

CURRICULUM VITAE

Name **Tevian DRAY**
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EDUCATION

February 1976 **B.S.** in Mathematics, Massachusetts Institute of Technology, Cambridge, MA, USA
December 1977 **M.A.** in Mathematics, University of California, **Berkeley**, CA, USA
December 1981 **Ph.D.** in Mathematics, University of California, **Berkeley**, CA, USA

PROFESSIONAL RECORD

1/88 – present Department of Mathematics, Oregon State University, Corvallis, OR, USA. *Assistant Professor 1/88 – 8/90; Associate Professor 9/90 – 8/97; Professor 9/97 – present*

2/10 – 4/10 School of Natural Sciences, Institute for Advanced Study, Princeton, NJ, USA. *Visitor*

9/09 – 10/09 Department of Physics, Utah State University, Logan, UT, USA. *Visiting Professor of Physics*

8/02 – 12/02 Grinnell College, Grinnell, IA, USA. *Robert N. Noyce '49 Visiting Professor in the Physical Sciences, Math, and Computer Science*

9/01 – 6/02 Department of Mathematics and Statistics, Mount Holyoke College, South Hadley, MA, USA. *Hutchcroft Visiting Professor of Mathematics*

2/95 – 8/95 Department of Physics and Mathematical Physics, University of Adelaide, Adelaide, AUSTRALIA. *Fulbright Senior Scholar*

8/94 – 1/95 School of Physics and Chemistry, Lancaster University, Lancaster, ENGLAND. *Visiting Research Fellow*

1/91 – 6/91 Mathematical Sciences Research Institute (MSRI), Berkeley, CA, USA. *Senior Member*

10/87 – 12/87 Theoretical Astrophysics Group, Tata Institute of Fundamental Research (TIFR), Bombay, INDIA. *Visiting Professor*

7/87 – 9/87 Institute of Mathematical Sciences, Madras, INDIA. *Visiting Scientist*

1/86 – 6/87 Department of Mathematics, University of York, York, ENGLAND. *Postdoctoral Research Fellow*

1/84 – 9/84
& **4/85 – 12/85** Instituut voor Theoretische Fysica, Rijksuniversiteit Utrecht, Utrecht, THE NETHERLANDS. *Wetenschappelijk Medewerker*

9/84 – 4/85 School of Mathematics, Institute for Advanced Study, Princeton, NJ, USA. *Member*

HONORS & AWARDS

- 1999 Named a “**Top Prof**” by the Mortar Board Senior Honor Society, OSU.
- 2004 **Frederick Horne Award** for Sustained Excellence in Teaching Science, College of Science, OSU.
- 2006 **Renie Award** for best deposit of 2006, National Curve Bank.
- 2009 **UHC Outstanding Professor**, University Honors College, OSU.
- 2010 **Fellow**, American Physical Society.
- 2011 **Loyd Carter Award** for Outstanding and Inspirational Undergraduate Teaching, College of Science, OSU.
- 2012 **UHC Eminent Professor**, University Honors College, OSU.
- 2014 **Distinguished Teaching Award** for Distinguished College or University Teaching of Mathematics, Pacific Northwest Section of the MAA.
- 2014 **Elizabeth P. Ritchie Distinguished Professor Award**, OSU.
- 2015 **Professor of the Term**, Panhellenic Executive Council of OSU.
- 2016 **Outstanding Educator in Higher Education**, Oregon Academy of Sciences. (*joint award with Corinne Manogue*)
- 2017 **Deborah and Franklin Tepper Haimo Award** for Distinguished College or University Teaching of Mathematics, MAA.

GRANTS

- 1/19 – 12/21 NSF/DUE–1836604 (co-PI), *Representations in Quantum Mechanics*,
- 1/19 – 12/21 NSF/DUE–1836603 (co-PI), *Second-Generation Dissemination Strategies*,
- 8/17 – 7/18 FQXi (PI), *Magic squares of Lie groups*
- 4/14 – 6/14 PERTG/AAPT (PI), *Workshop organizer grant*
- 9/13 – 8/19 NSF/DUE–1323800 (co-PI), *Representations of Partial Derivatives*
- 9/13 – 8/14 NSF/DUE–1256606 (PI), *Workshop supplement*
- 8/12 – 7/15 Templeton Foundation (PI), *An octonionic description of fundamental particles*
- 7/12 – 6/13 FQXi (PI), *A new look at the Freudenthal magic square*
- 9/10 – 8/14 NSF/DUE–1023120 (PI), *Interactive Electromagnetic Curricular Materials*
- 9/08 – 8/11 FQXi (PI), *Using Octonionic Cayley Spinors to Describe Fundamental Particles*
- 9/06 – 8/11 NSF/DUE–0618877 (co-PI), *Paradigms in Physics: Multiple Entry Points*
- 8/04 – 7/09 OMLI Disciplinary Content Team (funded by NSF/EHR–0412553)
- 2/04 – 9/08 ODE/Oregon ESEA Title II-B MSP 4076, (co-PI), *Central Oregon Consortium*
- 4/03 – 3/07 NSF/DUE–0231032 (PI), *Bridging the Vector Calculus Gap: Episode II*
- 1/01 – 7/03 NSF/DUE–0088901 (PI), *Bridging the Vector Calculus Gap*
- 6/00 – 6/01 OCEPT Faculty Fellow (funded by NSF/DUE–9996543)
- 6/97 – 11/02 NSF/DUE–9653250 (senior personnel), *Paradigms in Physics*
- 9/92 – 8/95 NSF/PHY–9208494 (co-PI), *The Wave Equation Isn't As Simple As You Thought*
- 12/88 – 5/91 NSF/PHY–8813126 (PI), *Algebraic Computing in General Relativity*

FELLOWSHIPS

- 2/95 – 8/95 Fulbright Senior Scholar (*Adelaide*)
7–12/87; 7–8/88 Indo-American Fellow (*Madras, Bombay, & Bangalore*)
1/86 – 4/87 SERC Postdoctoral Research Fellow (*York*)
10/82 – 9/83 NATO Postdoctoral Fellow (*Berlin*)
8/78 – 12/79 DAAD Stipendiat (*München*)

SHORT-TERM VISITS

- 10/18 – 11/18 Institut de Mathématiques et de Sciences Physiques, Porto-Novo, BÉNIN.
1/18 – 2/18 Department of Physics, California State University, San Marcos, USA.
10/17 Department of Physics, University of Colorado, Boulder, CO, USA.
9/17 Department of Physics, Utah State University, Logan, UT, USA.
3/17 Raman Research Institute, Bangalore, INDIA.
1/10 – 2/10 The Center for Science and Mathematics Education Research, University of Maine, Orono, ME, USA.
11/09 School of Mathematical and Statistical Sciences, Arizona State University, Phoenix, AZ, USA.
11/09 Institute for Mathematics and Education, University of Arizona, Tucson, AZ, USA.
7/07 – 8/07 Department of Mathematics and Physics, DigiPen Institute of Technology, Redmond, WA, USA.
12/04 Perimeter Institute for Theoretical Physics (PI), Waterloo, CANADA.
7/99 Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, ITALY.
6/97 & 8/98 Department of Physics, Reed College, Portland, OR, USA.
7/90 & 8/90 School of Mathematical Sciences, Queen Mary College, London, ENGLAND.
7/90 – 8/90 Physics Department, University of Crete, Iraklion, GREECE.
8/88 Tata Institute of Fundamental Research (TIFR), Bombay, INDIA.
7/88 Raman Research Institute, Bangalore, INDIA.
8/86 School of Mathematical Sciences, Queen Mary College, London, ENGLAND.
12/85 School of Natural Sciences, Institute for Advanced Study, Princeton, NJ.

MEMBERSHIPS

- American Association of Physics Teachers, College Park, MD, USA
American Mathematical Society, Providence, RI, USA
American Physical Society, College Park, MD, USA
Australasian Society for General Relativity and Gravitation, Canberra, AUSTRALIA
Indian Association for General Relativity and Gravitation, Pune, INDIA
International Society on General Relativity and Gravitation, Bern, SWITZERLAND
London Mathematical Society, London, ENGLAND
Mathematical Association of America, Washington, DC, USA
Oregon Academy of Sciences, Portland, OR, USA

PUBLICATIONS

As of Spring 2021, I have published 85 articles in refereed journals; this total does not include conference proceedings, refereed or otherwise, nor numerous book reviews. Of these articles, more than 60 are on mathematical physics and related topics, and more than 10 are on science education, focusing on the teaching of second-year calculus and middle-division physics. My h-index is 30.

In addition, I have written four books, on special (2012) and general relativity (2014), on vector calculus (online only; 2009–2021), and on the octonions (2015). The second edition of my special relativity book was published in 2021.

A complete list is at <http://math.oregonstate.edu/~tevian/cv/pubs.html>.

INVITED TALKS

I have given more than 150 invited talks in 21 countries on 6 continents, including colloquia in 3 departments (Mathematics, Physics, and Computer Science) here at OSU.

A complete list is at <http://math.oregonstate.edu/~tevian/cv/talks.html>.

CONFERENCES

I have co-organized three conferences, and special sessions at two further conferences; one of the latter was at a major international conference. I have also attended numerous conferences the world over, as invited speaker, session chair, and/or presenter of a contributed talk.

A complete list is at <http://math.oregonstate.edu/~tevian/cv/conferences.html>.

STUDENTS SUPERVISED

As of Spring 2021, 7 students have completed their Ph.D. degree, and 9 students their M.S. degree, under my supervision.

A complete list is at <http://math.oregonstate.edu/~tevian/cv/students.html>.

I have been a member of the Graduate Faculty in both the Department of Mathematics and the Department of Physics since 1988, in the College of Education since 2014, a member of the University Honors College Faculty since 2000, was named Courtesy Faculty in the Department of Physics in 1993, and have been Adjunct Professor of Physics since 2016.

I have supervised well over 200 undergraduate projects as part of WIC courses in the Department of Mathematics, as well as undergraduate theses for both the University Honors College and the Department of Physics.

Much of this CV can be found online at <http://math.oregonstate.edu/~tevian/cv>, including an up-to-date list of publications with links to copies of most of my recent work.