

Biographical Sketch - S. Mani Tripathi

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Appointments and Experience

2017 – present Associate Dean for Research and Graduate Studies, College of L&S.
1999 – present Professor, Department of Physics, University of California, Davis.
2013 – 17 Faculty Assistant to the Dean of Mathematical and Physical Sciences
2012 – 17 Chair, Designated Emphasis in Nuclear Science at UC Davis
1995 – 96 Director, UC Education Abroad Center, Delhi, India.
1994 – 99 Associate Professor, Department of Physics, UC Davis.
1994 – 95 Faculty Fellow, UC Washington Center, Washington, DC.
1990 – 94 Assistant Professor, Department of Physics, UC Davis.

Education and Training

St. Stephen's College, Delhi.	Physics	B.Sc. Honors, 1980
University of Pittsburgh	Physics	M.S., 1982
University of Pittsburgh	High Energy Physics	Ph.D., 1986
University of Pittsburgh	High Energy Physics	Postdoc, 1986-1990

Professional Activities

2007 – present Founding member of the LUX/LZ dark matter search experiments
1994 – present Member of the Compact Muon Solenoid experiment at the LHC
2011 – present Administrator of the Facility for Interconnect Technology at UC Davis
2011 – present Co-director, Summer school in Nuclear Analytical Techniques
2009 – present Founder and Coordinator of California Professoriate for Access to Physics Careers
2011 – present NNSA National Science and Security Consortium, P.I. at UC, Davis
2016 – present Member, Strategic Planning Committee for Crocker Nuclear Lab
2016 – present P.I. for a phase 2 technology transfer award from the DOE.
2010 – present Member, Radiation Safety Committee for the McClellan TRIGA reactor
2004 – present Active member of an NSF REU program at UC Davis
1993 – present Reviewer for DOE/HEP, NSF, DOD, and DOE NA-22

Awards and Honors

2013 Chancellor's Award for Excellence in Mentoring Undergraduate Research
2013 European Physical Society High Energy and Particle Physics Prize, for an outstanding contribution to High Energy Physics, awarded to the ATLAS and CMS collaborations, "*for the discovery of a Higgs boson, as predicted by the Brout-Englert-Higgs mechanism*".
2011 American Physical Society Professorship Award *for a lecture series in India*.
1977 National Science Talent Scholar (India)

Selected List of Publications (from a total of more than 700 journal articles)

Collaborative Physics Papers

- CMS Collaboration. **Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC.** arxiv: :1207.7235v2 [hep-ex]
- LUX Collaboration. **First results from the LUX dark matter experiment at the Sanford Underground Research Facility** arXiv:1310.8214 [Astro-ph]
- CMS Collaboration. **Search for Dark Matter and Large Extra Dimensions in pp Collisions Yielding a Photon and Missing Transverse Energy** arxiv: :1204.0821v1 [hep-ex]
- CMS Collaboration. **Study of the Mass and Spin-Parity of the Higgs Boson Candidate Via Its Decays to Z Boson Pairs.** Physics Review Letters, 110: 081803.
- D0 Collaboration. **Isolated Photon Cross Section in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV.** Phys. Rev. Lett. 84:2786-2791.
- H1 Collaboration. **A Search for Squarks of Rp-Violating SUSY at HERA.** Zeitschrift für Physik C71:211-226.
- D0 Collaboration. **Measurement of the W Boson Mass.** Physical Review Letters 77:3309-3314.
- D0 Collaboration. **Limits on the Anomalous $ZZ\gamma$ and $Z\gamma\gamma$ Couplings in pp Collisions at $\sqrt{s} = 1.8$ TeV.** Physical Review Letters 75:1028-1033
- D0 Collaboration. **Observation of the Top Quark.** Physical Review Letters 74:2632-2637.
- H1 Collaboration. **Hard Scattering in γp Interactions.** Physics Letters B297:205-213.
- E706 Collaboration. **Direct Photon Production at High- p_T in π^-Be and pBe Collisions at 500 GeV/c.** Physical Review Letters 68:2584-2587.

Technical/Engineering Papers

- D. Stolp, M. Tripathi, *et al.*, **An Estimation of Photon Scattering Length in Tetraphenylbutadiene,** *JINST* 11: C03025
- M. Chertok, M. Tripathi, *et al.*, **Reactive bonding film for bonding carbon foam through metal extrusion.** *JINST* 12 T03005
- M. Chertok, M. Tripathi, *et al.*, **Thermal and tensile strength testing of thermally-conductive adhesives and carbon foam.** *JINST* 12
- M. Szydagis, M. Tripathi, *et al.*, **NEST: a comprehensive model for scintillation yield in liquid xenon.** *JINST*, 6:P10002
- M. Tripathi, *et al.*, **Gold-stud Bump Bonding for HEP Applicatons.** *JINST*, 5:C08005
- M. Woods, M. Tripathi, *et al.*, **Development of Readout Interconnections for the Si-W Calorimeter of SiD.** *JINST*, 6: C12050
- M. Sweany, M. Tripathi, *et al.*, **Study of wavelength-shifting chemicals for use in large-scale water Cherenkov detectors.** *NIM A*665: 245-250.
- A. Juste, M. Tripathi, and D. A. Wijngaarden. **Measurement of the Single Event Upset Cross-Section in the SVX IIe Chip.** *NIM A*500:371-378,
- R. Breedon, M. Tripathi, *et al.*, **Results of Radiation Test of the Cathode Front-end Board for CMS Endcap Muon Chambers.** *NIM A*471: 340-347.
- E. Engels, S. Mani, *et al.*, **A Silicon Strip Detector for Fermilab E706.** *NIM A*226:59-62,

Graduate Student Advisees

Graduated: George Pope (1995), Steven Glenn (1996), Paul Bloom (1997), Steven Rojass (1996), Patrick Murray (2002), Richard Snavely (2003), Jason Knight (2004), Melikhan Tanyeri (2006), Juan Lizarazo (2006), Paulo Afonso (2005), Peter Marleau (2006), Melinda Sweany (2011), Tia Miceli (2012), Carley Kopecki (2013), Michael Woods (2014), Jeremy Mock (2015), Sergey Uvarov (2017).

Current: Brian Lenardo, James Morad, Dustin Stolp, Jacob Cutter, Benjamin Godfrey, Yao Yao, Daniel Naim, Jyothis Johnson.

Postdoctoral Advisees

Past: Chris Klopfenstein, Matthew Szydagis, Rich Ott, Scott Stephenson, Sushil Chauhan.

Current: Aaron Manalaysay, Devin Taylor.

Current Grants

Title: Nuclear Science and Security Consortium
Agency: UC Berkeley/National Nuclear Security Administration
Amount: \$2,000,000
Duration: 07/01/16-06/30/21
PI/Co-PI: Principal Investigator

Title: R&D in Interconnect Technologies and Radiation Damage Studies
Agency: Department of Energy
Amount: \$150,000
Duration: 04/01/16-03/31/18
PI/Co-PI: Principal Investigator

Title: High Energy Particle Physics Research with LUX/LZ (Task L)
Agency: Department of Energy
Amount: \$540,000
Duration: 04/01/17-03/31/20
PI/Co-PI: Principal Investigator

Title: High Density Interconnect Solutions for the HL-LHC
Agency: Department of Energy
Amount: \$996,794
Duration: 07/31/17-07/30/19
PI/Co-PI: Principal Investigator

Title: High Energy Particle Physics Research with CMS (Task A)
Agency: Department of Energy
Amount: \$2,760,000

Duration: 04/01/17-03/31/20
PI/Co-PI: Co-Principal Investigator

Title: Graduate Mentorship Program
Agency: LLNL/UCD Graduate Mentorship Program
Amount: \$49,000
Duration: 07/01/14-06/30/17
PI/Co-PI: Principal Investigator

Title: The LZ Dark Matter Detector
Agency: Lawrence Berkeley Laboratory/DOE
Amount: \$1,163,933
Duration: 10/01/15-09/30/19
PI/Co-PI: Principal Investigator

Title: LUX Operations
Agency: Lawrence Berkeley Laboratory/DOE
Amount: \$131,590
Duration: 02/01/13-06/30/2017
PI/Co-PI: Principal Investigator

Title: LZ Operations
Agency: Lawrence Berkeley Laboratory/DOE
Amount: \$9,998
Duration: 03/11/17-12/31/2017
PI/Co-PI: Principal Investigator

Campus Service relevant to Research and Graduate Studies

2013 – present	Administrative Coordinating Council of Deans (ACCD)
2013 – present	Limited Submissions Review Committees, (Chaired ~10 of those)
2014 – present	Research Coordination Council (RCC)
2015 – present	Chair, Research Core Advisory Committee (RCAC)
2012 – present	MPS Steering Committee (Inaugural Chair, 2012-13)
2013 – present	Reviewer and advisor for Dean of MPS on faculty merits and promotions
2013 – present	Reviewer and approver for non-faculty appointments in MPS
2011 – present	Co-Organizer, Annual UCD Summer School on Nuclear Analytical Techniques
2011 – present	UCD P.I., Nuclear Science and Security Consortium (NSSC)
2011 – present	Administrator of Facility for Interconnect Technologies at UCD.
2007 – present	McClellan Reactor Nuclear Safety Committee (NSC)
2012 – 2017	Chair, Designated Emphasis in Nuclear Science
2017	Co-Organizer, National Particle Accelerator Summer School, Rohnert Park
2015 – 16	Participant, Faculty Leadership Workshop
2015	Co-Organizer, National Nuclear Physics Summer School, Lake Tahoe
2015	Participated in discussions of collaboration between UCD and FAPESP, the funding agency in Sao Paulo, Brazil
2015 – 16	Organized Pelaton, the MPS high performance computing cluster
2014 – 16	Radiation Safety Committee (RSC)
2013 – 16	Campus Cyclotron Use Committee (CCUC)

2015 – 16	Chair, Crocker Nuclear Lab Planning Committee
2001 – 16	UCD P.I., Institute for Nuclear- Particle- Astro-physics and Cosmology (INPAC), a Multi-campus Research Unit (MRU)
2014 – 15	UCD-LLNL Joint Administrative Working Group (JAWG)
2013	Chancellor’s Award for Mentoring Undergraduate Research
2012 – 13	Review Committee for Graduate Program in Statistics
2005 – 07	L&S Faculty Personnel Committee
2000 – 02	College of L&S Committee on Educational Policy
1999 – 2001	Physics Representative to L&S Assembly
1998 – 2002	Chair, Graduate Admissions Committee for Physics
2005 – 06	Search Committee for Vice Provost, IET
2000 – 03	Academic Computing Coordination Council (AC4)
2000 – 03	Chair, Research Sub-committee of AC4
1998 – 03	Committee on Research (COR)
2001 – 03	Chair, Limited Submissions Sub-committee of COR
2001 – 03	Principle Investigator Council
1998 – 99	Search Committee for Director of Technology Transfer
1998 – 99	Chancellor’s Fall Conference on Research
1998 – 99	Chair, Equipment Matching Sub-committee of COR

Service Relevant to Diversity

2017	Organized “MPS Day” on campus, involving faculty and students from CSU’s and Community Colleges
2009 – present	Founder and Coordinator, California Professoriate for Access to Physics Careers (CPAPC)
2010 - present	Participant, UC Leadership Excellence through Advanced Degrees (UC LEADS)
2016 – 17	Mellon funded committee on Transforming Graduate Admissions
2013 – 15	ADVANCE-UCOP Roundtable Workshops
2013 – 15	American Physical Society’s Bouchet Award Committee (Chair, 2014 – 15)
2011 – 14	Co-Organizer, GRE Boot camp for Northern California physics majors
2010 – 13	American Physical Society’s Committee on Minorities
2012	Climate Survey Committee for National Magnet Lab, Tallahassee, FL
2010 – 12	UCD booths at SACNAS conference and Meeting of the National Society of Black Physicists
2011 – 12	Organizing committee for American Physical Society’s Bridge to PhD program
2010	Organized Physics Day on campus for prospective underrepresented graduate students
2008 – 09	Co-Convener for physics, UC/CSU Faculty STEM Summit

Professional Service

1992 – present	Reviewer of grant proposals and Panel Reviews for DOE, NSF, and DOD
1993 – present	Reviewer of journal articles for Nuclear Instruments & Methods, Journal of Instrumentation, and Physical Review
2003 – present	Active participant in NSF Research Experience for Undergraduates at UCD
2017	Organizing Committee, Dark Matter at the LHC conference, Irvine.

2015 Reviewer for Swiss National Science Foundation
2014 Reviewer for Netherlands Organization for Scientific Research
2014 Coordinated an Agreement of Cooperation between UCD and Yeungnam University, Korea.
2013 – 14 University Outreach and Engagement Advisory Committee
2014 Co-organizer, Meeting of US Compact Muon Solenoid (USCMS)
2013 Organizing Committee, Advances in Neutrino Technology conference
2010 – 12 Joint DOE/NSF working group on the future of dark matter searches.
2012 Organizer, Dark Matter in Collisions workshop, UCD.
2011 Organizing Committee, INPAC meeting, Asilomar.
2011 American Physical Society Professorship Award for a lecture series in India.
2009 Reviewer for Canada Foundation for Innovation
2007 Chair, Organizing committee for Colliders to Cosmic Rays conference, Lake Tahoe
2007 Co-organizer, INPAC conference, Berkeley.