NSF BIOGRAPHICAL SKETCH

NAME: Borrelli, R. A.

POSITION TITLE & INSTITUTION: Associate Professor, University of Idaho - Idaho Falls Center for Higher Education

(a) PROFESSIONAL PREPARATION -(see PAPPG Chapter II.C.2.f.(a))

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
Worcester Polytechnic Institute	Worcester, MA	Mechanical/Nuclear Engineering	BS	1996
Worcester Polytechnic Institute	Worcester, MA	Civil/Environmental Engineering	MS	1999
University of California-Berkeley	Berkeley, CA	Nuclear Engineering	PHD	2006

(b) APPOINTMENTS -(see PAPPG Chapter II.C.2.f.(b))

2021 - present Associate Professor, University of Idaho - Idaho Falls Center for Higher Education, Department of Nuclear Engineering and Industrial Management, Idaho Falls, ID

2019 - present Professional Engineer Faculty Restricted, State of Idaho

2019 - present Coordinator, Nuclear Power Plant Decommissioning and Used Fuel Management Professional Certificate, University of Idaho

2019 - present Affiliate, Boise State University Energy Policy Center, Boise, ID

2015 - 2021 Assistant Professor, University of Idaho - Idaho Falls Center for Higher Education, Department of Nuclear Engineering and Industrial Management, Idaho Falls, ID

2012 - 2015 Adjunct Professor, Diablo Valley Community College, Department of Architecture and Engineering , Pleasant Hill, CA

2009 - 2012 Postdoctorate Researcher, University of California-Berkeley, Department of Nuclear Engineering, Berkeley, CA

2007 - 2009 Research Associate, The University of Tokyo, Department of Nuclear Engineering/Management, Tokyo

(c) PRODUCTS -(see PAPPG Chapter II.C.2.f.(c))

Products Most Closely Related to the Proposed Project

1. Peterson J, Haney M, Borrelli RA. An overview of methodologies for cyber security vulnerability assessments conducted in nuclear power plants. Nuclear Engineering and Design. 2019; 346:75.
2. Lee J, Shigrekar A, Borrelli RA. Hazard and operability analysis of a pyroprocessing facility. Nuclear Engineering and Design. 2019; 348:131.
3. MacLean T, Borrelli RA, Haney M. International Journal of Critical Infrastructure Protection XIII. Shenoi S, Staggs J, editors. IFIP International Federation for Information Processing 2019: Springer International Publishing; 2019. Chapter 5, Cyber security modeling of non-critical nuclear power plant digital instrumentation; p.87.
4. Redfoot EK., Verner KM., Borrelli RA.. Applying analytic hierarchy process to industrial

process design in a Nuclear Renewable Hybrid Energy System. Progress in Nuclear Energy. 2022 January; 145:104083.

5. Mena P, Borrelli RA., Kerby L. Expanded Analysis of Machine Learning Models for Nuclear Transient Identification Using TPOT. Nuclear Engineering and Design. 2022; 390:111694.

Other Significant Products, Whether or Not Related to the Proposed Project

1. Borrelli RA, Delligatti M, Heidrich B. Borated aluminum cask design for onsite intermediate storage - Preliminary neutronics design and certification analysis. Nuclear Engineering and Design. 2020; 363. DOI: 10.1016/j.nucengdes.2020.110666
2. Carter J, Borrelli RA. Neutron physics study of an integral molten salt reactor using Monte Carlo N-Particle code. Nuclear Engineering and Design. 2020; 365. DOI: 10.1016/j.nucengdes.2020.110718
3. Lee J, Tolman M, Borrelli RA. High reliability safeguards approach to remotely handled nuclear processing facilities: Use of discrete event simulation for material throughput for fuel fabrication. Nuclear Engineering and Design. 2017; 324:54.
4. Borrelli RA. A high reliability safeguards approach for safeguardability of remotely-handled nuclear facilities: 2. A risk-informed approach for safeguards. Journal of Nuclear Materials Management. 2014; XLII:27.
5. Tacke J, Borrelli R, Roberson D. Advanced frequency-domain compensator design for subsystems within a nuclear generating station. Progress in Nuclear Energy. 2021; 140. DOI: 10.1016/j.pnucene.2021.103914

(d) SYNERGISTIC ACTIVITIES -(see PAPPG Chapter II.C.2.f.(d))

1. University of Idaho: Faculty Advisor - American Nuclear Society University of Idaho Student Section
2. Idaho Section of the American Nuclear Society: Treasurer; Coordinator - Smoke Detector Donation Program
3. American Nuclear Society: National Program Committee Member
4. University of Idaho: College of Engineering Promotion & Tenure Committee Member