Christopher M. Perfetti, PhD.

1 University of New Mexico
Albuquerque, NM 87131
cperfetti@unm.edu

Education:

University of Michigan, Ann Arbor, MI
2009 – 2012 **Doctor of Philosophy** in Nuclear Engineering and Radiological Sciences
Dissertation Title: "Advanced Monte Carlo Methods for Eigenvalue Sensitivity Coefficient Calculations"

University of Florida, Gainesville, FL
2007 – 2008 **Master of Science** in Nuclear and Radiological Engineering
Thesis Title: "Addressing the HTGR Double Heterogeneity and Methods for HTGR Design"
2004 – 2007 **Bachelor of Science** in Nuclear and Radiological Engineering

Experience:

University of New Mexico, Nuclear Engineering Department
07/23 – Present **Associate Professor**
08/23 – 01/24 **Interim Associate Department Chair**
08/18 – 06/23 **Assistant Professor**

- Principal Investigator for externally funded research grants totaling $4,864,831.
- Has supervised 9 PhD students, 7 Master's thesis students, and 6 senior honors thesis students.
- Currently advises 5 PhD students and one postdoctoral research scientist.
- Established a formal recruitment pipeline partnership with Los Alamos National Laboratory's Nuclear Criticality Safety Division.
- Faculty Advisor for the UNM American Nuclear Society Student Section.
- Faculty Advisor for the UNM Alpha Nu Sigma Honor Society.
  - Revived UNM's Section of the Alpha Nu Sigma Honor Society in 2021.
- Guest Scientist in the Los Alamos National Laboratory's XCP-3 Group.
- Granted early tenure and promotion to Associate Professor.

05/10 – 05/18 **Oak Ridge National Laboratory – Radiation Transport Group, R&D Staff**
10/14 – 08/17 **SCALE Team Lead for Sensitivity and Uncertainty Analysis Methods**
08/12 – 09/14 **Postdoctoral Research Associate**
09/11 – 08/12 **Postmasters Research Associate**
05/11 – 09/11 **NESLS Program Summer Intern**

- Led development of the continuous-energy TSUNAMI-3D code for sensitivity and uncertainty analysis, similarity assessment, and experimental data assimilation.
- Developed and instructed multi-day SCALE training courses for end users, regulators and developers in Monte Carlo and TSUNAMI sensitivity and uncertainty analysis tools for criticality safety, reactor physics, and radiation shielding analysis.

05/10 – 08/10 **Oak Ridge National Laboratory – Summer Intern**
Developed a regression test suite for the TSUNAMI code within the SCALE code system.

05/09 – 08/09 **Los Alamos National Laboratory Summer Intern** – Appl. Physics (X-5) Division

Citizenship & Security Clearance:

- US Citizen
- Department of Energy Top Secret (Q) Security Clearance

Awards & Honors:

- Recognized by Nuclear News as a *40 Under 40* honoree
- 2025 Landis Young Member Engineering Achievement Award, American Nuclear Society
- 2024 Early Career Reactor Physicist Award, American Nuclear Society
- 2025 Best Local Section Meetings and Programs (ANS Local Section Meritorious Awards)
- 2024 Best Overall Local Section (ANS Local Section Meritorious Awards)
- 2022 Best Board Award, Albuquerque Business First (Awarded to NMNS&T Board of Trustees)
- 2017 Best Local Section Management (ANS Small Local Section Awards)
- 2016 Best Local Section Public Information (ANS Small Local Section Awards)
- 1st place, ORNL NESLS 2011 Summer Student Poster Contest
- 2009 DOE Nuclear Engineering University Program Graduate Fellowship Recipient
- Graduate Student of the Year (2008–2009), University of Florida ANS Student Section
- 2008 Nuclear Regulatory Commission Graduate Fellowship Recipient
- 2007 American Nuclear Society Student Design Competition Finalist

Samuel Glasstone Awards in role as Faculty Advisor for the UNM ANS Student Section:

- Samuel Glasstone Award (Hon. Mention) 2024–2025
- Samuel Glasstone Award (3rd place) 2021–2022
- Samuel Glasstone Award (3rd place) 2020–2021
- Samuel Glasstone Award (1st place) 2019–2020
- Samuel Glasstone Award (1st place – first time awarded to UNM since 1975) 2018–2019

Professional Service:

American Nuclear Society

- Board of Directors Nominee 2022, 2024
- Nominated for Society Fellow (decision expected May 2026)
- Member of ANS RBMK Rapid Response Taskforce 2024 – Present

- Reactor Physics Professional Division
  - Secretary/Treasurer/Vice-Chair/Chair/Past-Chair 2020 – 2025
- Mathematics and Computation Professional Division
  - Benchmarks Committee Co-Chair 2016 – Present
  - Executive Committee Member 2018 – 2021
- Education, Training & Workforce Development Professional Division
  - Secretary/Treasurer/Vice-Chair/Chair 2024 – 2028

- Trinity (New Mexico) Local Section
  - Vice-Chair/Chair/Immediate Past-Chair/Past-Chair 2020 – 2025
    - Awarded Best Meetings and Programs 2025
    - Awarded Best Overall Local Section 2024
  - Membership Committee Chair 2022 – 2024
  - Executive Committee Member 2019 – Present
- Oak Ridge / Knoxville Local Section
  - Vice-Chair/Chair/Past-Chair 2014 – 2017
    - Awarded Best Local Section Public Outreach 2016
    - Awarded Best Local Section Management 2017
  - Bylaws and Rules Chair 2016 – 2018
  - Section Development Chair 2013 – 2016
  - Executive Committee Member 2013 – 2017
- University of New Mexico Student Section
  - Faculty Advisor 2018 – Present
- ANSI/ANS-8.24 Standards Committee
  - Member 2023 – Present
- Chair, High School Science Educators Workshop 2024 – 2026

Alpha Nu Sigma Nuclear Engineering National Honor Society

- National Vice-Chair — 2019 – 2021
- National Chair — 2021 – 2023
- University of New Mexico Student Section
  - Faculty Advisor — 2020 – Present
- University of Florida Student Section Vice-Chair — 2007 – 2009
- Member since 2006

National Museum of Nuclear Science and History

- Museum Trustee Emeritus — 2026 – Present
- Museum Trustee — 2019 – 2025
- Chair, Adult Education Committee — 2019 – 2025
- "Science on Tap" Seminar Series Lead Coordinator — 2019 – 2025
- Member, Adult Education Committee — 2025 – Present
- Member, National STEM Educational Center Committee — 2021 – Present
- Member, International Nuclear Science Week Steering Committee — 2015 – Present
  [See: https://www.nuclearscienceweek.org/]

OECD Nuclear Energy Agency

- International Expert Group Membership:
  - Working Party on International Nuclear Data Evaluation Cooperation — 2012 – Present
  - Working Party on Nuclear Criticality Safety — 2013 – Present

University of New Mexico

- School of Engineering
  - Member, Rankings and Reputation Committee — 2018 – Present
- Nuclear Engineering Department
  - Member, Admissions Committee — 2018 – Present
  - Member, Curriculum Committee — 2020 – Present
- Faculty Advisor, American Nuclear Society Student Section — 2018 – Present
- Faculty Advisor, Alpha Nu Sigma Honor Society — 2020 – Present
- Faculty Search Committees:
  - Faculty Search – Nuclear Engineering — 2019
  - Department Chair Search – Nuclear Engineering — 2020
  - Dean Search – College of University Libraries and Learning Services — 2021
  - Faculty Search – Nuclear Engineering — 2022
  - Dean Search – University College — 2024

Peer Review and Journal Editorial Activity

- Guest Editor for the Journal of Nuclear Science and Engineering's PHYSOR 2024 Special Issue
- Guest Editor for the Journal of Nuclear Science and Engineering's M&C 2025 Special Issue
- Reviewer for Annals of Nuclear Energy; Nuclear Technology; Journal of Computational Physics; and Nuclear Science and Engineering
- DOE Nuclear Engineering University Program – Technical Reviewer
- Nuclear Regulatory Commission University R&D Grant Program – Technical Reviewer
- Reviewer, Session Organizer, and Session Chair for numerous professional conferences

Advisory Board Membership

- University of New Mexico, Computational Science & Eng. Degree Program — 2021 – Present
- LANL FIESTA Fission School & Workshop, Scientific Advisory Committee — 2024

Professional Conference Leadership

- General Chair — Mathematics & Computation (M&C) 2025 (324 attendees)
- General Chair — PHYSOR 2024 (383 attendees)
- Lead Coordinator — 2025 American Nuclear Society K-12 Teacher's Workshop
- Lead Coordinator — 2024 American Nuclear Society K-12 Teacher's Workshop
- Student Awards Chair — Mathematics & Computation (M&C) 2021
- General Chair — 2015 Nuclear Science Week "Big Event"
- Asst. Technical Program Chair — Mathematics & Computation (M&C) 2015
- Transportation Chair — PHYSOR 2012
- General Chair — 2009 American Nuclear Society Student Conf. (528 attendees)

Professional Consulting Activities – Consultant for:

- Sandia National Laboratories
- Lawrence Livermore National Laboratory
- X-energy Inc.
- Last Energy Inc.
- Clean Core Thorium Energy, Inc.
- Energy Impact Center
- Ergo
- Boundless Impact Research and Analytics
- Numerous expert-based science and tech consulting firms

Miscellaneous

- Full Member of the Sigma Xi Scientific Research Honor Society (invited)
- Student Experience Project Fellow 2021 – 2022
- Dance Instructor, 505 Swing Dance Community 2020
- Trumpet, UNM Health Sciences Orchestra 2020
- Executive Board Member, Knoxville Swing Dance Association 2017 – 2018
- Vice-Chair, Oak Ridge Postdoctoral Association 2013 – 2014
- 5x Marathon Finisher
- Self-taught ragtime pianist

- Creator of the "Nuclear Engineering Lectures" YouTube Channel, which currently has 203,261 views and 4,185 subscribers. These lectures are available at: https://www.youtube.com/c/NuclearEngineeringLectures

Students:

Current PhD Students

	Name	*Status*	*Expected Graduation*	*University*	*Project/Thesis Title*
1.	Mekiel Olguin	GRA	2026	University of New Mexico	Sensitivity Methods for Uncertainty Analysis in Monte Carlo Photon/Electron Radiation Transport
2.	Ethan Krammer	NEUP Fellowship	2026	University of New Mexico	Covariance Data and Depletion Sensitivity Analysis Method Development
3.	James Suthon	GRA	2027	University of New Mexico	Physics-based Nuclear Criticality Safety Validation of Heat-Source Plutonium
4.	Sydney Dowben	GRA	2027	University of New Mexico	Using Depletion Sensitivity Analysis to Better Characterize Reactor Fuel Cycles
5.	Aaron Holets	Part-time	2029	University of New Mexico	TBD

PhD Students Graduated:

	Name	*Status*	*Year Graduated*	*University*	*Dissertation Title*
1.	Daniel Timmons	GRA	2022	University of New Mexico	Use of a k-Eigenvalue Solver to Enhance Subcritical Benchmark Assessments
2.	Bobbi (Riedel) Harper	GRA	2023	University of New Mexico	Understanding the Behavior of Upper Subcritical Limit Calculation Methods
	Following promotion to Associate Professor				
3.	Colin Weaver	GRA	2023	University of New Mexico	Sensitivity and Uncertainty Analysis of Inertial Confinement Fusion Experiments
4.	Rowdy Davis	GRA	2024	University of New Mexico	Improving Criticality Safety Benchmark Coverage by Developing a Benchmark Evaluation of the UNM AGN-201M Reactor
5.	Benjamin Murphy	GRA	2024	University of New Mexico	Coupled Monte Carlo and Adjoint Depletion Sensitivity Coefficient Methods
6.	Raymond Fasano	Part-time	2025	University of New Mexico	PRIA: Process Risk Identification and Analysis
7.	Alexis Maldonado	Part-time	2025	University of New Mexico	Coupled Adjoint-based Perturbation Theory for Dynamics and Heat Transfer Multiphysics for Nuclear Transients
8.	Melissa Moreno	GRA	2025	University of New Mexico	Representivity and Sensitivity Analysis of Accident Tolerant Fuel Cladding Behavior in Reactivity-Initiated Accidents
9.	Matthew Lazaric	GRA	2026	University of New Mexico	Resonance Parameter Sensitivity-Informed Cross Section Adjustments

Master's Thesis Students Graduated:

	Name	*Status*	*Year Graduated*	*University*	*Thesis Title*
1.	Colin Weaver	GRA	2020	University of New Mexico	A Forward Analytic Model of Neutron Time of Flight Signals with Single Elastic Scattering and Beamline Attenuation for Inferring Ion Temperatures from MagLIF Experiments
2.	Kimberly Hinrichs	Part-time	2020	University of New Mexico	Characterization of Uranium Foil Irradiations at the WSU TRIGA Reactor using a New Reactor Model in SCALE
3.	Melissa Moreno	Part-time	2021	University of New Mexico	Monte Carlo Perturbation Analysis of Fuel Temperature Variations in the MCNP Model of the Annular Core Research Reactor
4.	Karissa Currie	Part-time	2021	University of New Mexico	Monte Carlo Perturbation Analysis of Dimension and Density Variations of the Annular Core Research Reactor Model Fuel
5.	Alexis Maldonado	Part-time	2022	University of New Mexico	Utilizing Sensitivity and Correlation Coefficients from MCNP and Whisper to Guide Microreactor Experiment Design
6.	Tara (Robertson) Lynam	GRA	2023	University of New Mexico	Developing a Predictive Capability for Plutonium Concentrations in Nitrate Solutions
			Following promotion to Associate Professor		
7.	Riley Bulso	Part-time	2023	University of New Mexico	Developing a Predictive Capability for Plutonium Concentrations in Chloride Solutions

Undergraduate Senior Honors Thesis Students Graduated:

	Name	*Year Graduated*	*University*	*Thesis Title*	*Post-Graduation Status*
1.	Matthew Lazaric	2020	University of New Mexico	Evaluation of the ENDF/B VIII.0 Nuclear Data Library	Pursuing a PhD at UNM
2.	Benjamin Murphy	2020	University of New Mexico	Understanding the Impact of Adjoint Weighting on Reactor Kinetics Parameters	Postdoc at UNM
3.	Rowdy Davis	2021	University of New Mexico	Expansion of the Monte Carlo Integrated Tiger Series Validation Suite	R&D Staff at Verus Research
4.	Mekiel Olguin	2021	University of New Mexico	Evaluation of the AGN-201M Reactor's Dominance Ratio	R&D Staff at SNL and pursuing a PhD at UNM
5.	Ethan Krammer	2023	University of New Mexico	Using Machine Learning to Predict Nuclear Covariance Data	Pursuing a PhD at UNM
			Following promotion to Associate Professor		
6.	Gibson Prall	2024	University of New Mexico	Quantifying the Rigor of Random Number Generators in Monte Carlo Radiation Transport Simulations	NCS Staff at Y-12

PhD Committee Membership – Service in non-Chair Roles:

	Name	*Year Graduated*	*University*	*Dissertation Title*
1.	Darren Talley	2019	University of New Mexico	Investigation of the Coupled Nuclear, Thermal-Hydraulic, and Thermo-Mechanical Response of a Natural Circulation Research Reactor under Severe Reactivity-Initiated Accident Transients
2.	Patrick O'Rourke	2020	University of New Mexico	Modeling and Simulation of Stochastic Neutron and Cumulative Deposited Fission Energy Distributions
3.	Vedant Mehta	2020	Georgia Institute of Technology	Investigating the Response of Yttrium Hydride Moderator Due to Changes in Stoichiometry and Temperature
4.	Corey Skinner	2022	University of New Mexico	Simulation of Thermal Radiation Transport in Stochastic Media with Nonlinear Temperature Dependence
	Following promotion to Associate Professor			
5.	Jawad Moussa	2024	University of New Mexico	Methods for the Efficient Computation of Neutron Multiplicity Counting Distributions

Research Grants:

Total Research Awards since 2018: $4,864,831

Dates	*Project Title*	*Funding Agency*	*Role*	*Total Project Budget*	*Perfetti Share*
12/2018 – 09/2023	Advanced Monte Carlo Methods Development for Nuclear Critical & Subcritical Applications	LANL	PI	$649,338	$649,338
09/2019 – 08/2025	NNSA Consortium on Monitoring, Technology and Verification (MTV)	NNSA	Co-PI	$25,000,000	$503,510
10/2019 – 09/2023	Integrating Nuclear Criticality Experiments into Differential Nuclear Data Evaluations	DOE NEUP	PI	$400,000	$400,000
10/2019 – 09/2022	Sensitivity Methods for Monte Carlo Photon/Electron Radiation Transport	SNL	PI	$300,000	$300,000
10/2021 – 01/2024	Strengthening a Nuclear Criticality Safety Pipeline at the University of New Mexico	LANL	PI	$108,095	$108,095
10/2021 – 09/2025	Documenting the Unique Physics Properties of the UNM AGN-201M Reactor	DOE NEUP	PI	$400,000	$400,000
12/2021 – 08/2024	Outreach and Recruitment Pipeline for Underrepresented Students in New Mexico	NNSA	PI	$25,000,000 *(MTV Consortium Subcontract)*	$66,157
09/2022 – 09/2025	Validation and testing of NRC tools for Accident Tolerant Fuel behavior in reactivity-initiated accidents using separate effects test data	NRC	Co-PI	$500,000	$235,000
10/2022 – 09/2025	Photon/Electron Monte Carlo Transport Uncertainty Quantification and Sensitivity Analysis	SNL	PI	$352,556	$352,556
Following promotion to Associate Professor					
07/2023 – 06/2028	Physics-based Nuclear Criticality Safety Validation of Heat-Source Plutonium	LANL	PI	$599,996	$599,996
03/2024 – 12/2027	Using Depletion Sensitivity Analysis to Better Characterize Reactor Fuel Cycles	NRC	PI	$500,000	$500,000
08/2024 – 09/2026	Democratizing awareness and access to nuclear engineering career opportunities in the Southwest	DOE NEUP	PI	$200,000	$200,000
08/2024 – 09/2027	Supporting Nuclear Criticality Safety Education at the University of New Mexico	LANL + NMC	Co-PI	$150,179	$150,179
11/2025 – 10/2029	Fusion Neutrons for Integrated Blanket Technology Development Through Advanced Testing and Design	DOE FES	Co-PI	$18,500,000	$400,000
Total				**$47,660,164**	**$4,864,831**

Invited Seminars since 2018:

2019 1. **Massachusetts Institute of Technology**
"Methods for Sensitivity and Uncertainty Analysis in the Nuclear Engineering Applications," 02/25/19.

2019 2. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 04/02/19.

2019 3. **University of New Mexico, ANS Student Section**
"Adulting 101: A Guide to Basic Financial Literacy," 04/25/19.

2019 4. **University of New Mexico, ANS Student Section**
"C++ Coding Boot Camp," 07/28/19.

2019 5. **Science on Tap** (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"Fact VS Fiction in HBO's Chernobyl," 09/05/19.

2019 6. **Virginia Commonwealth University**
"Methods for Sensitivity and Uncertainty Analysis in the Nuclear Engineering Applications," 11/15/19.

2020 7. **University of Michigan MTV Summer School for the NNSA Consortia on Monitoring, Technology and Verification**
"Introduction to Monte Carlo Methods," 06/17/20.

2020 8. **University of Michigan MTV Summer School for the NNSA Consortia on Monitoring, Technology and Verification**
"Methods for Sensitivity and Uncertainty Analysis in the Nuclear Engineering Applications," 06/19/20.

2020 9. **ANS Trinity Local Section – Lightning Talk Series**
"Methods for Sensitivity and Uncertainty Analysis in the Nuclear Engineering Applications," 09/18/20.

2020 10. **American Nuclear Society Professional Division Seminar Series**
"Uncertainty Quantification in Nuclear Engineering Applications," to be hosted by ANS National as member-only benefit. Privately available at:
https://www.youtube.com/watch?v=cL6FIWItn_E

2020 11. **University of New Mexico, Nuclear Engineering Graduate Seminar and Mid-tenure Review**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 11/17/20.

2020 12. **University of New Mexico, ANS Student Section**
"Graduate School 101," 11/18/20.

2021 13. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 04/07/21.

2021 14. **Oregon State University, Nuclear Science and Engineering Graduate Seminar**
"Methods for Sensitivity and Uncertainty Analysis in Nuclear Engineering Applications," 04/29/21.

2021 15. **University of New Mexico, ANS Student Section**
"Adulting 101: A Guide to Basic Financial Literacy," 05/07/21.

2021 16. **Los Alamos National Laboratory's Nuclear Data Working Group**
"Nuclear Data Calibration Methods in the NNSA's Consortium for Modeling, Technology, and Verification," 07/12/21.

2021 17. **University of New Mexico, Nuclear Engineering Graduate Seminar**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 08/31/21.

2021 18. **University of New Mexico, ANS Student Section**
"Talking about Stuff: Public Speaking Tips for Conferences, Networking, and Nuclear Advocacy," 11/12/21.

2022 19. **American Nuclear Society Members-Only Webinar**
"A Reactor Physicist's Explanation of Chernobyl," 04/26/22.
➔ Audience included 699 registrants and 445 unique, live viewers, making this the largest ANS Webinar at the time.

2022 20. **National Museum of Nuclear Science and History**
Science on Tap (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"A Brief History of Nuclear Reactor Accidents," 04/28/22.

2022 21. **Los Alamos National Laboratory Summer Student Seminar**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 06/27/22.

2022 22. **National Criticality Experiments Research Center Futures Workshop**
"Reactors: Space/Micro/Naval Reactors" Focus Area Co-Lead, 09/07/22 – 09/09/22.

2022 23. **TerraPower, LLC**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 09/27/22.

2022 24. **University of New Mexico, Nuclear Engineering Graduate Seminar and Tenure Review Seminar**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 10/25/22.

2022 25. **National Museum of Nuclear Science and History**
Science on Tap (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"The Conflict at Zaporizhzhia and A Brief History of Nuclear Reactor Accidents," 10/28/22.

2022 26. **University of New Mexico, Nuclear Engineering Graduate Seminar**
"Talking about Stuff: Public Speaking Tips for Conferences, Networking, and Nuclear Advocacy," 12/06/22.

2023 27. **University of Michigan, Consortium on Modeling, Technology, and Verification**
"DEI Initiatives and Successes Panel," 03/22/23.

2023 28. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 03/24/23.

2023 29. **National Museum of Nuclear Science and History**
"A Reactor Physicist's Explanation of the Chernobyl Accident," 04/28/23.

Following promotion to Associate Professor

2023 30. **University of Michigan MTV Summer School for the NNSA Consortia on Monitoring, Technology and Verification**
"Nuclear Data Evaluation and Integral Experiment Design," 07/20/23.

2023 31. **Los Alamos National Laboratory – MCNP Team Seminar**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 08/03/23.

2023 32. **Los Alamos National Laboratory – Nuclear Criticality Safety Division Seminar**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 08/03/23.

2023 33. **American Nuclear Society 2023 Young Professional's Congress**
Panelist for the "Re-empower your Work-Life Balance" Session, 11/11/23.

2024 34. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 03/05/24.

2024 35. **University of New Mexico, ANS Student Section**
"Adulting 101: A Guide to Basic Financial Literacy," 04/12/24.

2024 36. **ANS Reactor Physics Division Early Career Reactor Physicist Award Seminar**
"Sensitivity and Uncertainty Analysis in Monte Carlo Radiation Transport," 04/22/24.

2024 37. **Oklo Inc.**
"Sensitivity and Uncertainty Analysis in Monte Carlo Radiation Transport," 04/24/24.

2024 38. **National Museum of Nuclear Science and History – Virtual Seminar**
"Nuclear Waste 101," 05/17/24.

2024 39. **National Museum of Nuclear Science and History**
Science on Tap (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"Nuclear Waste 101," 07/12/24.

2024 40. **University of New Mexico, NE Department Event**
"Graduate School 101 and Nuclear Engineering Career Opportunities Panel," 09/06/24. Lead organizer.

2024 41. **American Nuclear Society 2024 Educators Workshop**
Lead organizer and presenter for "Radiation Basics" and "Nuclear Waste 101" lectures 10/20/24.

2024 42. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 11/22/24.

2025 43. **University of New Mexico, ANS Student Section**
"Adulting 101: A Guide to Basic Financial Literacy," 01/29/25.

2025 44. **Santa Fe Indian School**
"Nuclear 101 Workshop," 02/05/25.

2025 45. **UNM Chapter of Sigma Xi Lecture Series**
"Nuclear Waste 101," 02/20/25.

2025 46. **UK Working Party on Criticality Webinar Series**
"Sensitivity and Uncertainty Analysis in Applied Radiation Transport," 03/05/25.

2025 47. **American Nuclear Society – Educator Training Webinar**
"The How, Why, & Where of Nuclear Waste," 03/06/25.
➔ Audience included 572 registrants, making this the second largest ANS Educator Webinar at the time.

2025 48. **American Nuclear Society – Educator Training Webinar**
Moderator for "Radiological Risk in Perspective," 04/14/25.

2025 49. **American Nuclear Society 2025 Annual Meeting**
Panelist for "Mentorship Matters: Building the Future Through Guidance and Support," 06/16/25.

2025 50. **American Nuclear Society 2025 Annual Meeting**
Panelist for "Going Viral: Engaging the Next Generation with Nuclear Science Online," 06/17/25.

2025 51. **American Nuclear Society 2024 Educators Workshop**
Lead organizer and presenter for "Radiation Basics," "Nuclear Energy," and "Nuclear Waste 101," lectures, 11/04/25.

2026 52. **American Nuclear Society "40 under 40" Webinar**
One of five panelists for the American Nuclear Society's "40 under 40" webinar, 03/26/26.

2026 53. **National Museum of Nuclear Science and History**
Science on Tap (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"The Deadly Blue Flash: A History of Nuclear Criticality Accidents," 05/08/26.

Teaching Evaluations:

Course	Course Name	Term	Eval. Q1	Eval. Q2
NE 515	Nuclear Reactor Kinetics and Dynamics	Fall 2018 (5 students)	4.50	5.00
NE 410/510	Nuclear Reactor Physics	Spring 2019 (23 students)	4.55	4.73
NE 499/515	Nuclear Criticality Safety	Fall 2019 (17 students)	4.40	4.40
NE 410/510	Nuclear Reactor Physics	Spring 2020 (16 students)	4.33	4.67
NE 499/515	Nuclear Reactor Kinetics and Dynamics	Fall 2020 (12 students)	4.82	4.82
NE 410/510	Nuclear Reactor Physics	Spring 2021 (27 students)	4.43	4.71
NE 499/515	Nuclear Criticality Safety	Fall 2021 (15 students)	4.80	5.00
NE 410/510	Nuclear Reactor Physics	Spring 2022 (23 students)	4.79	4.86
NE 499/515	Nuclear Criticality Safety	Fall 2022 (14 students)	5.00	5.00
NE 410/510	Nuclear Reactor Physics	Spring 2023 (18 students)	4.57	4.75
NE 499/515	Nuclear Criticality Safety	Fall 2023 (14 students)	4.75	5.00
NE 410/510	Nuclear Reactor Physics	Spring 2024 (18 students)	4.57	5.00
NE 499/515	Nuclear Criticality Safety	Fall 2024 (4 students)	4.67	5.00
NE 410/510	Nuclear Reactor Physics	Spring 2025 (18 students)	4.18	3.91
NE 499/515	Nuclear Criticality Safety	Fall 2024 (10 students)	4.80	5.00
Overall[†]			**4.61 / 5.00**	**4.76 / 5.00**

[†] **Scores weighted evenly based on the number of submitted evaluations.**

Evaluation Question 1: Please rate the instructor's overall teaching effectiveness.
Evaluation Question 2: How comfortable do you feel approaching the instructor with questions or comments?

5 = Highly Effective 4 = Effective 3 = Unsure 2 = Ineffective 1 = Highly Ineffective

Publications:

*** Indicates Graduate Student Mentee**
**** Indicates Research Group Alumnus**

Refereed Journal Articles

In. Prep. 1. R. Davis*, **C. M. Perfetti**, L. L. Wetzel, F. B. Brown, C. A. Willis, S. J. Henderson, R. D. Busch, "A High-Fidelity Benchmark of the AGN-201M Reactor at the University of New Mexico."

In Prep. 2. J. Suthon*, **C. M. Perfetti**, "Nuclear Criticality Safety Validation Methods for Heat-Source Plutonium."

In Int. Review 3. R. Davis*, K. R. Depriest, R. P. Kensek, **C. M. Perfetti**, B. C. Franke, A. J. Olson, "Expansion and Validation of the Integrated Tiger Series Electron and Photon Transport Code."

2026 4. A. Maldonado*, **C. M. Perfetti**, "Kinetic and Transient Similarity Coefficient Analyses for Coupled Multiphysics Nuclear Transients," *accepted to Nucl. Sci. & Eng*.

2026 5. B. R. Murphy*, **C. M. Perfetti**, "Depletion Perturbation Theory Methodology for Analyzing the Sensitivity of Advanced Activation Chains," *Nucl. Sci. & Eng*. (2026). DOI: 10.1080/00295639.2025.2603073

2026 6. M. Olguin*, **C. M. Perfetti**, A. J. Olson, B. C. Franke, "A Low-Fidelity Covariance Library Based on EPICS for Photon-Electron Radiation Transport Applications," *Nucl. Sci. & Eng*. (2026). DOI: 10.1080/00295639.2026.2645508

2026 7. A. Maldonado*, **C. M. Perfetti**, "Coupled Adjoint-Based Perturbation Theory for Dynamics and Heat Transfer Multiphysics for Nuclear Transients," *Nucl. Sci. & Eng*. (2026). DOI: 10.1080/00295639.2025.2465220

2025 8. T. L. Robertson*, **C. M. Perfetti**, J. L. Alwin, R. Bulso*, "A Python Tool for Aqueous Plutonium Nitrate Density Law Input Preprocessing in MCNP6," *accepted to Nucl. Tech.*

2025 9. R. Bulso*, J. L. Alwin, **C. M. Perfetti**, T. L. Robertson*, "Application of an Empirical Density Law via Python for Aqueous Plutonium Chloride Systems for MCNP6," *accepted to Nucl. Tech.*

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