Contact

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Top Skills

Strategic Planning
Environmental Science
Climate Change

Greg Dusek

Senior Scientist
Washington DC-Baltimore Area

Summary

Senior scientist and coastal physical oceanographer with expertise in applying data science and machine learning to better understand and predict weather and climate influenced coastal hazards. NOAA subject matter expert for coastal and estuarine processes including sea level variability, coastal flooding, rip currents, tidal currents, and waves.

Experienced strategic thought leader for emerging technologies, artificial intelligence, climate impacts and coastal inundation. A lead for numerous high-impact strategic plans including the NOAA AI Strategic Plan, the National Marine Fisheries Service Cloud Strategy, the Southeast Coastal Ocean Observing Regional Association Coastal Modeling Strategic Plan, and the NOAA Coastal Inundation Capability Framework.

I lead high performing science and technical teams to build innovative public-facing products. This includes the first national rip current forecast model, the NOAA monthly high tide flooding outlook and the WebCOOS coastal webcam network.

Held numerous leadership roles including as the Chief Scientist for the NOAA Center for Operational Oceanographic Products and Services, Chair of the NOAA Artificial Intelligence Executive Committee, Chair of the National Ocean Service Science Board, Vice-chair for the American Meteorological Society Coastal Environment Committee, and technical chair for the Interagency Task Force on Sea Level Change.

As a dynamic public speaker, I frequently represent NOAA at conferences, in media interviews, and on podcasts to discuss coastal ocean science, coastal hazards, emerging technologies and NOAA products and services.

Experience

NOAA: National Oceanic & Atmospheric Administration

12 years 8 months

Senior Scientist

September 2015 - Present (8 years 10 months)

Silver Spring, Maryland, United States

Chief Scientist for NOS CO-OPS, an operational federal science center of over 170 employees. Leadership for all ongoing research, scientific and technical activities including observations and predictions of sea level rise and coastal flooding across the U.S. and the more than 200 real-time water level stations in the NOAA National Water Level Observation Network (NWLON). Develop and implement strategic priorities for CO-OPS R&D and establish internal and external scientific and technical partnership opportunities. Frequently work with external partners and stakeholders to identify science needs and codevelop products to address these needs. Lead professional development for our scientists and engineers, including the development of internal and external training programs. Regularly supervise contract personnel and graduate students performing research tasks.

The developer and lead oceanographer of the NOAA Rip Current Forecast Model - a machine learning model which applies numerical model output to predict the likelihood of hazardous rip currents across the coastal U.S. Developer and lead of the NOAA Monthly High Tide Flooding Outlook - a product which utilizes tide predictions, sea level rise and climatological water levels to predict the daily likelihood of flooding at NOAA tide gauges up to a year in advance. Chair from 2020-2022 for the NOAA Artificial Intelligence Executive Committee and lead for the cross-NOAA development and implementation of the NOAA AI Strategic Plan.

Oceanographer

November 2011 - August 2015 (3 years 10 months)

Silver Spring, Maryland, United States

Lead physical oceanographer for a range of scientific, technical and field projects. I led a multi-year field study deploying over 130 current profilers to measure estuarine currents of the Puget Sound, WA region. I was also the project lead for the development of a web product to display real-time High Frequency Radar surface currents observations with tidal current predictions.

NOAA Fisheries

Strategic Advisor for Cloud

March 2023 - July 2023 (5 months)
Silver Spring, MD

Rotational assignment where I led the development of a strategy for NOAA Fisheries to transition on-premise data storage and compute resources to the cloud. Worked with IT professionals, scientists, and managers to develop the plan and worked with Fisheries OCIO leadership to promote the plan and create an implementation roadmap.

U.S. Geological Survey (USGS)
Senior Advisor
October 2022 - February 2023 (5 months)
St Petersburg, Florida, United States

Rotational assignment where I advised and coordinated across NOAA and USGS on a range of climate and coastal change hazards with existing and future potential collaboration opportunities between agencies. This included identifying opportunities to develop a multi-agency network of coastal camera imagery, strengthening agency coordination on developing and issuing joint operational total water level and coastal change forecasts, and advising on the USGS implementation of a decadal- and climate-scale coastal change hazards science plan.

Southeast Coastal Ocean Observing Regional Association (SECOORA)
Executive Strategic and Budget Advisor
March 2022 - July 2022 (5 months)

Rotational assignment where I led the strategic planning, budget estimates and implementation for a new national webcam observing system. Developed a coastal modeling strategic plan to guide SECOORA's future planning, prioritization, and service delivery of coastal models. Advised SECOORA leadership on the technical design of a new community-based coastal flood monitoring network.

Education

University of North Carolina at Chapel Hill
Doctor of Philosophy - PhD, Oceanography, Chemical and Physical · (August 2006 - December 2011)

University of Rochester - Warner School of Education
Master of Science - MS, Teaching and Curriculum · (May 2004 - May 2005)

University of Rochester

Bachelor of Science - BS, Applied Mathematics · (September 2000 - May 2004)