

Nathan S. Ryan

CONTACT INFORMATION Graduate Research Assistant mobile: (708) 567-0002
University of Illinois, Urbana-Champaign e-mail: nathanryan.nuc@gmail.com
Nuclear, Plasma, and Radiological Engineering website: nryan.github.io

RESEARCH INTERESTS Nuclear fuel cycle simulation and analysis, energy system modeling, and scientific computation.

MS **University of Illinois Urbana-Champaign, NUCLEAR, PLASMA, AND RADIOLOGICAL ENGINEERING** Aug 2022 – est. May 2024

BS **University of Illinois Urbana-Champaign, ENGINEERING PHYSICS** Aug 2019 – Aug 2022

RESEARCH EXPERIENCE **University of Illinois at Urbana-Champaign, Urbana, IL**
Graduate Research Assistant, Nuclear Plasma and Radiological Engineering Aug 2022 – Present
Undergraduate Research Assistant May 2020 – Aug 2022
Advanced Reactors and Fuel Cycles group.

HONORS AND AWARDS NPRE, Students Award for Excellence in Graduate Service 2023
ANS, Student Sections Committee Commendation for Service and Leadership 2023
NPRE, Students Award for Excellence in Undergraduate Service 2022
UIUC, Dean's List 2020
Department of Physics, Excellence in Physics Award 2020

JOURNAL PUBLICATIONS [1] A. M. Bachmann, R. Fairhurst-Agosta, Z. Richter, **N. Ryan**, and M. Munk. Enrichment dynamics for advanced reactor HALEU support. *EPJ Nuclear Sciences & Technologies*, 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. Ryan** and N. Panczyk. Using an illinois energy model to demonstrate the potential impact of proactive nuclear activism. Poster presented at *American Nuclear Society Student Conference*, 2022. Champaign, IL

INVITED TALKS **Institute for Genomic Biology**, Setting Boundaries in Graduate School, *Panel*. Aug 24, 2023
ANS, Social Media for Local and Student Section Members Webinar, *Panel*. Aug 3, 2023
Memphis Rise Academy, Careers in Nuclear, *Panel*. May 31, 2023
U. Tennessee, Knoxville, Navigating Conversations with Advisors, Managers, and Supervisors, *Panel*. April 14, 2023
ANS U. Illinois, How to Present at a Conference, *Invited Talk*. March 13, 2023
ANS U. Illinois, How to Create a Conference Abstract, *Invited Talk*. Jan 23, 2023
U. Illinois, Physics and Astronomy Convocation, *Student Remarks*. May 15, 2022
Tinley Park High School, Introduction to Nuclear Science & Careers, *Seminar*. Jan 17, 2020
TEDxYouth, Evolutionary Anthropology and Youth in Science, *Invited Speaker*. Feb 15, 2019

SCIENTIFIC COMPUTING TEACHING **Computational Resource Access Network**, Vitruval 2022-2024
Introduction to Python, Numerical Methods, Parallel Programming, and Best Practices
Worldwide Youth in Science and Engineering, Vitruval July 2022, 2023
Introduction to Python, and Best Practices for Beginners

SCIENTIFIC COMPUTING SKILLS	Languages Build Systems Databases Test Frameworks Version Control Other Tools	bash, C++, Python make, CMake SQL PyTest git Sphinx, L ^A T _E X, Mathematica
PROFESSIONAL SERVICE	Delegate , Nuclear Engineering Student Delegation Vice Chair , Student Sections Committee, ANS Subcommittee Chair , Student and Young Member Liaison Committee, ANS Chair , Student Conference Finance Subcommittee, ANS Chair , Winter Meeting Student Program, ANS Organizer , Young Professionals Congress, ANS Public Relations Officer , U. Illinois ANS student section Coordinator , Engineering Outreach Bureau, Grainger Engineering Council Media Coordinator , 2022 ANS Student Conference	2023 2023–present 2023–present 2022–2023 2022 2022–2023 2020–2022 2020–2022 2019–2022
DEPARTMENTAL SERVICE	Committee Member , Diversity, Equity, and Inclusion Committee Committee Chair , Graduate Student Advisory Committee Camp Advisor , Worldwide Youth in Science and Engineering	2022–present 2022–2023 2022–present