



Oak Ridge National Laboratory Recruiting

Connected and Automated
Vehicles Research



Oak Ridge National Laboratory



ORNL at-a-glance

Established in **1943**
as part of the Manhattan Project

\$1.5 billion
annual budget

9 national
user facilities

20 centers and
joint institutes

4,600 employees

3,200 visiting
scientists

200 R&D 100 Awards

2 Nobel Prize winners

46 National Academy
members

14 UT-ORNL Governor's Chairs

9 university core
research partners

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Introduction

The US Department of Energy's (DOE) 17 national laboratories occupy a unique niche in the nation's R&D enterprise, providing the resources needed to perform what former Oak Ridge National Laboratory (ORNL) director Alvin Weinberg famously called "Big Science"—large-scale, long-term R&D efforts that are outside the scope of industry or universities.

National labs are distinguished by their ability to assemble large teams of experts from a variety of scientific and technical disciplines to tackle compelling national problems. They also design, build, and operate powerful scientific facilities that are available to the international research community. They work in partnership with universities and industry to train the future science and engineering workforce and transfer the results of their R&D to the marketplace.

As DOE's largest multiprogram science and energy laboratory, ORNL is engaged in a wide range of activities that support DOE's mission: ensuring America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.



About Oak Ridge National Laboratory

As we celebrate ORNL's historical achievements dating back to 1943, our challenge is to build on Alvin Weinberg's notion of a laboratory whose mission evolves and strengthens over time. To that end, we continue to build on ORNL's historic competencies in energy, life sciences, neutron sciences, and advanced materials while adding new research missions in the areas of national security, environmental and biological sciences, and high-performance computing.

Equally important, our staff scientists in collaboration with more than 4,000 visiting researchers annually make new scientific discoveries and develop new technologies. Using ORNL's unique facilities from the Spallation Neutron Source to Titan, one of the world's fastest supercomputers, these scientists keep our laboratory at the forefront of the world's leading scientific research centers.

The programs outlined here reflect an orientation to both scientific disciplines and national missions—a unique combination that characterizes ORNL and enables us to deliver national-scale solutions to problems of critical importance.



Clean Energy

We deliver energy technology solutions for energy-efficient buildings, transportation, and manufacturing, and we study biological, environmental, and climate systems in order to develop new biofuels and bioproducts and to explore the impacts of climate change.



Computational Sciences

We accelerate scientific discovery through modeling and simulation on powerful supercomputers, advance data-intensive science, and sustain US leadership in high-performance computing.



Global Security

We develop and deploy "first-of-a-kind" science-based security technologies to make the world a safer place.



Neutron Science

We operate two of the world's leading neutron sources, which enable scientists and engineers to gain new insights into materials and biological systems.



Advanced Materials

We integrate basic and applied research to develop advanced materials for energy applications.



Nuclear Science and Engineering

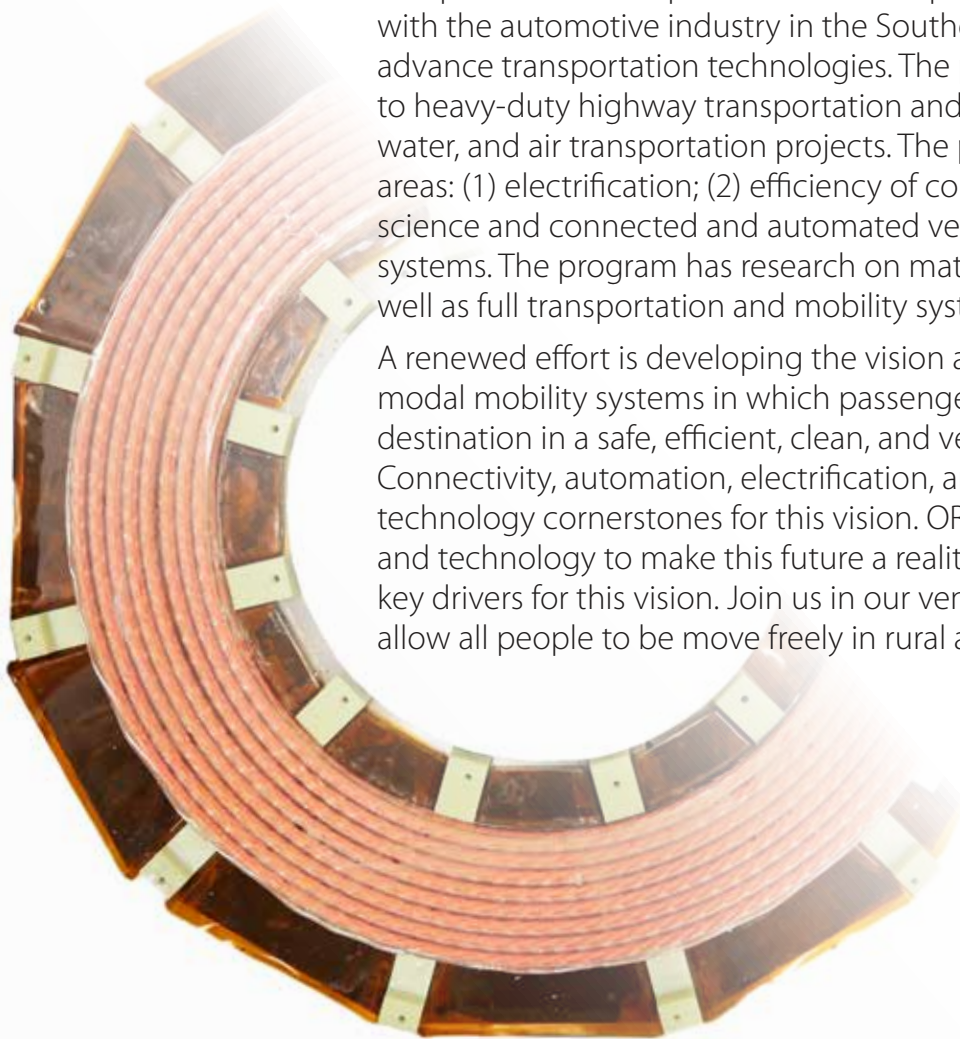
We advance the scientific basis for 21st century nuclear fission and fusion technologies and systems, and we produce isotopes for research, industry, and medicine.



About the Sustainable Transportation Program

ORNL's sustainable transportation program is DOE's largest and most comprehensive transportation research portfolio. ORNL partners closely with the automotive industry in the Southeast and across the country to advance transportation technologies. The program spans from light-duty to heavy-duty highway transportation and all other modes, including rail, water, and air transportation projects. The program has four key focus areas: (1) electrification; (2) efficiency of combustion and emissions; (3) data science and connected and automated vehicles; and (4) materials for future systems. The program has research on materials, components, vehicles, as well as full transportation and mobility systems.

A renewed effort is developing the vision and science for future multi-modal mobility systems in which passengers and freight arrive at their destination in a safe, efficient, clean, and very convenient manner. Connectivity, automation, electrification, and alternative fuels are key technology cornerstones for this vision. ORNL is developing knowledge and technology to make this future a reality. Cybersecurity and safety are key drivers for this vision. Join us in our venture to reinvent mobility and allow all people to be move freely in rural and urban environments.





national user facilities



The **National Transportation Research Center** helps industry, academia, and other agencies accelerate the development and deployment of efficient and secure transportation technologies. Research focuses on electrification, efficiency of combustion and emissions, data science and connected vehicles, and materials for future systems.



The **Manufacturing Demonstration Facility** was established at ORNL to help industry adopt new technologies that reduce life-cycle energy use and greenhouse gas emissions, lower production costs, and create new products. The lab's expertise helps manufacturers reduce risks and validate their investments in innovations that will create the products—and high-paying jobs—of the future in lightweight metals, stronger materials, three-dimensional printing, and more.



The **Carbon Fiber Technology Facility** is a 390-ft. long processing line with a capacity of up to 25 tons carbon fiber per year for demonstrating advanced technology scalability and producing market-development volumes of prototypical carbon fibers, and serves as the last step before commercial production scale.

Program at-a-glance



220 scientists and engineers



\$90M R&D Budget



10 core research areas



149 active industry partners



32 professional society fellows



22 R&D 100 awards



244 publications FY16



13 SAE International top awards FY15-16



Position Description

Oak Ridge National Laboratory is seeking a scientific leader with a national and international reputation and record of accomplishment to serve as Senior Researcher within the Energy and Transportation Science Division, focusing on Connected and Automated Vehicle Research.

Major Duties / Responsibilities

You will establish ORNL as a national leader in connected and automated vehicles research. Serving as a subject matter expert, you will deliver and execute a roadmap for this rapidly growing focus area by utilizing multi-disciplinary facilities and capabilities within ORNL. You will lead research in a wide variety of connected and automated vehicle technologies, including systems research, vehicle control theory, vehicle modeling and simulation, and vehicle to infrastructure communications.

Qualifications

- Ph.D. in an engineering or scientific discipline relevant to connected and automated vehicles research and a recognized record of research accomplishments in that field, plus 10 years of relevant experience is required.
- An established track record of strong leadership qualities, scientific reputation, building programs, team building and motivational skills, written and oral communication skills, and ability to manage to outcomes is a must. A proven record of engineering or scientific accomplishments is strongly preferred.
- Demonstrated technical and strategic leadership ability applicable to running a large, diverse, team-oriented organization with a multidisciplinary group of engineers and scientists is required.
- Knowledge of distributed computing, sensor fusion, and cooperative robotics is preferred.

Apply Today <http://bit.ly/ORNL-CAV>



Community and Culture

The strong partnership between DOE and UT-Battelle, LLC, which manages ORNL for the department, has created a national resource that draws outstanding researchers in a wide range of disciplines to world-class facilities where they tackle fundamental scientific challenges, couple discoveries with applied research, and work with industry to translate results into commercial applications. The work of the laboratory is being performed safely and efficiently in a modern campus setting. Throughout the region ORNL is justifiably regarded as a high-value asset for innovation, education, and economic development.

Discover East Tennessee

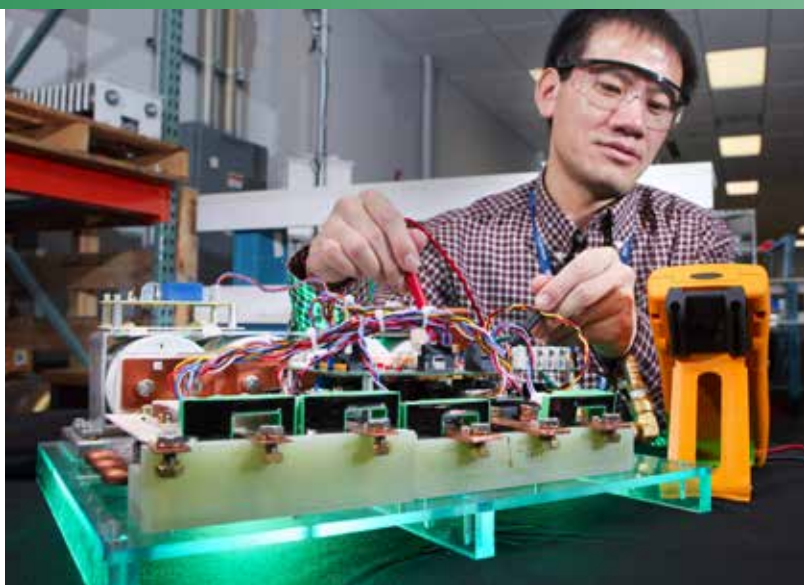
East Tennessee offers plenty of wonderful resources and experiences—mountains, rivers, lakes, a full menu of outdoor adventures, championship college teams and minor-league baseball, and the cultural offerings of Knoxville, a city recognized as one of the country's best places to live! ORNL is within a day's drive of 75% of the nation's population and all of the East Coast's major cities.

Our Workforce

With more than 4,600 employees representing more than 80 different countries, we assemble teams of experts from diverse backgrounds, equip them with powerful instruments and research facilities, and address compelling national problems. Home to some of the world's premier scientific facilities, ORNL is a great place to chart your own research course, work with eminent colleagues, and build an extraordinary career.

Business Diversity

Oak Ridge National Laboratory's ability to achieve and maintain a competitive workforce in a rapidly changing business and political environment is greatly influenced by our ability to plan and forecast workforce needs and promote diversity. Maintaining an inclusive environment is a business imperative that focuses on the people in our entire work environment and how to maximize the unique talents of individuals, teams, and business partners to deliver quality products and services for our customers.



We Welcome Your Application

Our challenge now is to sustain our leadership and build on our success. Thank you for your interest in ORNL and how we are helping to address some of the big science challenges facing our nation and the world.

Apply Today

Visit us at: <http://bit.ly/ORNL-CAV>

Equal Employment Opportunity

ORNL is an equal opportunity employer committed to a diverse and inclusive workplace that fosters collaborative scientific discovery and innovation. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply



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Oak Ridge National Laboratory is managed
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ENERGY