



# NOAA COOPERATIVE INSTITUTES

Photo: CIRA

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**C**ooperative Institutes are academic and non-profit research institutions sponsored by the National Oceanic and Atmospheric Administration (NOAA). In support of NOAA mission goals and strategic plans, Cooperative Institutes conduct collaborative research, develop education programs to train the next generation of scientists, and conduct outreach activities that disseminate scientific information to the public. NOAA sponsors 16 Cooperative Institutes across the country whose membership includes 80 universities and research institutions across 33 states, the District of Columbia, US Territories, and Canada.

Cooperative Institutes may be comprised of a single University with employees working at NOAA laboratories (co-located) or a consortium of universities, research institutes, and private companies (consortium). Many of the partner NOAA laboratories are staffed with over 50% Cooperative Institute employees who are co-located at NOAA facilities. Additional faculty, research scientists, engineers, and technicians work on consortium university campuses across the country.

Cooperative Institute research portfolios focus on specific topic areas (e.g. environmental observations and modeling on local to global scales) or a geographic region (e.g. Gulf of Mexico, Northeast Atlantic Shelf). Each Cooperative Institute, with its individual research mandate, adds to NOAA's capabilities and can facilitate rapid and efficient mobilization of resources to address programmatic needs.



# 16

Cooperative Institutes

# 80

Universities &  
Research Institutions

# 33

States, Territories, the  
District of Columbia,  
& Canada



### COOPERATIVE INSTITUTE FOR CLIMATE, OCEAN, AND ECOSYSTEM STUDIES

CICOES was established in 2020 as the successor to the Joint Institute for the Study of the Atmosphere and Ocean (JISAO) that started in 1977. CICOES, a consortium formed among the University of Washington, the University of Alaska Fairbanks, and the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University, fosters collaborative research with NOAA's Pacific Marine Environmental Laboratory, the Alaska Fisheries Science Center, the Northwest Fisheries Science Center. CICOES' scientists investigate climate impacts, ocean and ecosystem structure, resource management, and tsunami forecasting.



### COOPERATIVE INSTITUTE FOR MARINE ECOSYSTEM AND RESOURCES STUDIES

CIMERS is based at Oregon State University's Hatfield Marine Science Center. CIMERS is co-located with NOAA's NWFS, AFSC, and PMEL and Newport's working waterfront to support collaborative fisheries, ecosystem, climate, and seabed science.



### COOPERATIVE INSTITUTE FOR MARINE, EARTH, AND ATMOSPHERIC SYSTEMS

CIMEAS supports NOAA's comprehensive observation, modeling, and management programs. CIMEAS' goals are to: (1) Understand, predict changes in, and share knowledge about climate, weather, oceans, and coasts; and (2) Conserve and manage coastal and marine ecosystems and resources. CIMEAS focuses on physical and ecological variability in the coupled ocean-atmosphere-land (earth) system, globally and in four focus regions: the California Current System (CCS); the US West Coast and the Western US; the Pacific; and the Southern Ocean. Emphasis is on analysis and prediction of physical and biogeochemical parameters, ecosystems, and societal welfare, aligned with NOAA's foci on resilient communities and ecosystem-based management.



### COOPERATIVE INSTITUTE FOR MARINE AND ATMOSPHERIC RESEARCH

CIMAR's mission is to support research, technology innovations and stakeholder education that are needed for understanding and predicting environmental change in the Pacific Islands Region, for conserving and managing coastal and marine resources in island environments, notably the Hawaiian Islands and the U.S.-Affiliated Pacific Islands, and for supporting the region's economic, social, and environmental needs.



### COOPERATIVE INSTITUTE OF THE NORTH ATLANTIC REGION

CINAR is a regional consortium of eight partner institutions spanning the Northeast U.S. Shelf Large Marine Ecosystem (NES LME), offering a broad range of world-class capabilities to meet NOAA's mission goals. Research underway by CINAR is providing a better understanding of physical and biological processes in the NES LME, thereby advancing effective and sustainable management of the region's habitats and resources.



### OCEAN EXPLORATION COOPERATIVE INSTITUTE

The OECI brings together a world-class collection of engineering and science talent, experience, and creativity to explore the US EEZ, accelerate ocean exploration through the development of new technology and approaches, and engage and train a diverse blue economy workforce. Founded in 2019, the OECI is led by the University of Rhode Island with affiliates including the University of New Hampshire, Woods Hole Oceanographic Institution, University of Southern Mississippi, and the Ocean Exploration Trust.



### COOPERATIVE INSTITUTE FOR MARINE AND ATMOSPHERIC STUDIES

CIMAS is located at the Rosenstiel School of Marine, Atmospheric & Earth Science at the University of Miami. We seek to use our research on basic understanding of weather, climate and the marine ecosystem; the development, quantitative assessment and maintenance of observing systems; and model development and hypothesis testing to make more accurate forecasts of severe weather (e.g., hurricanes, tropical storms, tornados, droughts, floods, heatwaves, cold spells), climate (e.g., sub-seasonal to decadal variability) and how weather and climate variability affects the management of marine ecosystems, fish stock assessments and coastal resilience.



### COOPERATIVE INSTITUTE FOR RESEARCH IN THE ATMOSPHERE

CIRA conducts world-leading research in the atmospheric sciences, blending the meteorological disciplines and advances in engineering and computer science, to the benefit of satellite remote sensing, tropical meteorology, ethical artificial intelligence and machine learning, data assimilation, air quality, carbon studies, and more. CIRA's research encompasses professional development and training, the social sciences, education and outreach, and significant efforts in diversity, equity, and inclusion, to the benefit of NOAA, CSU, the State of Colorado, and the Nation.



### COOPERATIVE INSTITUTE FOR EARTH SYSTEMS RESEARCH AND DATA SCIENCE

CIESRDS, the Cooperative Institute for Earth Systems Research and Data Science, is the NOAA-funded portion of CIRES, a long-standing environmental research institute at the University of Colorado Boulder. At CIRES, often in partnership with NOAA, we conduct innovative research that advances our understanding of the global, regional, and local environments and the human relationship with those environments, for the benefit of society. Our areas of expertise include weather and climate, wildfire and water, changes at Earth's poles, air quality and atmospheric chemistry, water resources, Earth data analytics, and more.



### NORTHERN GULF INSTITUTE

NGI is comprised of six academic institutions: Mississippi State University (lead), University of Southern Mississippi, Florida State University, Louisiana State University, University of Alabama in Huntsville, Dauphin Island Sea Laboratory. It focuses on four research themes: Climate Change and Climate Variability Effects on Regional Ecosystems; Coastal Hazards; Ecosystem Management; and Effective and Efficient Data Management Systems Supporting a Data-driven Economy.



Photo: CIESRDS

# NOAA COOPERATIVE INSTITUTES



## THE COOPERATIVE INSTITUTE FOR GREAT LAKES RESEARCH

CIGLR is hosted by the School for Environment and Sustainability (SEAS) at the University of Michigan and consists of a Research Institute that is co-located with the NOAA Great Lakes Environmental Research Laboratory (GLERL) and a Regional Consortium of ten universities, three NGOs, and two businesses that work together to achieve environmental, economic, and social sustainability in the Great Lakes. CIGLR's research themes complement those of GLERL and include hydrometeorological and ecosystem forecasting, observing systems and advanced technology, invasive species and food web ecology, and protection and restoration of resources.



## COOPERATIVE INSTITUTE FOR MODELING THE EARTH SYSTEM

CIMES is a world leader in understanding and predicting the earth system, across time scales from days to decades, and from the local to global spatial scales, with particular focus on extreme events, and integrating physical, chemical, and biological components.



## COOPERATIVE INSTITUTE FOR METEOROLOGICAL SATELLITE STUDIES

Located at the birthplace of satellite meteorology, CIMSS at the University of Wisconsin-Madison conducts research that maximizes the value of NOAA weather satellites for meeting the nation's weather and climate needs. CIMSS subject matter experts conduct research in: Satellite Meteorology Research and Applications, Satellite Sensors and Measurement Techniques, and Environmental Models and Data Assimilation, and provide associated Training, Outreach, and Education to users, stakeholders, and students at all levels.



Photo: OECI



## COOPERATIVE INSTITUTE FOR RESEARCH TO OPERATIONS IN HYDROLOGY

CIROH, a partnership between NOAA and The University of Alabama, is a national consortium committed to advancing water prediction – the forecasting of streamflow entering water systems, extreme events such as floods and droughts, and water quality – and building community resilience to water-related challenges. CIROH scientists, from 28 different institutions—academic, government, and private, work to improve the understanding of hydrologic processes, operational hydrologic forecasting techniques and workflows, community water modeling, translation of forecasts to actionable products, and use of water predictions in decision making.



## COOPERATIVE INSTITUTE FOR SATELLITE EARTH SYSTEM STUDIES

CISESS is a national consortium of academic, non-profit and community organizations and includes Minority Serving Institutions as well as others with strong faculties that enhance CISESS capability to contribute to NOAA's mission and goals. In addition to the University of Maryland, CISESS has another campus in North Carolina co-located with the National Climatic Data Center in Asheville.



## COOPERATIVE INSTITUTE FOR SEVERE AND HIGH-IMPACT WEATHER RESEARCH AND OPERATIONS

CIWRO connects the scientific and technical resources of the University of Oklahoma and its partners at Texas Tech University, Howard University, Penn State University, and the University at Albany with NOAA to accomplish the goal of improving the basic understanding of weather and transitioning that understanding to operations to produce better forecasts that save lives and property. CIWRO's work concentrates on 5 themes: weather radar and observations; mesoscale and storm scale modeling; forecast applications improvement; subseasonal to seasonal forecasting; and societal impacts of high impact weather.



Photo: CIMSS