

Nigel George, Ph.D.



EXECUTIVE SUMMARY

Strategic, experienced academic innovator and experimental physicist with over two decades of experience in undergraduate education and research, departmental governance, and inter-institutional partnership. Proven track record of securing and managing federal and state awards, including serving as local co-PI on NSF EPSCoR SPARK-ND and leading the statewide NSF E-CORE (ENDURE) planning initiative across nine North Dakota institutions. Skilled at forging equitable, sustainable partnerships among diverse higher education institutions, K-12 educators, and regional communities. Passionate about expanding North Dakota's STEM research and outreach footprint, driving statewide workforce development, and positioning the jurisdiction for national competitiveness.

CORE COMPETENCIES & LEADERSHIP SKILLS

- **NSF EPSCoR & Federal Grant Leadership:** SPARK-ND, ENDURE, S-STEM, FIPSE, and NIH proposal development & project execution.
- **Coalition & Partnership Building:** Sustainable R1–PUI–TCU research framework development and statewide K-12 STEM engagement.
- **Strategic Change Management:** Academic program design, workforce alignment, and resource allocation.
- **STEM Infrastructure & Workforce Capacity:** Building statewide undergraduate research networks, delivering regional AI educator training, aligning programs with local industry needs, and pioneering student pathways in quantum computing.
- **Stakeholder Communication & Advocacy:** Legislative testimony, state-wide summit facilitation (AI & Data Summit, ENDURE), executive reporting, and multi-institutional collaboration & coordination.

GRANT LEADERSHIP & EPSCOR INITIATIVES

Co-Developer NSF E-CORE (ENDURE) Planning Proposal (*Aug 2026*)

- Co-led and authored the NSF E-CORE planning grant to prepare and position the statewide coalition for submission of a full E-CORE ENDURE (*Enhancing North Dakota's Undergraduate Research Ecosystem*) proposal in 2027.
- Facilitated pre-planning, vision alignment, and structural coordination across nine ND higher education institutions, building a statewide collaborative research network for undergraduates.

Co-Principal Investigator | NSF EPSCoR SPARK-ND Grant (2025 – Present)

- Awarded \$480,000 over 4 years to build STEM research literacy in rural and underrepresented populations across North Dakota.
- Jointly oversee pathway programs at MiSU, including *Scientist in the Classroom* and *Research Experiences for High School Students*, to broaden participation in STEM disciplines.

Project Creator & Implementation Co-led | Workforce Education Innovation Fund Grant (2025 – Present)

- Awarded \$800,000 over 2 years to launch *Innovation Engineering at Minot State University*, addressing regional workforce demands in Western North Dakota.
- Co-lead multi-departmental program rollout, micro-credential frameworks, and industry-aligned experiential learning pathways.

Co-Principal Investigator | NSF S-STEM Grant (2015 – 2022)

- Awarded \$650,000 over 5+ years for *STEM-Pros: Growing more STEM professionals in the Heartland*.
- Co-managed program development and implementation, recipient selection, advising and student professional development initiatives.

PROFESSIONAL EXPERIENCE

Minot State University | Minot, ND

Professor of Physics (Aug 2024 – Present)

Associate Professor of Physics (Special Rank) (Aug 2023 – July 2024)

- **Statewide Coalition Building:** Spearhead multi-institutional coalitions across North Dakota, leading the ENDURE E-CORE proposal development with eight partner institutions—spanning TCUs, public and private PUIs, and R1s; co-developed a DoEd FIPSE proposal establishing a 4-PUI consortium for statewide K-12 AI teacher training; co-presented on sustainable R1-PUI-TCU research collaborations at the 2026 EPSCoR Annual Summit; and delivered legislative testimony on AI in learning.
- **Educational Innovation & Program Development:** Co-led engineering expansion efforts at MiSU, involved in designing a novel Biomedical Science major, and co-created the Applied AI Certificate program to meet evolving regional workforce needs.
- **K-12 & Regional Workforce Outreach:** Co-lead AI workshops for 150+ K-12 educators, direct SPARK-ND outreach pathways, and facilitate and participate in regional STEM events (FIRST Lego League, Science Olympiad, Open House).
- **Academic Leadership:** Chaired the General Education Ad Hoc Committee, driving the strategic revision and rapid campus-wide rollout of MiSU's general education program.

Upper Iowa University | Fayette, IA

Professor of Math and Physics (2015 – Aug 2023)

Associate Professor of Math and Physics (2009 – 2015)

Assistant Professor of Math and Physics (2003 – 2009)

- **Executive Administrative Leadership:** Served as Faculty Chair (2022–2023, 2007–2008), Faculty Vice-Chair (2021–2022, 2006–2007), Department Chair across STEM disciplines (2010–2015), and Chair of the University Curriculum Committee for 3 consecutive terms (2011–2014).
- **Change Management & Organizational Improvement:** Co-led market-aligned program development to support institutional growth and transitioned a broad department into smaller, agile units to enhance team collaboration and program responsiveness; served on university-wide committees to strengthen institutional positioning.
- **Supervisory Experience:** Chaired multiple faculty and staff search committees, mentored junior faculty, and directed student research projects across physics and applied mathematics.

RESEARCH & SCIENTIFIC BACKGROUND

Brookhaven National Laboratory (BNL) | Upton, NY

Assistant Scientist / Visiting Scientist (2001 – 2003)

- **Project & Operations Management:** Managed data production systems, computing infrastructure (\$200K+ resources), software frameworks, and system operators for the PHOBOS Collaboration (60+ international scientists).
- **Mentorship & Publications:** Guided graduate student research and authored/co-authored high-impact experimental nuclear physics publications in *Physical Review C* and *Physical Review Letters*.

Argonne National Laboratory | Chicago, IL (Based on-site at BNL)

Post-Doctoral Fellow (1999 – 2001)

- **Deputy Operations Manager:** Managed the end-to-end data production software system for experimental analysis while supporting run-time operations for a 25-person research team.

EDUCATION

- **Ph.D. in Experimental Nuclear Physics** | Yale University, New Haven, CT (1992 – 1998)
- **M.Sc. in Theoretical Physics (First Class Honors)** | University of Auckland, New Zealand (1991)
- **B.Sc. in Physics and Mathematics** | University of Auckland, New Zealand (1989)

COMMUNITY SERVICE & PROFESSIONAL OUTREACH

- **President / Vice-President & Board Member** | Rainbow Land Daycare Center (2004 – 2023)
 - Secured and managed \$100k in annual state grant funding to sustain multiple free preschool centers within the local school district.
- **Lead Judge / Judge** | First Lego League Regional Competition (2025, 2026)
- **Member** | Northwestern North Dakota Science Teachers Association (2024 – Present)
- **Facilitator / Member** | School Improvement Advisory Committee (2013 – 2023)

SELECTED SCHOLARLY PUBLICATIONS & PRESENTATIONS

- Co-author of **25+ peer-reviewed scientific publications** in top-tier physics journals (*Physical Review Letters*, *Physical Review C*, *Nuclear Physics A*, *Physics Letters B*).
- Co-presenter, "*Beyond 'Equal Partners': Designing Sustainable R1-PUI-TCU Research Collaborations*," EPSCoR Annual Summit (May 2026).
- Co-presenter, "*What We See in Our Classrooms — AI, Learning, and Human Agency*," ND Legislative Assembly AI & Data Center Committee (Aug 2026).