the action through ARPA-E's Student Program, a unique opportunity for student leaders in energy to attend the Summit and network with government and companies who are looking for top talent.

Sandia California Mentors High School Girls in Math, Science

Before the program began, the young women were paired with Sandia mentors to discuss academic plans and careers in STEM. At the ceremony, students said their mentorships inspired them and increased their interest in STEM fields. Heidi Ammerlahn, director of homeland security and defense systems, spoke of the importance of the Math and Science Awards at Sandia.

ABOUT NETL



NETL, owned and operated by DOE, is one of the Department's 17 National Laboratories. NETL supports DOE's mission to advance the national, economic, and energy security of the United States.

1450 Queen Avenue SW
Albany, OR 97321-2198
541-967-5892

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
304-285-4764

626 Cochran's Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940
412-386-4687

Program staff are also located in
Houston, Texas and Anchorage, Alaska

WEBSITE: www.netl.doe.gov



CONTACTS

Matthew Garcia
Regional Workforce Initiative
Consultant
956-314-0645
Matthew.Garcia@netl.doe.gov

Kirk Gerdes
Regional Workforce Initiative
Coordinator
304-285-4342
Kirk.Gerdes@netl.doe.gov

Anthony Armaly
NETL RWFI Federal
Coordinator
412-386-6040
Anthony.Armaly@netl.doe.gov

Mike Knaggs
Associate Director
of Partnerships
304-285-4926
Michael.Knaggs@netl.doe.gov