

EDUCATION

1992-1997	UNIVERSITY OF ILLINOIS CHAMPAIGN-URBANA •Ph.D. in Civil & Environmental Engineering (1997)	(Urbana, IL)
1989-1992	UNIVERSITY OF ILLINOIS CHAMPAIGN-URBANA •Master of Science in Aeronautical Engineering (1992)	(Urbana, IL)
1986-1989	SAINT LOUIS UNIVERSITY •Bachelor of Science in Aerospace Engineering (Magna Cum Laude)	(St. Louis, MO)

Publications

Google Scholar: <https://scholar.google.com/citations?user=y7Quo2EAAAAJ&hl=en>
as of March 9, 2026 : H-Index = 46 Citations = 11911 i10-index = 85

EXPERIENCE

2015 – 2022 2024 -Present	NASA Langley Research Center Head, Lidar Science Branch As the Head of the Lidar Science Branch at NASA Langley Research Center. oversee the development of new lidar systems, their maturation for airborne and space-based platforms and the development of algorithms for converting lidar measurements to geophysical parameters. In this capacity, provide institutional resources, scientific and engineering expertise, and guidance to enable missions, research, and technology development. Manage and supervise 50+ civil servant and contractor scientists and engineers. Leading the Knowledge Management and Communication efforts of the Branch.
2023 – 2024	NASA Langley Research Center Acting Deputy Chief Technologist Supported the Center Chief Technologist in providing technical leadership at Langley for the planning, management, and evaluation of comprehensive advanced Center-wide technology development activities to meet Langley's vision and mission responsibilities. Oversaw and maintained close contacts with NASA Headquarters, field Centers, industry, academic institutions and interagency partners on technologies relevant to NASA programs and projects at the Center. Managed the Center Innovation and Research and Development (IRAD) fund.
2022 – 2023	NASA Langley Research Center Acting Deputy Director of Science shared the joint responsibility with the Director for leading the Directorate's efforts in conducting and improving world-class core capability in atmospheric science research and space flight for NASA's Science Mission Directorate (SMD). Responsible for the oversight and integration of the Science Directorate (SD) portfolio, reviewing upcoming decadal survey research efforts, presidential priorities, and SMD initiatives for applicability to science portfolio. Managed a directorate wide research portfolio of more than US \$50m. Led the Knowledge Management and Communication efforts of the Directorate. Directly supervised 6 civil servants.
Dec 2011 – 2017	NASA HQ Detailee: NASA Applied Sciences Program (ASP) ♦Associate Program Manager for Health & Air Quality Applications Oversaw overall project progress to apply Earth science products in decision-making activities ♦Mission Applications Representative for PACE – Atmosphere & Air Quality Apps Managed integration of applications into mission requirements in the early design Phase (pre-Phase A)
Sept 2002-present	NASA Langley Research Center – <i>Science Directorate</i> (Hampton, VA). <i>Physical Scientist</i> Science team member responsible for the development and testing of aerosol extinction-to-backscatter-ratio, and aerosol subtyping algorithms for the Cloud and

Aerosol Lidar Infrared imager Pathfinder Spaceborne Observations (CALIPSO) Satellite. Led a team of scientists to develop and implement extinction algorithms for CALIPSO.

PI: NASA LaRC [AERONET Station](#) part of a worldwide network of federated aerosol photometers.

Jan 2000-2004 **Old Dominion University – Environmental Engineering Dept** (Norfolk, VA).
Adjunct Faculty

•Teach Air Pollution Control course for graduate and undergraduate students

March' 98-2002 **Hampton University (HU)- Center for Atmospheric Sciences** (Hampton, VA).
Research Assistant Professor

- Taught the inaugural *Remote Sensing* and *Atmospheric Physics* courses at HU
- Led the Algorithm Implementation and Validation efforts for CALIPSO
- Led the aerosol subtyping algorithm development effort
- Co-Investigator, and Science Team member CALIPSO
- Advised and mentored undergraduate students
- Led committee to recruit students in science/engineering from south eastern institutions
- PI for a Space Science Grant and Co-I on several grants supporting six students.
- Primary author of the Education and Public Outreach Chapter of the CALIPSO proposal

Supervisor: M. Pat McCormick; Ph. (757) 719-5061

PROFESSIONAL ACTIVITIES/ ASSOCIATIONS

Served on the Proposal Review Panel of NASA's "*Global Water and Energy Cycle (GWEX) for EOS Interdisciplinary Science*", and the Terra-Aqua Panel (2010) NASA ACCESS Panel (2013), NASA New Investigator Panel (2014), Applied Sciences Air Quality and Public Health Panel (2014) Co-Chairman of the *IEEE Atmospheric Aerosol Symposium*, Tucson, AZ, April 2005

- Member American Geophysical Union (AGU)
- Member American Meteorological Society (AMS)
- Member American Assoc for the Advancement of Science (AAAS)

COMMUNITY SERVICE

NOAA Science Advisory Board Climate Working Group Member (2020-2024)

Secretary, AGU Global Environmental Change Section (2015-19)

American Assoc for the Advancement of Science AAAS (Membership Chair, 2023-24)

Amer Assoc for the Advancement of Science AAAS (Non Academic Exec Comm Member, 2024-)

AGU Macelwane Medal Committee for the 2020-2021 term

NASA Source Evaluation Board STARSS III (2015)

Language Skills **Fluent in English, Working knowledge of Arabic and French**

AWARDS/ HONORS

America Meteorological Society (AMS) Fellow (elected 2023)

Outstanding Student Award Saint Louis University, 1989

Graduated 1st of Class of May 89 (Engineering) Saint Louis University

NASA Exceptional Scientific Achievement Medal (2024)

NASA Outstanding Performance (CALIPSO Launch) 2006

NASA Outstanding Performance (Operations and Data Processing) 2007

NASA Outstanding Performance (CALIPSO Laser Switchover Team) 2008

NASA Group Achievement Award (ARCTAS) 2009

NAAMES Group Achievement Award 2019

NASA Silver Achievement Medal – SEB Committee 2018