

Curriculum Vitae

Mark J. Nandor
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EDUCATION

Ph.D. The Ohio State University, Physics, September, 1999

M.S. The Ohio State University, Physics, September, 1997

B.S. Harvey Mudd College, Physics, Distinction, May 1994

PROFESSIONAL EMPLOYMENT

1999 to present: Upper School Mathematics Teacher, The Wellington School

Upper School Co-Head, 2007 to 2012

Upper School Dean of Study, 2004 to 2014

Academic Quiz Team, 2002 to 2009 and 2012 to present

WOSU In The Know champions, 10TV Brain Game playoffs, 2014

Mathematics Department Chair, 2001 to 2004 and 2006 to 2008

Assistant Varsity Soccer Coach, 1999 to 2000

2004 to present: Professional editor and mathematics text consultant. Clients include Harvard University Press and Dr. Clifford Pickover, author of over 40 books. Books edited include *Sex, Drugs, Einstein, & Elves*; *Archimedes To Hawking*; *A Passion For Mathematics*; and *The Math Book*.

2002 to 2003: Ongoing atomic physics research, The Ohio State University.

PERTINENT EXTRA-CURRICULAR ACTIVITIES

Development Team Member of www.projecteuler.net, mathematical problem development site

Faculty Mentor in The Wellington School's faculty mentoring program, 2003 to 2005

Steering/Teaching and Learning Committee, The Wellington School, 2001 to 2005

Department Chair, Mathematics, The Wellington School, 2001 to 2004, 2006 to 2008

Conference Co-chair, OAIS State-Wide (Ohio) 2004 Conference, 2003 to 2004

OAIS Teacher Services Committee, 2001 to 2005

ISACS representative to the Upper School, The Wellington School, 2001 to 2005

Local Professional Development Committee, The Wellington School, 2000 to 2004

Vice-Chair, 2001 to 2002

Chair, 2002 to 2003

Played Tevye in *Fiddler on the Roof* Production, 2003

Diversity Committee, The Wellington School, 2000 to 2001

Member of Graduate Student Advisory Panel, The Ohio State University, 1997 to 1998

Choir director, Olentangy Christian Reformed Church, Columbus, OH, 1996 to 2011

Member of Graduate Studies Committee, The Ohio State University, 1996 to 1998

Member of Physics Graduate Student Council, The Ohio State University, 1996 to 1997

Member of Council on Religious Affairs, Claremont Colleges, 1993 to 1994

ACADEMIC HONORS AND TEACHING HONORS

Harvey Mudd College (1990 to 1994)

- 5 times on Dean's List plus letter of commendation from Freshman Division

The Ohio State University (1994 to 1999)

- Three-time winner of the annual Hazel Brown Teaching Award for outstanding teaching assistant (1995, 1996, 1997)
- The Ohio State University Presidential Fellow for excellence in research (1999)

The Wellington School (1999 to present)

- Horace Mann "Excellence in Teaching" award, The Wellington School (2004)
- Ohio Magazine's *Excellence in Education* special recognition (2007)

PROFESSIONAL AFFILIATIONS

American Association of Physics Teachers (AAPT)

National Council of Teachers of Mathematics (NCTM)

PROFESSIONAL PUBLICATIONS RELATED TO TEACHING

M.J. Nandor, "Recurrence Relations, Proper Guessing, and Closed-Form Solutions," *The Mathematics Teacher*, **99**, pp. 292-295, (2005).

M. J. Nandor, "The Inclusion of Leap Year to the Canonical Birthday Problem," *The Mathematics Teacher*, **97**, pp. 87-89, (2004).

REFERENCES

Jeff Terwin (current direct supervisor)

Head of Upper School, The Wellington School

614-324-8891 terwin@wellington.org

Robert Brisk (direct supervisor while I was Co-Head of Upper School)

Head of School, The Wellington School

(614) 324-1655 brisk@wellington.org

Christopher Hayes (direct supervisor at The Wellington School 2003 to 2007)

Head of School, Holy Trinity Academy

(321) 723-8323 christopher.hayes@htes.org

Mark Wagner (direct supervisor at The Wellington School 1999-2003)

Upper School Head, Sanford School

(302) 234-1633 wagnerm@sanfordschool.org

Rick O'Hara (Head of The Wellington School 1999-2007)

President, The John Carroll School

(410) 838-8333 rohara@johncarroll.org

Professor Linn Van Woerkom (direct supervisor at The Ohio State University, 1994-2004)

Department of Physics, The Ohio State University

(614) 292-9626 lvw@mps.ohio-state.edu

RESEARCH

Number theory

I have been pursuing how rational numbers related to one another and have published a number of papers in the high school journal for math teachers. Research has stretched from recurrence relations, to combinations of square inverses that yield unitary fractions, to novel Pythagorean Triples, to probability.

High-intensity laser-gas interactions with Professor Linn Van Woerkom:

Photoelectrons are generated by short-pulsed, high-intensity laser light focused through Noble gases. These electrons have absorbed up to 50 more photons than are needed to ionize them. We have generated photoelectron spectra highly resolved in either intensity or angle. This work has added to multiphoton physics by demonstrating exotic behaviors in these photoelectron spectra which raise questions as to the validity of previously held conceptions in this field.

High-intensity laser-solid interactions with Professor Linn Van Woerkom:

Soft x-rays are useful for diagnostic and other biomedical uses. It is hoped that a method of generating short-pulsed, soft x-rays will be developed for these purposes, but not enough is yet known regarding the methods of producing soft x-rays. We used a high-intensity laser to generate soft x-rays by focusing the laser light onto cylindrical rods of various materials. This work furthered the field by supplying spectral features produced by such interactions.

OTHER PROFESSIONAL PUBLICATIONS

L. D. Van Woerkom, M. J. Nandor, M. A. Walker, G. D. Gillen, H. G. Muller, "Above-Threshold Ionization As a Probe of Multielectron Physics", *Laser Physics*, **11**, pp. 982-988, (2001).

L. D. Van Woerkom, M. A. Walker, M. J. Nandor, H. G. Muller, "On the absence of multielectron effects in ATI photoelectron spectra of argon," *AIP Conference Proceedings*, **525**, pp. 70-80, (2000).

M. J. Nandor, M. A. Walker, and L. D. Van Woerkom, H. G. Muller, "Detailed comparison of above-threshold-ionization spectra from accurate numerical integrations and high-resolution measurements", *Physical Review A*, **60**, pp. 1771-1774, (1999).

M. J. Nandor, M. A. Walker, and L. D. Van Woerkom, "Angular distributions of high intensity ATI and the onset of the plateau", *Journal of Physics B*, **30**, pp. 4617-4629, (1998).

M. J. Nandor and L. D. Van Woerkom "Soft X-rays from high intensity laser interactions with solids", *Physical Review E*, **56**, pp. 1273-1275 (1997).

M. J. Nandor and T. M. Helliwell, "Fermat's Principle and Multiple Imaging by Gravitational Lenses", *American Journal of Physics*, **64**, pp. 45-49 (1996).

OTHER PUBLICATIONS

M. J. Nandor, "The CRC Form of Subscription: a stumbling block in God's path?", *The Banner*, **135**, 22, p. 38 (2000).