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 Rad. Sciences, May 2012
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**
08/18 – 06/23 **Assistant Professor**

- Principal Investigator for externally funded research grants totaling $4,464,831.
- Has supervised 5 PhD students, 7 Master's thesis students, and 6 senior thesis students.
- Currently advises 8 PhD students and one postdoctoral research scientist.
- Established a formal recruitment pipeline partnership with Los Alamos National Laboratory's Nuclear Criticality Safety Division.
- Director of the International Nuclear Criticality Safety Short Courses.
- 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 Alpha Nu Sigma 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.

Los Alamos National Laboratory
05/09 – 08/09 **Summer Student Intern** – Applied Physics (X-5) Division
Researched methods for modeling infinitely-reflected fuel lattices using a critical neutron spectrum in the MCNP5 Monte Carlo code.

Citizenship & Security Clearance:

- US Citizen
- Department of Energy Q-level Security Clearance

Awards & Honors:

- Best Overall Local Section, 2024 (ANS Local Section Meritorious Awards)
- 2024 Early Career Reactor Physicist Award, American Nuclear Society
- 2022 Best Board Award, Albuquerque Business First (Awarded to NMNS&T Board of Trustees)
- Samuel Glasstone Award (3rd place), 2021–2022 (Faculty Advisor for UNM ANS Student Section)
- Samuel Glasstone Award (3rd place), 2020–2021 (Faculty Advisor for UNM ANS Student Section)
- Samuel Glasstone Award (1st place), 2019–2020 (Faculty Advisor for UNM ANS Student Section)
- Samuel Glasstone Award (1st place), 2018–2019 (Faculty Advisor for UNM ANS Student Section)
- Best Local Section Management, 2017 (ANS Small Local Sections Award)
- Best Local Section Public Information, 2016 (ANS Small Local Sections Award)
- 1st place, ORNL NESLS 2011 Summer Student Poster Contest
- 2009 Nuclear Engineering University Program Fellowship Recipient
- Graduate Student of the Year (2008–2009), University of Florida ANS Student Section
- 2008 University of Florida – Nuclear Regulatory Commission Fellowship Recipient
- 2007 American Nuclear Society Student Design Competition Finalist

Professional Service:

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

American Nuclear Society

- Board of Directors Nominee — 2022, 2024
- Member of ANS RBMK Rapid Response Taskforce — 2024
- 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 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 Overall Local Section — 2024
  - Membership Committee Chair — 2022 – Present
  - Executive Committee Member — 2019 – Present
- Oak Ridge / Knoxville Local Section
  - Vice-Chair/Chair/Past-Chair — 2014 – 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, ANS Science Teachers Workshop 2024
- Member since 2006

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
- Member since 2006

National Museum of Nuclear Science and History
- Museum Trustee 2019 – Present
- Chair, Adult Education Committee 2019 – Present
- "Science on Tap" Seminar Series Lead Coordinator 2019 – 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

Professional Conference Leadership
- General Chair — Mathematics & Computation (M&C) 2025
- General Chair — PHYSOR 2024
- 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 Conference

Reviewer
- 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
- 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

Miscellaneous
- 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

- Creator of the "Nuclear Engineering Lectures" YouTube Channel, which currently has 144,711 views and 3,062 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.	Raymond Fasano	Part-time	2025	University of New Mexico	Advanced Methods for Quantitative Cyber Risk Assessment
2.	Matthew Lazaric	GRA	2025	University of New Mexico	Using Integral Benchmark Experiments to Improve Differential Nuclear Data Evaluations
3.	Melissa Moreno	GRA	2025	University of New Mexico	Validation and Testing of NRC Tools for Accident Tolerant Fuel behavior in Reactivity-initiated Accidents using Separate Effects Test Data
4.	Mekiel Olguin	GRA	2025	University of New Mexico	Sensitivity Methods for Uncertainty Analysis in Monte Carlo Photon/Electron Radiation Transport
5.	Alexis Maldonado	Part-time	2025	University of New Mexico	Sensitivity and Uncertainty Analysis for Time-Dependent Heat Transfer/Radiation Transport Multiphysics Simulations
6.	Ethan Krammer	NEUP Fellowship	2026	University of New Mexico	Covariance Data and Depletion Sensitivity Analysis Method Development
7.	James Suthon	GRA	2027	University of New Mexico	Physics-based Nuclear Criticality Safety Validation of Heat-Source Plutonium
8.	Sydney Dowben	GRA	2027	University of New Mexico	Using Depletion Sensitivity Analysis to Better Characterize Reactor Fuel Cycles

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	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

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	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	Pursuing a PhD at UNM
3.	Rowdy Davis	2021	University of New Mexico	Expansion of the Monte Carlo Integrated Tiger Series Validation Suite	Pursuing a PhD at UNM
4.	Mekiel Olguin	2021	University of New Mexico	Evaluation of the AGN-201M Reactor's Dominance Ratio	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: $4,464,831

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 – 08/2024	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 – 09/2024	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	PI	$150,179	$150,179
Total				**$29,160,164**	**$4,464,831**

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 Workshop," 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 Division Seminar Series**
"Uncertainty Quantification in Nuclear Engineering Applications," to be hosted by ANS National soon – also 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.

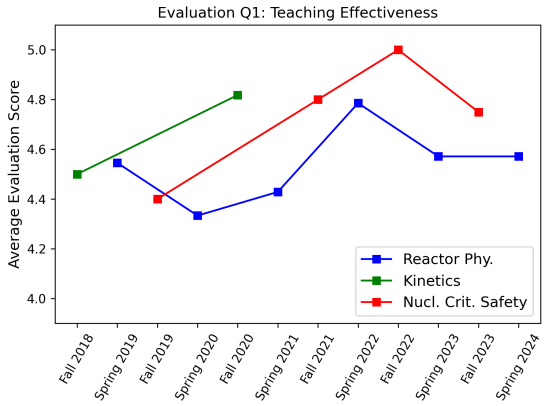
2024 37. **National Museum of Nuclear Science and History – Virtual Seminar**
"Nuclear Waste 101," 05/17/24.

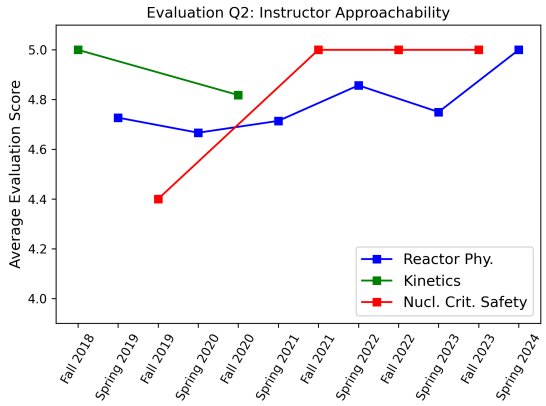
2024 38. **National Museum of Nuclear Science and History**
Science on Tap (an approachable technical lecture series hosted by Explora, UNM, and the National Museum of Nuclear Science and History)
"Nuclear Waste 101," 07/12/24.

2024 39. **University of New Mexico, NE Department Event**
"Graduate School 101 and Nuclear Engineering Career Opportunities Panel," 09/06/24.

2024 40. **University of New Mexico, ANS Student Section**
"Public Speaking Mini-Workshop," 11/22/24.

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
Overall†			**4.65 / 5.00**	**4.83 / 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."
2024	4.	T. L. Robertson*, **C. M. Perfetti**, J. L. Alwin, R. Bulso*, "A Python Tool for Aqueous Plutonium Nitrate Density Law Input Preprocessing in MCNP6," *submitted to Nucl. Tech.*
2024	5.	A. Maldonado*, **C. M. Perfetti**, "Coupled Adjoint-based perturbation Theory for Multiphysics Reactor Transients," *submitted to Nucl. Sci. & Eng*. (2024).
2024	6.	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," *submitted to Nucl. Tech.*
2024	7.	C. A. Weaver*, **C. M. Perfetti**, M. E. Rising, "Fixed Source Sensitivity Calculations for Inertial Confinement Fusion Applications," *Nucl. Sci. & Eng*. (2024). DOI: 10.1080/00295639.2024.2380607
2024	8.	R. Davis*, **C. M. Perfetti**, L. L. Wetzel, C. A. Willis, R. D. Busch, "Research and Educational Applications of the Aerojet General Nucleonics 201-M at the University of New Mexico," *Annals of Nuclear Energy*, 204 (2024). DOI: 10.1016/j.anucene.2024.110564
2024	9.	B. R. Murphy*, C. M. Perfetti, "Development of a Coupled Depletion Perturbation Theory Methodology in Continuous-Energy Monte Carlo Depletion Simulations," *Nucl. Sci. & Eng*. (2024). DOI: 10.1080/00295639.2024.2332010
2024	10.	M. Moreno*, **C. M. Perfetti**, D. Redhouse, "Monte Carlo Perturbation Analysis of Fuel Temperature Variance in the MCNP Model of the Annular Core Research Reactor," *Nucl. Tech*., 210(6) (2024). DOI: 10.1080/00295450.2023.2274168
2024	11.	**C. M. Perfetti**, B. C. Franke, R. P. Kensek, A. J. Olson, "Sensitivity Analysis in Coupled Monte Carlo Radiation Transport Simulations," *Nucl. Sci. & Eng*., 198(2) (2024). DOI: 10.1080/00295639.2023.2184192
2024	12.	B. Riedel*, **C. M. Perfetti**, F. B. Brown, "A Consistent Comparison of Upper Subcritical Limit Methods," *Nucl. Sci. & Eng*. (2024). DOI: 10.1080/00295639.2024.2403898

2023 13. M. Olguin*, **C. M. Perfetti**, A. J. Olson, B. C. Franke, "GEAR-MC and Differential-Operator Methods Applied to Electron-Photon Transport in the Integrated TIGER Series," *submitted to Nucl. Sci. & Eng*.

2023 14. B. Riedel*, **C. M. Perfetti**, F. B. Brown, "Comparison of the Baseline USL Calculation Methods for Loosely Coupled and Novel Neutronic Systems," *Nucl. Sci. & Eng*. (2023). DOI: 10.1080/00295639.2023.2249787

Prior to promotion to Associate Professor

2023 15. A. Maldonado*, **C. M. Perfetti**, "Utilizing Sensitivity and Correlation Coefficients from MCNP and Whisper to Guide Microreactor Experiment Design," *Nucl. Sci. & Eng*. (2023). DOI: 10.1080/00295639.2022.2162782

2022 16. M. Olguin*, **C. M. Perfetti**, F. B. Brown, "Investigation of the AGN-201M Research Reactor's Unique Dominance Ratio," *Nucl. Sci. & Eng*. (2022) DOI: 10.1080/00295639.2022.2087831

2022 17. K. A. Hinrichs*, **C. M. Perfetti**, S. P. LaMont, "SCALE Modeling of Foil Irradiations at WSU's TRIGA with Sensitivity/Uncertainty Analysis," *Journal of Radioanalytical and Nuclear Chemistry* (2022). DOI: 10.1007/s10967-022-08575-9

2021 18. C. A. Weaver*, G. W. Cooper, **C. M. Perfetti**, D. Ampleford, G. Chandler, P. Knapp, M. Mangan, J. Styron, "A Forward Analytic Model of Neutron Time-of-Flight Signals with Single Elastic Scattering and Beamline Attenuation for Inferring Ion Temperatures from MagLIF Experiments," *Fusion Sci. & Tech*, 78(2), 119-133 (2021). DOI: 10.1080/15361055.2021.1961540

2019 19. **C. M. Perfetti**, B. T. Rearden, "Estimating Code Biases for Criticality Safety Applications with Few Relevant Benchmarks," *Nucl. Sci. Eng*., 193(10), 1090–1128 (2019). DOI: 10.1080/00295639.2019.1604048

Prior to arrival at UNM

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