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Division Deputy for Science, Applied Math & Computational Research Division
Project Scientist of the La Silla Schmidt Southern Survey, Member of DES, DESI, and LSST-DESC
Author of over 389 refereed articles (1993-2026): *h*-index of 114

Professional Experience:

2014–present Division Deputy for Science, AMCR
2010–present Senior Staff Scientist, LBNL
2014–present Senior Fellow at the Berkeley Institute for Data Science
2010–2018 Adjunct Professor of Astronomy, UC Berkeley
2016–2022 Department Head for Computational Science
2010–2014 Group Lead: Computational Cosmology Center
2010–2014 Group Lead: NERSC Data Analytics
2001–2010 Staff Scientist, Lawrence Berkeley National Laboratory
1996–2001 Postdoctoral Fellow in Physics, Lawrence Berkeley National Laboratory
1995–1996 Research Assistant, University of Oklahoma
1988–1990 Teaching Assistant, Bowdoin College
1988 Admin, AM Best, Oldwick, NJ
1987 Mail Clerk, Exxon, Annondale, NJ

Education:

1997 PhD in Physics (Concentration in Astronomy), University of Oklahoma
Thesis Advisor: Edward Baron Thesis Title: *Non-LTE Spectrum Synthesis of Type Ia Supernovae*.
1993 M.S. in Physics, University of Oklahoma
1990 B.A. (*Magna Cum Laude*) in Physics (*High Honors*), Bowdoin College, Brunswick, Me.

Honors and Awards:

2020 Oppenheimer Science and Energy Leadership Fellow
2015 Breakthrough Prize in Fundamental Physics
2013 LBNL Director's Award for Exceptional Scientific Achievement
2013 NERSC: Innovative Use of High Performance Computing
2009 SuperComputing 2009 Storage Challenge Award
2007 Gruber Prize in Cosmology
1997 Nielsen Award from the Physics Department, University of Oklahoma
1990–1995 GAANN Fellowship from the U.S. Dept. of Education, University of Oklahoma
1988–1990 Noel C. Little & Edwin H. Hall Physics Prizes from the Physics Department, Bowdoin College

Current Grants (where PI or lab-PI):

2024–2027 TRAC: Trustworthy Rapid Approvals for Countermeasures (DTRA: \$850k)
2026–2026 VerfAI for IAEA Compliance (DOE/NSA: \$30k)
2025–2026 CM2US (DOE/ASCR: \$200k)
2022–2025 ModCon (DOE/ASCR: \$200k)
2023–2026 EMERGE: ExaEpi for Robust, Generalized Epidemiology (DOE/ASCR: \$12M)
2023–2028 Center for Computational Excellence (DOE/HEP: \$5M)
2023–2026 High Performance Computing for Energy Innovation (DOE/EERE: \$800k)
2023–2026 A FAIR Universe: Unbiased Data Benchmarks for Physics (DOE/HEP: \$1.8M)

Leadership & Membership Roles:

2022–present Project Scientist & Deputy Director of LS4
2015–present LBNL Lab Manager for HPC4Mfg and HPC4EI program
2008–present Co-Founder of the *Computational Cosmology Center* at LBNL
2009–2014 Northern California Coordinator for HiPACC
2008–2014 PI of the Palomar Transient Factory Type Ia Supernova Project
2002–2005 Hubble Space Telescope User's Committee
1996–Present Referee for *ApJ*, *ApJL*, *PRL*, *Science*, *Nature* and *PASP*
1991–Present American Astronomical Society

Teaching Experience:

2020–present	Thesis Advisor for Emily Ramey, & Kenneth Lin U.C. Berkeley
2025	Thesis Advisor for Sarafina Nance’s U.C. Berkeley Ph.D. titled, <i>Type IIP Supernovae for Cosmology</i>
2022	Co-advisor for Charlotte Ward’s University of Maryland Ph.D. thesis titled, <i>Tracing the Formation and Merger-Drive Growth of Massive Black Holes with the ZTF</i>
2021	Thesis Advisor for Michael Medford’s U.C. Berkeley Ph.D. titled, <i>Scalable Methods for Detecting Microlensing Black Holes with the Zwicky Transient Facility</i>
2020	Thesis Advisor for Abigail Polin’s U.C. Berkeley Ph.D. titled, <i>Signatures of Normal and Unusual SNe from Sub-Chandra Explosions</i>
2018	Thesis Advisor for Chelsea Harris’ U.C. Berkeley Ph.D. titled, <i>Numerical Modeling to Characterize the Circumstellar Environments of Type I Supernovae</i>
2018	Thesis Advisor for Daniel Goldstein’s U.C. Berkeley Ph.D. titled, <i>Foundations of Strongly Lensed Supernova Cosmology</i>
2018	Thesis Advisor for Kaylan Burleigh’s U.C. Berkeley Ph.D. titled, <i>A Monte Carlo Method for Identifying Imaging Systematics in Galaxy Surveys</i>
2016	Co-advisor for Yi Cao’s Caltech Ph.D. thesis titled, <i>Cosmic Explosions</i>
2015	Thesis Advisor for Casey Stark’s U.C. Berkeley Ph.D. titled, <i>Hydrodynamic Simulations and Tomographic Reconstructions of the Intergalactic Medium</i>
2004	Thesis Advisor for Daniel Kasen’s U.C. Berkeley Ph.D. titled, <i>3-D Studies of Supernovae</i>
1996–present	Supervised 50 undergraduate research projects
2013–2018	Created first High Performance Computing Class for Astronomy, U.C. Berkeley
1991–1993	Created and conducted a computer laboratory class for Introductory Astronomy

Postdoc Sponsor/Mentor of:

Maayane Soumagnac (LBNL) now faculty Bar-Ilan University; Zarija Lukic (LBNL) now Research Scientist LBNL; Andreu Font-Ribera (LBNL) - now staff UCL; Dovi Poznanski (UCB) - now faculty Tel Aviv University; Antonino Cucchiara (LBNL) now staff NASA Goddard; Rollin Thomas (LBNL) - now staff LBNL; Sebastien Bongard (UCB) - now CNRS staff IN2P3; D.A. Howell (LBNL) - now staff/faculty LCOGT/UCSB

Selected Publications:

- “Dying star reveals its inner structure,” Anya Nugent & Peter Nugent, *Nature*, Volume 644, 2025
- “The Progenitors of Superluminous Type Ia Supernovae,” Fitz Axen, M. & P. Nugent, *The Astrophysical Journal*, Vol 953, 2023
- “The Case for Strong Scaling in Deep Learning: Training Large 3D CNNs with Hybrid Parallelism,” Oyama Y.,... Nugent P, et al. *IEEE Transactions on Parallel and Distributed Systems*, 2021.07
- “Observational Predictions for Sub-Chandrasekhar Mass Explosions: Further Evidence for Multiple Progenitor Systems for Type Ia Supernovae,” Polin, A., P. Nugent & D. Kasen, *ApJ*, **873**, 2019
- “How to Find Gravitationally Lensed Type Ia Supernovae,” Goldstein, D. A. & P. E. Nugent, *ApJ*, **834**, 2017
- “Supernova SN 2011fe from an exploding carbon-oxygen white dwarf star,” Nugent, P. E., *et al.*, *Nature*, **480**, 2011
- “The Palomar Transient Factory: System Overview, Performance, and First Results,” Law, N. M., S. R. Kulkarni, P. E. Nugent, *et al.*, *PASP*, **121**, 2009
- “K-Corrections and Extinction Corrections for Type Ia Supernovae,” Nugent, P., A. Kim, & S. Perlmutter, *PASP*, **114**, 2002
- “Measurements of Ω_M and Ω_Λ from 42 High-Redshift Supernovae,” Perlmutter, S., G. Aldering, P. Nugent, *et al.* *ApJ*, **517**, 1999