

MAARTEN A. RUTGERS, Ph.D.

2367 Glendon Ave.
Los Angeles, CA 90064

<http://home.earthlink.net/~marutgers>

(310) 441-5621 (Home)
(310) 709-8265 (Mobile)

maarten@alumni.princeton.edu

EDUCATION:

1989-1994	Princeton University	Ph.D., Physics,	May 1995.
		M.A., Physics,	June 1991.
1985-1989	University of Minnesota, Minneapolis	B.S., Physics, Summa Cum Laude,	June 1989.

PROFESSIONAL EXPERIENCE:

1997-Present	Assistant Professor of Physics (on leave since Jan.'01)	The Ohio State University, Columbus, OH
	Created and directed a research group of 4-8 students, specializing in experiments on 2D turbulence, colloidal sedimentation and crystallization, and flow of granular materials. Built up a laboratory with \$400k funding. Garnered around \$400k in operating expenses from government and industry grants. Published research findings in various refereed journals and presented results at conferences. Presented invited lectures several conferences and at many universities in Europe and the USA. Taught physics courses of up to 200 students (both to science and non-science undergraduates) Managed teaching assistants. Served on graduate admissions, colloquium, and undergraduate course committees. Designed , built, and managed several conference exhibits for the 100th anniversary of the American Physical Society.	
1996-1997	Physics Postdoctoral Researcher (Continued)	The Ohio State University, Columbus, OH
1994-1996	Physics Postdoctoral Researcher	University of Pittsburgh, Pittsburgh, PA
	Designed , built, and operated several experiments on 2D turbulence in flowing soap films. Entered a new research field and quickly established myself. Invented a new flowing film technique which greatly surpassed older techniques and has now become standard practice. Published research in refereed journals and presented findings in conference presentations. Created and operated exhibits at the Pittsburgh Science museum. Contributed to the direction of research, grant writing, and decisions on major equipment purchases.	
1989-1994	Graduate Research Assistant	Princeton University, Princeton, NJ
	Designed , built, and operated several experiments on colloidal crystallization and sedimentation. Definitively measured the hard sphere phase transition, a system subject to decades of previous research. Published research in refereed journals and presented findings in conference presentations. Taught sophomore level undergraduate physics laboratory classes. Designed several mini exhibits for local science museum fund raisers.	
1986-1989	Undergraduate Research Assistant	University of Minnesota, Minneapolis, MN
	Operated a dilution refrigerator and measured heat capacities of superconducting samples, near absolute zero temperature. Designed and built an experiment for making noise measurements in magnetic garnets.	

SKILLS:

Management	• Small research groups. • Small and large lecture classes. • Multi author manuscripts and presentations. • Conference and museum exhibits.
Computer	Programming Languages: C, Labview (G), LaTeX, Mathematica, HTML, Pascal, Fortran, Basic. Operating Systems: Windows 9x and NTx, MacOS, Unix, PalmOS. Programs: Excel, Powerpoint, Word, Illustrator, Photoshop, Premiere, GoLive, Imageready. Techniques: Test Instrument and motion control interfacing, Image capture and processing.
Technical	• Mechanical, electronics, and software design. • Test and measurement, data reduction. • Metal and wood machining, instrument building. • Fluid dynamical measurements, including laser and hot wire anemometry and Digital Particle Imaging Velocimetry. • Lasers, optics, and microscopy. • Vacuum systems and cryogenics. • Laser light scattering and small particle characterization.
Languages	• Fluent English and Dutch. • Rudimentary German and some French.
Other	• Technical writing. • Graphic and presentation design, photography. • Public speaking. • Conveying abstract and scientific concepts to lay audiences. • Extensive traveling in USA, Europe, and Asia. • Design and construction of modern furniture.

AWARDS:

- National Science Foundation CAREER Award, 1999.
- Ohio State University Office of Disability Services Teaching Award, 1999.
- Joint Finalist of the APS Division of Fluid Dynamics Meeting Gallery of Fluid Motion, 1995.
- Fellowship to attend a NATO ASI summer school conference, Cargèse, France, 1994.
- Joseph Henry Prize for Princeton First Year Physics Graduate Students, 1989.
- Undergraduate Research Opportunity Grant, University of Minnesota, Minneapolis, 1986.
- Valedictorian, Jefferson High School, Bloomington, Minnesota, 1985.

CONSULTING:

- Ann Hamilton / Meredith Monk, stage design consultant for performance piece, 2001.
- Rhythm and Hues, scientific summary of atomic explosion hydrodynamics, 2001.
- Stephen Wolfram (Wolfram Research Inc.), production of 2D flow field images for book illustrations, 2000.
- American Physical Society, creation and management of various conference exhibits, 1999.
- Xperiment Huset Science Museum, Vaxjo, Sweden, museum exhibit consultant, 1997.
- Carnegie Science Center of Pittsburgh, PA, museum exhibit creation, 1996.

AFFILIATIONS and PROFESSIONAL SERVICE:

- Memberships • American Physical Society (APS): Division of Condensed Matter Physics
 • American Physical Society (APS): Division of Fluid Dynamics.
- Journal Referee • Physical Review Letters. • Physical Review E. • Nature. • Physics of Fluids.
- Proposal Referee • American Chemical Society Petroleum Research Fund.
- Conferences • Exhibit planner, APS 1999 centennial anniversary meeting.
- Mentoring • Graduated **2** physics undergraduates, **3** physics masters students, and **1** physics Ph.D.

PUBLICATIONS:

- Journals • Thirteen (13) publications in refereed journals such as • Physical Review Letters, • Physical Review E, • Physical Review B, • Physics of Fluids, and • Review of Scientific Instruments.
- Popular Press • At least ten (10) instances of research coverage in the popular press, including • Nature, • Science, • Science News, • Scientific American, • New Scientist, • CNN Science and Technology Week, • ABCnews.com, and • Dance Magazine.

PRESENTATIONS:

- Conference • Five (5) invited conference presentations.
 • Twenty one (21) contributed conference presentations.
- Seminars • Fifty (50) invited seminars and colloquia at universities and research laboratories.

PERSONAL:

- Citizenship • Dutch Citizen, US Permanent Resident (Green Card holder).