V. Rao Kotamarthi, Ph.D.
Chief Scientist & Department Head, Atmospheric Science and Climate, Argonne National Laboratory

Rao Kotamarthi is an atmospheric scientist, Department Head of Atmospheric Science and Climate, and the Chief Scientist for the Environmental Science Division at at Argonne National Laboratory. He has over 25 years of experience in the area of atmospheric sciences, computational atmospheric modeling, conducting field studies and dynamic model downscaling. Dr. Kotamarthi has led or provided technical and analytical expertize to a wide range of Federally-sponsored projects. These include serving as the Principal Investigator for the DOE BER sponsored field study, Ganges Valley Aerosol Experiment (GVAX) 2011-2012; Principal Investigator (Argonne) for the U.S. Department of Energy (DOE) Atmospheric Science Program for Atmospheric Aerosols and Clouds(current); Principal Investigator for Climate model downscaling at DoD installations, SERDP, DoD; Co-Investigator at the Center of Robust Decision Making Under Uncertainty, University of Chicago, NSF (current);Co-Principal Investigator at the Center for Statistics and Environmental Sciences, University of Chicago(2002-2007); Principal investigator for the Wind Energy Forecasting Project (WFIP2), DOE-EERE (Current). He has more than 80 peer-reviewed journal publications.

CLIMATE CHANGE IMPACTS TO DEPARTMENT OF DEFENSE INSTALLATIONS: A multi-year project to provide a comprehensive analysis of the uncertainty associated with generating climate projections at the regional scale. Dr. Kotamarthi led a team of climate scientists to conduct analysis of dynamically downscaled climate data and characterize the uncertainty associated with its generation of future precipitation information. **Developed guidance that can be used by decision makers to quantify and plan for the impacts of future climate change at specific locations, and understand relevant considerations when choosing climate models and data.**

ROLE OF AEROSOLS ON ATMOSPHERIC PROCESSES: A multi-year research project assessing the role of atmospheric aerosols in regional scale climate change and radiative forcing. Dr. Kotamarthi and his team develop representation of radiatively important absorbing aerosols for global climate models; **conducted multi-national and multi-institutional field study to collect data on atmospheric aerosols and understand their effect on regional scale atmospheric and hydrological cycles**; develop a model to demonstrated the importance of brown carbon as a key absorbing aerosol in the atmosphere; performed integrated analysis of the atmospheric-hydrological cycles to demonstrate the role of absorbing aerosols and their vertical distribution on regional scale climate

CASCO BAY REGION CLIMATE CHANGE ADAPTATION – DHS REGIONAL RESILIENCE ASSESSMENT PROGRAM (RRAP): A multi-year research project assessing the climate change vulnerabilities of lifeline infrastructure systems (transportation, power, water/wastewater, and telecommunications) in the Casco Bay Region of Maine. Dr. Kotamarthi and his team develop a climate change impact dataset characterizing changes in average temperature and precipitation, as well as extreme temperature (i.e., heat waves) and precipitation (i.e., 99th percentile event) for two future time horizons for the Casco Bay region. **Integrated downscaled climate model data into a geospatial analysis product for use in regional infrastructure impact analysis for regional decision-support efforts.**