J. Scott Miller, Ph.D.

Associate Vice President for Research and Innovation
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History of Employment

University of Texas at Arlington — Arlington, TX
Associate Vice President for Research and Innovation | 06/2025 – Present

Oak Ridge Associated Universities (ORAU) — Huntsville, AL
Sr. Director, Research Programs | 10/2020 – 05/2025
President and CEO, ORAU ConScientia | 10/2020 – 09/2023
Sr. Research Advisor | 01/2020 – 09/2020

CFD Research Corporation — Huntsville, AL
Vice President, Energy, Materials, and Propulsion | 01/2019 – 12/2019

Universities Space Research Association (USRA) — Huntsville, AL
Sr. Director, NASA Postdoctoral Program | 06/2016 – 09/2018
Sr. Director, Science and Technology Institute | 09/2014 – 01/2019

Qualis Corporation / NASA Marshall Space Flight Center — Huntsville, AL
Program Manager / Senior Scientist | 01/2005 – 09/2014

Naval Surface Warfare Center – IH Division — Indian Head, MD
Research Chemist (ND-IV) | 03/2002 – 12/2004

National Research Council / Air Force Research Laboratory — Hanscom AFB, MA
NRC Postdoctoral Research Associate | 07/2000 – 03/2002

Education

Louisiana State University — Baton Rouge, LA
Ph.D., Chemistry (Chemical Physics)
Dissertation: “State-resolved molecular photoionization dynamics of polyatomic systems: Effects of non-linear changes in molecular geometry,”

Mississippi College — Clinton, MS
B.A., Chemistry / French (Minor)

Harvard Business School Online
Certificate of Specialization in Strategy
Coursework: Disruptive Strategy (Christensen), Sustainable Business Strategy, Strategy Execution.

Narrative of Research Experience

Dr. Miller’s research career began in experimental chemical physics, investigating state-resolved molecular photoionization dynamics using synchrotron radiation at LSU’s Center for Advanced Microstructures and Devices (CAMD). His NRC postdoctoral fellowship at AFRL extended this work into ion-molecule reaction dynamics at the LBNL Advanced Light Source, producing foundational xenon charge-exchange measurements with direct application to electrostatic thruster modeling. At the Naval Surface Warfare Center, he developed optical diagnostics and analytical methods for energetic materials combustion research supported by DTRA and ONR — work embedded in applied mission contexts from the outset.

At NASA Marshall Space Flight Center, Dr. Miller transitioned into applied Earth and space science, contributing to planetary instrumentation development on the Potassium-Argon Laser Experiment (KArLE), a NASA PIDDP-funded instrument for in situ radiological age-dating of planetary samples. His work also spanned space environmental effects, natural and induced space environments, and real-time space weather support for the Chandra X-ray Observatory. Leading a multidisciplinary team at MSFC sharpened his understanding of what scientific communities require to function well — and what leadership must provide to make that possible.

Dr. Miller's career then evolved through executive roles at two national university research consortia — the Universities Space Research Association (USRA) and Oak Ridge Associated Universities (ORAU). In these organizations, he worked at the nexus of federal agencies and academic performers: translating agency mission needs into scientific capability, connecting university researchers to large-scale federal programs, and building organizational infrastructure that allows scientific talent to work effectively. At USRA, he led portfolios spanning atmospheric science, high-energy astrophysics, heliophysics, and major flight programs including HIRAD, ISERV, ART-XC, and IXPE, while growing the Science and Technology Institute's funded staffing by 20 percent over four years.

At ORAU, Dr. Miller directed research programs at scale — managing portfolios exceeding $50M annually, securing a competitive $129M NASA contract, and developing cross-sector partnerships across federal agencies, universities, and industry. He also served as President and CEO of ORAU ConScientia, leading a mission-adjacent enterprise through disciplined strategic assessment and closure when the business case could not be established. Across these roles, a consistent orientation held: science depends not only on discovery, but also on the organizations that enable it.

Dr. Miller now leads the physical sciences and engineering research strategy and enterprise development at the University of Texas at Arlington, a Carnegie R1 institution, with responsibility for scaling the university's research portfolio and designing systems that connect scientific capability to mission-aligned opportunity. His foundation in chemical physics, space environmental science, planetary instrumentation, astrophysics, and heliophysics informs the cross-disciplinary perspective he brings to institutional leadership and AGU service. He has spent his career not only conducting science, but building the environments that make science possible.

Selected Publications

- **Cohen, B.A., Miller, J.S., et al.** "The Potassium-Argon Laser Experiment (KArLE): In Situ Geochronology for Planetary Robotic Missions." Geostand. Geoanal. Res. 38, 421 (2014).
- **Wolk, S., Minow, J., O'Dell, S., and Miller, J.S.** "Radiation Safing – The Non-Ideal Case." Proceedings of AIAA SpaceOps 2010 Conference, AIAA-2010-2254.
- **Carney, J.R., Miller, J.S., et al.** "Time-Resolved Optical Measurements of Post Detonation Combustion of Aluminized Explosives." Rev. Sci. Instrum. 77, 063103 (2006).
- **Miller, J.S. and Pangilinan, G.I.** "Measurements of Aluminum Combustion in Energetic Formulations." Proceedings, APS Topical Conference on Shock Compression of Condensed Matter (2003).
- **Miller, J.S., et al.** "Xenon charge exchange cross sections for electrostatic thruster models." J. Appl. Phys. 91, 984 (2002).
- **Miller, J.S. and Poliakoff, E.D.** "Excitation of the symmetry forbidden bending mode in molecular photoionization." J. Chem. Phys. 114, 4496 (2001).
- **Miller, J.S. and Poliakoff, E.D.** "On the correlation between photoelectron energy and bending excitation in molecular photoionization." J. Chem. Phys. 113, 899 (2000).

Honors and Recognition

- **APLU COR Research Leader Fellow, Cohort 9 (2026)** — Competitively selected national fellowship for emerging and current chief research officers at public research universities
- **Leadership Huntsville / Madison County CONNECT Program** — Program Chair, Class 9; Advisor; Alumnus, Class 4. Competitive civic and executive leadership development program.
- **NASA Group Achievement Award** — NASA Marshall Space Flight Center
- **Qualis Team Player of the Year Finalist** — NASA MSFC
- **Jacobs ESTS Apogee Award Finalist** — NASA MSFC
- **AFOSR Star Team Award** — Air Force Research Laboratory
- **Outstanding Performance and Productivity in Chemical Research** — Louisiana State University

Professional Society Memberships

- American Geophysical Union (AGU)
- American Astronomical Society (AAS)
- American Association for the Advancement of Science (AAAS)
- American Chemical Society (ACS)
- American Physical Society (APS)
- Sigma Xi — The Scientific Research Honor Society
- Phi Lambda Upsilon — National Chemistry Honor Society
- National Organization of Research Development Professionals (NORDP)