

---

**ROBERT ANGELO BORRELLI**  
**ASSOCIATE PROFESSOR**  
**University of Idaho · Idaho Falls Center for Higher Education**  
**Department of Nuclear Engineering and Industrial Management**  
**Center for Advanced Energy Studies · 995 MK Simpson Boulevard · Idaho Falls ID 83401**  
**rborrelli@uidaho.edu · @TheDoctorRAB**

---

**EDUCATION**

**University of California – Berkeley**

Doctor of Philosophy – Nuclear Engineering 2006

**Worcester Polytechnic Institute**

Master of Science – Civil & Environmental Engineering 1999

Bachelor of Science – Mechanical Engineering with high distinction 1996

**RESEARCH & PROFESSIONAL EXPERIENCE**

**University of Idaho · Idaho Falls Center for Higher Education** 2015–

**Nuclear Engineering & Industrial Management**

Associate Professor 2021–

Affiliate – Energy Policy Institute Boise State University 2019–

State of Idaho Professional Engineer – Faculty Restricted 2019–

**University of California-Berkeley · Nuclear Engineering**

Postdoctorate Researcher 2009-12

**University of Tokyo · Nuclear Engineering & Management**

Research Associate 2007–09

**SELECTED GRANTS & CONTRACTS AWARDED**

- (1) Michael Haney (PI), R. A. Borrelli (co-PI), Dakota Roberson (co-PI), Constantinos Koliass (co-PI) - University of Idaho, Ben Lampe (co-PI), Sean McBride (co-PI) - Idaho State University. Secure Cyberspace and Resilient Industrial Systems Workforce Development. Idaho Global Entrepreneurial Mission Initiative · Higher Education Research Council. **\$700,000**. 2024.07.01 - 2025.06.30. [*Borrelli PI 2024.07.01*]
- (2) Kathleen Araújo (PI), Cassie Koerner (co-PI) - Boise State University, Stephanie Malin (co-PI) - Colorado State University, Daniel Cardenas (co-PI) - National Tribal Energy Association, R. A. Borrelli (co-PI) - University of Idaho, Weston Eaton (co-PI), Temple Stoellinger (Senior Personnel), Steven Smutko (Senior Personnel), Rachael Budowle (Senior Personnel) - University of Wyoming, Majia Nadesan (co-PI) - Arizona State University, Julia Haggerty (co-PI), Lee Spangler (Senior Personnel) - Montana State University, Denia Djokić (co-PI) University of Michigan, Sarah Robey (co-PI) - Idaho State University. Common ground: Legitimacy in consent-based siting for interim nuclear waste storage. United States Department of Energy Consent-Based Siting for Interim Storage Program - Community Engagement Opportunities. **\$2,000,000**. 2023.08.01 - 2025.07.31.
- (3) Michael Haney (PI), R. A. Borrelli (co-PI), Dakota Roberson (co-PI), Constantinos Koliass (co-PI) - University of Idaho, Ben Lampe (co-PI), Sean McBride (co-PI) - Idaho State University. Secure Cyberspace and Resilient Industrial Systems Workforce Development. Idaho Global Entrepreneurial Mission (IGEM) – Higher Education Research Council **\$700,000**. 2023.07.01 - 2024.06.30.
- (4) Michael Haney (PI), R. A. Borrelli (co-PI), Dakota Roberson (co-PI), Constantinos Koliass (co-PI) - University of Idaho, Ben Lampe (co-PI), Sean McBride (co-PI) - Idaho State University. Secure Cyberspace and Resilient Industrial Systems Workforce Development. Idaho Global Entrepreneurial Mis-

- sion (IGEM) – Higher Education Research Council **\$693,000**. 2022.07.01 - 2023.06.30.
- (5) R. A. Borrelli (PI), Michael Haney (co-PI) - University of Idaho. Cyber-informed design, education, and training for cyberthreat resiliency with real-time nuclear reactor simulation. University of Idaho. Operation: Resubmission Support. **\$34,122**. 2022.04.30 - 2022.09.30.
  - (6) Thomas A. Ulrich (PI) - Idaho National Laboratory, R. A. Borrelli (co-PI) - University of Idaho. User evaluation of the NuScale simulator at the Center for Advanced Energy Studies. CAES programmatic funding. **\$50,000**. 2022.03.01 - 2022.09.30.
  - (7) R. A. Borrelli (PI), Jason Barnes (Senior Adviser) - University of Idaho. Experimental determination of interactions between the radiation fields of Dragonfly’s MMRTG and Titan’s environment. Idaho NASA EPSCoR Research Initiation Grant. **\$82,962**. 2021.05.01 - 2022.04.30.
  - (8) Richard N. Christensen (PI), R. A. Borrelli, Michael G. McKellar, Michael Haney, David Arcilesi (co-PIs) - University of Idaho, Richard Jacobson (co-PI) Idaho State University. NuScale Simulator at the Center for Advanced Energy Studies. United States Department of Energy Scientific Infrastructure Support for Consolidated Innovative Nuclear Research. **\$321,525**. 2019.10.01 - 2022.09.30. [*PI - NuScale Simulator Laboratory - 2022.01.07*]
  - (9) R. A. Borrelli (PI) - University of Idaho, Dennis D. Keiser, Jr., (co-PI) - Idaho National Laboratory. Graduate Research Assistantship: Connecting U-Mo Fuel Processing, Microstructure, and Irradiation Performance. **\$127,866**. 2018.10.01-2021.05.31.
  - (10) R. A. Borrelli (PI), Richard N. Christensen (co-PI) - University of Idaho, Brian J. Jaques (co-PI) - Boise State University, Piyush Sabharwall (co-PI) - Idaho National Laboratory, Mark Delligatti (co-PI) - Table Rock, LLC, Sakae Casting USA, LLC (co-PI). Modeling and design of borated aluminium cask for used fuel cooling. Idaho Global Entrepreneurial Mission (IGEM) - Idaho Commerce. **\$237,898**. 2018.01.01-2019.05.31.

#### RELEVANT PUBLICATIONS

- (1) R. A. Borrelli, Kathleen Araújo, Cassie Koerner, Denia Djokić (2024). Consent based siting for Spent Nuclear Fuel – The Common Ground Consortium Focus on Research and Public Conversations. Las Vegas, Nevada: Proc., American Nuclear Society Annual Meeting.
- (2) Nathan Manwaring, Matt Johnson, R. A. Borrelli (2024). At-power Subcritical Multiplication in the Advanced Test Reactor during Nuclear Requalification Testing. *Nuclear Engineering and Design* 426, 113399.
- (3) Sam J. Root, Porter Throckmorton, Jonathan Tacke, Jacob Benjamin, Michael Haney, R. A. Borrelli (2023). Cyber Hardening of Nuclear Power Plants with Real-time Nuclear Reactor Operation — 1. Preliminary Operational Testing. *Progress in Nuclear Energy* 162, 104742.
- (4) Teyen Widdicombe, R. A. Borrelli (2023). Experimental Determination of Interaction Between the Radiation Fields of Dragonfly’s MMRTG and Titan’s Environment II: Gamma Induced Atmospheric Conductivity. *Acta Astronautica* 208, 91.
- (5) Pedro Mena, R. A. Borrelli, Leslie Kerby (2022). Survey of markets for nuclear power in Western North America. *International Journal of Energy, Environment, and Economics* 29, 17.
- (6) Joseph Christensen, R. A. Borrelli (2022). Evaluations of the effect of heterogeneity in HALEU systems using modified critical benchmarks. *Nuclear Science and Engineering* 196, 1333.
- (7) Emma K. Redfoot, Kelley M. Verner, R. A. Borrelli (2022). Applying analytic hierarchy process to industrial process design in a nuclear renewable hybrid energy system. *Progress in Nuclear Energy* 145, 104083.
- (8) Jonathan Tacke, R. A. Borrelli, Dakota Roberson (2021). Advanced frequency-domain compensator design for subsystems within a nuclear generating station. *Progress in Nuclear Energy* 140, 103914.
- (9) John P. Carter, R. A. Borrelli (2020). Integral molten salt reactor neutron physics study using Monte Carlo N-particle code. *Nuclear Engineering and Design* 365, 110718.

- (10) Jieun Lee, Amey Shigrekar, R. A. Borrelli (2019). Hazard and operability analysis of a pyroprocessing facility. Nuclear Engineering and Design 348, 131.

**RELEVANT COURSES TAUGHT**

**University of Idaho - Idaho Falls Center for Higher Education  
Nuclear Engineering & Industrial Management**

NE529: Risk Assessment

NE535: Nuclear Criticality Safety I

NE585: Nuclear Fuel Cycle Analysis

**University of California–Berkeley - Department of Nuclear Engineering**

NE92: Issues in Nuclear Science and Engineering

NE375: Teaching Techniques in Nuclear Engineering

E124: Ethics and the Impact of Technology on Society

**The University of Tokyo - Department of Nuclear Engineering/Management**

Technical English for Scientists

**Diablo Valley Community College (CA) - Department of Architecture and Engineering**

ENGIN110: Introduction to Engineering

**SYNERGISTIC ACTIVITIES**

(1) **American Nuclear Society**

National Program Screening Subcommittee 2022–

Fuel Cycle & Waste Management Division 2015–

Nonproliferation Policy Division 2015–

Student Sections Committee 2015–

(2) **Idaho Section of the American Nuclear Society**

Treasurer 2022–

Board of Directors 2018; 2020

Community Service 2015–

(3) **University of Idaho**

Faculty Senate – College of Engineering 2024–27

Faculty Advisor – American Nuclear Society Student Section 2015–