

Nathan S. Ryan

CONTACT INFORMATION	Graduate Research Assistant <i>University of Illinois, Urbana-Champaign</i> <i>Nuclear, Plasma, and Radiological Engineering</i>	mobile: (708) 567-0002 e-mail: nathanryan.nuc@gmail.com website: nsryan.github.io
RESEARCH INTERESTS	Nuclear fuel cycle simulation and analysis, energy regulation, nuclear energy policy, and scientific computation.	
MS	University of Illinois Urbana-Champaign, NUCLEAR, PLASMA, AND RADIOLOGICAL ENGINEERING	Aug 2022 – est. Dec 2024
BS	University of Illinois Urbana-Champaign, ENGINEERING PHYSICS	Aug 2019 – Aug 2022
RESEARCH EXPERIENCE	Oak Ridge National Laboratory, Oak Ridge, TN <i>Graduate Summer Research Assistant,</i> <i>Research and Test Reactor Physics Group</i>	June 2024 – Aug 2024
	University of Illinois at Urbana-Champaign, Urbana, IL <i>Graduate Research Assistant, Nuclear Plasma and Radiological Engineering</i> <i>Undergraduate Research Assistant</i> Advanced Reactors and Fuel Cycles group.	Aug 2022 – present May 2020 – Aug 2022
HONORS AND AWARDS	NPPE, Students Award for Excellence in Graduate Service ANS, Student Sections Committee Commendation for Service and Leadership NPPE, Students Award for Excellence in Undergraduate Service UIUC, Dean's List Department of Physics, Excellence in Physics Award	2023 2023 2022 2020 2020
JOURNAL PUBLICATIONS	[1] A. M. Bachmann, R. Fairhurst-Agosta, Z. Richter, N. S. 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	
TECHNICAL REPORTS	[2] S. G. Dotson, A. M. Bachmann, Z. M. Richter, N. R. Panczyk, N. S. Ryan , A. C. Balla, and E. R. Fanning. Economic and Carbon Impacts of Potential Illinois Nuclear Plant Closures: The Cost of Closures. Technical Report UIUC-ARFC-2021-02, University of Illinois at Urbana-Champaign, Urbana, IL, May 2021. URL: github.com/arfc/2021-04-nm-illinois	
POSTER PRESENTATIONS	[3] N. S. Ryan and N. Panczyk. Using an energy model to demonstrate the potential impact of proactive nuclear activism. Poster presented at <i>American Nuclear Society Student Conference</i> , 2022. Champaign, IL	
	[4] N. S. Ryan and J. W. Bae. Enrichment core-loading versatility in cyclus reactors. Poster presented at <i>ORNL Summer Symposium</i> , 2024. Oak Ridge, TN	
OTHER PUBLICATIONS	[5] K. D. Huff and N. S. Ryan . What it will take to restart decommissioned US nuclear plants. A primer, Oct. 2024. URL: https://thebulletin.org/2024/10/what-it-will-take-to-restart-decommissioned-us-nuclear-plants-a-primer/	
INVITED TALKS	ANS Midwest , Nuclear Outreach with Social Media, <i>Workshop Lead</i> . ANS Midwest , Attending your First Conference, <i>Panelist</i> . Institute for Genomic Biology , Boundaries in Graduate School, <i>Panelist</i> . ANS , Social Media for Local and Student Section Members Webinar, <i>Panelist</i> . Memphis Rise Academy , Careers in Nuclear, <i>Panelist</i> . U. Tennessee, Knoxville , Navigating Conversations with Advisors, Managers, and Supervisors, <i>Moderator</i> .	November 9, 2024 November 9, 2024 Aug 24, 2023 Aug 3, 2023 May 31, 2023 April 14, 2023

ANS U. Illinois , How to Present at a Conference, <i>Speaker</i> .	March 13, 2023
ANS U. Illinois , How to Create a Conference Abstract, <i>Speaker</i> .	Jan 23, 2023
U. Illinois , Physics and Astronomy Convocation, <i>Speaker</i> .	May 15, 2022
Tinley Park High School , Introduction to Nuclear Science & Careers, <i>Speaker</i> .	Jan 17, 2020
TEDxYouth , Evolutionary Anthropology and Youth in Science, <i>Speaker</i> .	Feb 15, 2019

SCIENTIFIC
COMPUTING
TEACHING

Computational Resource Access Network , Board of Directors	2022 – present
Introduction to Python, Numerical Methods, Parallel Programming, and Best Practices	
Worldwide Youth in Science and Engineering , Urbana, IL	July 2022, 2023
Introduction to Python, and Best Practices for Beginners	

SCIENTIFIC
COMPUTING
SKILLS

Languages	bash, C++, Python
Build Systems	make, CMake
Databases	SQL
Test Frameworks	PyTest
Version Control	git
Other Tools	Sphinx, L ^A T _E X, Mathematica

PROFESSIONAL
SERVICE

Delegate , Nuclear Engineering Student Delegation	2023, 2024
Vice Chair , Student Sections Committee, ANS	2023 – present
Subcommittee Chair , Student and Young Member Liaison Committee, ANS	2023 – present
Subcommittee Chair , Student Conference Committee, ANS	2022 – present
Chair , Winter Meeting Student Program, ANS	2022
Organizer , Young Professionals Congress, ANS	2022 – 2023
Public Relations Officer , U. Illinois ANS Student Section	2020 – 2022
Coordinator , Engineering Outreach Bureau, Grainger Engineering Council	2020 – 2022
Media Chair , 2022 ANS Student Conference	2019 – 2022

DEPARTMENTAL
SERVICE

Committee Member , Diversity, Equity, and Inclusion Committee	2022 – present
Committee Chair , Graduate Student Advisory Committee	2022 – 2023
Camp Advisor , Worldwide Youth in Science and Engineering	2022 – 2024