

Amanda M. Bachmann

CONTACT INFORMATION	NEUP Fellow, Graduate Research Assistant <i>University of Illinois, Urbana-Champaign</i> <i>Nuclear, Plasma, and Radiological Engineering</i>	mobile: (813) 495-5698 e-mail: amandab7@illinois.edu
PhD	University of Illinois Urbana-Champaign, NUCLEAR ENGINEERING • Nuclear Fuel Cycle Transition to High Assay Low Enriched Uranium Fueled Reactors • GPA: 3.94/4.0	Aug 2020 – Present
MS	University of Tennessee, Knoxville, NUCLEAR ENGINEERING • Empirical Modeling of Used Nuclear Fuel Signatures Radiation Emissions for Safeguards Purposes • GPA: 3.96/4.0	Aug 2019 – Aug 2020
BS	University of Tennessee, Knoxville, NUCLEAR ENGINEERING • GPA: 3.91/4.0	Aug 2015 – May 2019
SELECT RESEARCH EXPERIENCE	University of Illinois at Urbana-Champaign, Urbana, IL <i>NEUP Fellow, Advanced Reactors and Fuel Cycles Group</i> Investigating impacts of the transition to HALEU-fueled advanced reactors on the nuclear fuel cycle University of Tennessee, Knoxville, Knoxville, TN <i>Graduate Research Assistant, Coble Research Lab</i> Developed multivariate models of used nuclear fuel signatures for used in nonproliferation safeguards Oak Ridge National Laboratory, Oak Ridge, TN <i>NESLS Intern, Radiation Transport High Performance Computing Methods and Applications Team</i> Investigated differences in doppler broadening of cross section data in SHIFT Monte Carlo code	Aug 2020 – Present Aug 2019 – Aug 2020 May 2019– Aug 2019
JOURNAL PUBLICATIONS	[1] A. M. Bachmann , R. Fairhurst-Agosta, Z. Richter, N. Ryan, and M. Munk. Enrichment dynamics for advanced reactor HALEU support. <i>EPJ Nuclear Sciences & Technologies</i> , 7:22, 2021. Publisher: EDP Sciences. URL: https://www.epj-n.org/articles/epjn/abs/2021/01/epjn210024/epjn210024.html , doi:10.1051/epjn/2021021 [2] A. M. Bachmann , J. B. Coble, and S. E. Skutnik. Comparison and uncertainty of multivariate modeling techniques to characterize used nuclear fuel. <i>Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 991:164994, Mar. 2021. URL: http://www.sciencedirect.com/science/article/pii/S0168900220313917 , doi:10.1016/j.nima.2020.164994	
SELECT REFEREED CONFERENCE ABSTRACTS	[3] A. M. Bachmann and K. D. Huff. Comparing HALEU Demand Among Advanced Reactor Fuel Cycle Transitions. In <i>Proceedings of the 2021 ANS Virtual Annual Meeting</i> , volume 124, pages 134–137, Virtual Meeting, June 2021. URL: https://www.ans.org/pubs/transactions/article-49551/ [4] A. M. Bachmann , J. B. Coble, and S. E. Skutnik. Elemental and Isotopic Concentration Tracking for Electrochemical Reprocessing Safeguards. In <i>Proceedings of the 2018 Advances in Nuclear Nonproliferation Technology and Policy Conference</i> , pages 121–124, Orlando, FL, Nov. 2018. URL: https://www.ans.org/pubs/proceedings/article-44678/	
SELECT HONORS AND AWARDS	ANS Student Sections Commendations, ANS Student Sections Committee U.S. WIN Region II Leadership Award, U.S. WIN Region II Girl Scout Gold Award, Girl Scouts of America	2020 2019 2015
SCIENTIFIC COMPUTING SKILLS	Languages Databases Test Frameworks Version Control Other Tools	Python HDF5 nose git L ^A T _E X, MatLab, CYCLUS, MCNP, ORIGAMI, ORIGEN
SELECT PROFESSIONAL SERVICE	Student Director , Board of Directors, ANS DEI Co-Chair, Sponsorship Chair , 2022 ANS Student Conference Twitter Lead , Communications Committee, U.S. WIN Member , Region II Conference Planning Committee, U.S. WIN Member , American Nuclear Society Member , U.S. Women in Nuclear	2021–Present 2021–Present 2018–Present 2018–2019 2016–Present 2015–Present