

Suzanne Amador Kane

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| Professional Experience | 1999- present | Associate Professor, Physics Department, Haverford College | |
| | 1991- 1998 | Assistant Professor, Physics Department, Haverford College | |
| | 1988-1990 | Postdoctoral research associate, Department of Chemistry, University of Pennsylvania; Research Supervisor: J. K. Blasie | |
| Education | 1989 | Ph.D., Applied Physics, Harvard University. Dissertation: "Light scattering and x-ray scattering studies of thin, freely-suspended liquid crystal films", advisor Prof. Peter S. Pershan. | |
| | 1984 | M.S., Applied Physics, Harvard University. | |
| | 1982 | B.S., Physics, Massachusetts Institute of Technology. Elected to Sigma Xi. | |
| Invited Talks (since 2000) | 2006 | SACNAS Conference (Tampa FL) | Talk on bionanoscience |
| | 2006 | University of Richmond | Physics Colloquium |
| | 2006 | University of the Sciences | Science Colloquium |
| | 2006 | Kalamazoo College | Jennifer Mills Lecture |
| | 2005 | St. Joseph's University | Physics Colloquium |
| | 2003 | Lafayette College | Physics Colloquium |
| | 2002 | Brown University | Physics Colloquium |
| | 2002 | Bucknell University | Physics Colloquium |
| | 2002 | Council on Undergraduate Research | Panel discussion |
| | 2001 | Villanova University | Physics Colloquium |
| | 2001 | Colgate University | Physics Colloquium |
| | 2001 | Williams College | Symposium panel discussion |
| Contributed Talks and Workshops | | | |
| (since 2000) | 2006 | AAPT Meeting (poster with student) | |
| | 2005 | AAPT Meeting (talk) | |
| | 2003 | Physics of Medical Technology workshop for high school teachers & students (HHMI sponsored Cascade Mentoring workshop, Haverford College) | |
| | 2003 | Biophysical Society Annual Meeting (poster) | |
| | 2002 | Council on Undergraduate Research, invited panel discussion, "Interdisciplinary Research Collaborations" (poster) | |
| | 2002 | Tricollege Science Teaching symposium, Bryn Mawr College (talk) | |
| | 2002 | American Physical Society March Meeting (poster) | |
| | 2002 | Haverford Faculty Research Talk (Panel Discussion) | |
| | 2001 | Tricollege Science Teaching symposium, Bryn Mawr College (talk, with Lyle Roelofs) | |
| | 2002 | Haverford Natural Science Colloquium | |
| | 2000 | Interface between Physics and Biology, University of Pennsylvania (poster with student) | |
| | 2000 | AAC&U Rethinking Science Literacy Conference (poster with Kaye Edwards) | |
| | Grants (since 2000) | 10/03-10/08 | National Science Foundation Math Science Partnerships of Greater Philadelphia (MSPGP) Participant in educational activities in a multi-institution grant program (\$1.5M) |
| 09/04-01/05 | | Andrew J. Mellon Foundation New Directions Fellowship | |
| 7/00-6/05 | | Packard Corporation, "Protein-based biomaterials for nanotechnology", Co-PI (\$966,020) | |
| 7/00-6/02 | | NSF "RUI: Advanced microscopy and manipulation cluster for biological and biophysical studies", Co-PI (\$169,271) | |

1/99-12/00

Zimmer Corporation, "Interdisciplinary studies of structure and reactivity of proteins", Co-PI (\$100,000)

Recent honors: Haverford College Innovation in Teaching Award (2005)

Recent Teaching related activities

2004 to 2007

Member, American Journal of Physics Resource Letters Editorial Board

2006 Math Science Partnership of Greater Philadelphia Annual Meeting (talk)

2005 NSF Math-Science Partnership Science Pedagogy Workshop (talk)

2004 NSF Math-Science Partnership Bi-College faculty seminar on New Pedagogies in Math and Science Education

2002 HHMI-funded faculty development workshop in Bioinformatics (Haverford College)

2002 Tricollege Science Teaching symposium, Bryn Mawr College, Bryn Mawr, PA (talk, S. Amador Kane)

2002 Tricollege Multicultural Winter Institute, Swarthmore College, Swarthmore, PA. (intensive four-day workshop focused on issues of race, ethnicity, socio-economic class, gender, religion and sexual orientation.)

2001 HHMI-funded faculty development workshop on Computing Across the Sciences

2001 Women In Science: Opportunity in a Changing Landscape, Bryn Mawr College, Bryn Mawr PA

2001 Building Bridges: Introductory Science Education, Bryn Mawr College Bryn Mawr PA

2001 Tricollege Science Teaching symposium, Bryn Mawr College, Bryn Mawr, PA (talk, S. Amador Kane, Lyle Roelofs)

2000 AAC&U Rethinking Science Literacy Conference, Charleston, SC (poster presentation, S. Amador Kane, Kaye Edwards)

Senior Research

Over the five year period 2002-2006, I supervised one quarter of our physics majors during that period, a total of 7 senior research projects and theses, including four by female physics majors and three by members of under-represented groups.

Publications (student coauthors indicated by asterisks)

1. Suzanne Amador Kane and Kenneth Laws, "[Hunting for Jobs at Liberal Arts Colleges](#)" *Physics Today*, November 2006, pp.38-42. (Also featured on the [American Institute of Physics Career Services website](#).)
2. Daniel J. Rigotti, Bashkim Kokona, Theresa Horne, Eric K. Acton, Carl D. Lederman, Karl A. Johnson, Robert S. Manning, Suzanne Amador Kane, Walter F. Smith and Robert Fairman, "Quantitative atomic force microscopy image analysis of unusual filaments formed by the *Acanthamoeba castellanii* myosin II rod domain" *Analytical Biochemistry*, 346(2), 2005, pp. 189-200
3. S. Amador Kane, "Faculty development programs: a model for learning emerging technologies while developing interdisciplinary partnerships," *The Journal of Science Education and Technology*, **12(4)**, 421-430 (2003).
4. S. Amador Kane, *Introduction to Physics in Modern Medicine*, textbook with problems, Taylor and Francis Publishers, Inc. London, UK (2003). (Second edition under contract.)

5. Robert Manning, Robert Fairman, Theresa Horne*, Daniel Rigotti, Walter Smith, Suzanne Amador Kane "Conformational statistics of filaments formed by myosin-II rod domain aggregates as imaged by AFM", *Biophys. J* A204 (2003). (Meeting abstract).
6. S. Amador Kane, "Quantitative chirality measures applied to domain formation in Langmuir monolayers", *Langmuir* **18**, 9853 (2002).
7. S. Amador Kane, "An undergraduate biophysics program: curricular examples and lessons from a liberal arts context" *Am. J. Phys.* **70**, 581 (2002). (This article is included in Biophysical Journal's Online Biophysics Textbook.)
8. S. Amador Kane and S. D. Floyd*, "Interaction of local anesthetics with phospholipids in Langmuir monolayers" *Phys. Rev. E*, **62**, 8400-8408 (2000).
9. S. Amador Kane, M.A. Compton*, N. Wilder*, "Interactions determining phospholipid domain growth in monolayers: experimental results and computer simulations" *Langmuir*, **16(22)**, 8447-8455 (2000).
10. S.M. Amador and S. D. Floyd*, "Interaction of local anesthetics with phospholipids in Langmuir monolayers" *Biophys. J.* **74(2)**, A371 (1998). (Meeting abstract)
11. S.M. Amador, M.A. Compton*, L. Roelofs, N. Wilder* "Interactions determining phospholipid domain growth in monolayers: experimental results and computer simulations" *Bull. Amer. Phys. Soc.* **43(1)**, 328 (1998). (Meeting abstract)
12. S.M. Amador, K. Long*, N. Wilder*, "Epifluorescence microscopy studies of mixed lipid Langmuir monolayers" *Biophys. J.* **70** (2), A90 (1996). (Meeting abstract)
13. S.M. Amador, "Teaching medical physics to general audiences" *Biophys. J.*, **66**, 2217 (1994) (Included in the Biophysical Society *On-line Biophysics Textbook* at <http://biosci.umn.edu/biophys/OLTB/Textbook.html/>)
14. S.M. Amador, J. M. Pachence, R. Fischetti, J. P. McCauley, Jr., A. B. Smith III, J.K. Blasie, "Use of self-assembled monolayers to covalently tether protein monolayers to the surface of solid substrates" *Langmuir*, **9**, 812 (1993).
15. S. Xu, M. A. Murphy, S. M. Amador, J. K. Blasie, "Proof of asymmetry in the Cd-arachidate bilayers of ultrathin Langmuir-Blodgett multilayer films via x-ray interferometry" *J. Phys. I (France)* **1**, 1131 (1991).
16. S.M. Amador, J.M. Pachence, R. Fischetti, J.P. McCauley, Jr., A.B. Smith III, J.K. Blasie, "X-ray diffraction studies of protein monolayers bound to self-assembled monolayers" *Materials Research Society Symposium Proceedings, Vol. 177: Macromolecular Liquids*, eds. Cyrus R. Safinya, Samuel A. Safran, Philip A. Pincus, Materials Research Society, Pittsburgh, (1990).
17. J.M. Pachence, S.M. Amador, G. Maniara, J. Vanderkooi, P.L. Dutton, J.K. Blasie, "Orientation and lateral mobility of cytochrome *c* on the surface of ultrathin lipid multilayer films", *Biophys. J.* **58**, 379 (1990).
18. S.M. Amador, P.S. Pershan, "Light-scattering and ellipsometry studies of the two-dimensional smectic-C to smectic-A transition in thin liquid crystal films", *Phys. Rev. A* **41**, 4326 (1990).
19. S.M. Amador, P.S. Pershan, H. Stragier, B.D. Swanson, D.J. Tweet, L.B. Sorensen, E.B. Sirota, G.E. Ice and A. Habenschuss "Synchrotron studies of the first-order melting transitions of hexatic monolayers and multilayers in freely suspended liquid crystal films", *Phys. Rev. A* **39**, 2703 (1989).
20. E.B. Sirota, P.S. Pershan, S.M. Amador, L.B. Sorensen "Synchrotron x-ray observation of surface smectic-I hexatic layers on smectic-C liquid crystal films", *Phys. Rev. A* **35**, 2283 (1987).