

## CURRICULUM VITAE

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Home Phone: (413) 549-2644  
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Clark Science Center  
Smith College  
Northampton, MA 01063  
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EDUCATION: University of Pittsburgh  
Physics (Condensed Matter)  
Ph.D. 1984

University of Pittsburgh  
Physics  
M.S. 1982

University of Bombay (India)  
Nuclear Physics (Major)  
M. Sc. 1971

University of Bombay (India)  
Nuclear Physics (Major)  
B. Sc. 1969

### RESEARCH EXPERIENCE:

- 2008- 2015 Co-PI “Materials Research on Polymers’ NSF
- 2002-2008 Co-PI: Materials Research Science and Engineering center ‘University of Massachusetts’
- 2002-current Co-PI: “Imaging Fast Dynamics in Macroscopic Disordered Media”. Collaboration with co-researchers at the University of Massachusetts.
- 2002- current Co-Investigator “Aqueous Polymer Assemblies” NSF Grant to Materials Research Science and Engineering Center, Univ. of Massachusetts.
- 1998 -2002 Co-Investigator “Controlled Interfacial Interactions” NSF Grant to Materials Research Science and Engineering Center, Univ. of Massachusetts.
- 1994-98 Co-Investigator “Polymers in Restricted Geometries”. NSF Grant to Materials Research Science and Engineering Center, Univ. of Massachusetts.

- 1991-92 Co-Investigator "Optical Techniques for Thin Film Measurements"
- 1990 Visiting Scientist Indian Institute of Science, Bangalore, India.
- 1990 Primary Investigator "Coupling of velocity and composition fluctuations' a binary liquid mixture," funded by Research Corporation.
- 1986-87 Post Doctoral Research Associate, Department of Polymer Science and Engineering, University of Massachusetts.
- 1984-86 Primary Investigator, "Turbulence and Binary Liquid Mixtures," funded by Research Corporation. Amherst College, Amherst.

### **TEACHING EXPERIENCE:**

- 2003-Current Professor, Smith College, Northampton, MA 01063.
- 2002-2006 Chair of the Physics Department
- 1992-2002 Associate Professor, Smith College, Northampton, MA 01063.
- 1987-92 Assistant Professor, Smith College, Northampton, MA 01063.
- 1984-86 Visiting Assistant Professor, Amherst College, Amherst, MA 01002.
- Fall 1983 Teaching Fellow at the University of Pittsburgh, Pittsburgh, PA 15213.
- 1978-79 Teaching Assistant at the University of Pittsburgh, Pittsburgh, PA 15213.
- 1971-1978 Lecturer in Physics at S.I.E.S. College, which is affiliated to the University of Bombay in India. Responsibilities included classroom lectures, tutorial sessions, and laboratory supervision at the undergraduate level.

### **GRANTS**

- .NSF grant 'materials research' 2008-2015
- . IMR (Instrumentation for Materials Research) Grant for instrumentation for imaging fast dynamics in macroscopic disordered media, 2002
- .NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts) (2002-2008)
- .NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts) (1998-02)
- .NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts.) (1994-1999)
- .HP Instrument Grant (1994)
- .Kresge Funds (1992)
- .NSF Grant (joint collaboration through the University of Massachusetts Industry Center) (1991)

- .NECUSE Grant for Advanced Laboratory Experiment (1991) (PI)
- .Ford fellowship for summer student intern (1991)
- .Research Corporation Cottrell Science Grant (1990-1992) (PI)
- .NECUSE (New England Consortium of Undergraduate Science Education) summer research fellowship for student participation (1989)
- .Sherman Fairchild Grant (1988)
- .CFCD funds from Smith College
  - Research Corporation Cottrell Science Grant (1985-1986) (PI)

## PAPERS AND PUBLICATIONS (\*: Smith College students)

Publication of a report "Advancement of Women" in the MaNEP center of the University of Geneva. MaNEP PR11 AOW survey, pages 118-119

"Chandra: the Man behind the Science" Mercury, Volume 40, Number 2 , Spring 2011  
N.Easwar

"Dynamical fluctuations in dense granular flows" N.Menon, K.Facto; University of Massachusetts, Amherst, MA 01003, N. Easwar, E.Gardel\*, E.Seitaridou\*, E.Keene\*, K.Hattam \*; Smith College, Northampton, MA01063  
Phil. Trans. R. Soc. A 28 December 2009 vol. 367 no. 1909 5109-5121.

"Force-Velocity Correlations in a Dense Collisional Flow" E.Gardel\*, E.Keene\*, S.Dragulin\*, N.Easwar, N.Menon- To be submitted to Europysics Letters, [cond-mat/0601022](#)

"Evidence for re-entrant behavior in laponite-PEO systems" Hossein A. Baghdadi, Elizabeth C. Jensen\*, Nalini Easwar, Surita R. Bhatia,

- Journal: Rheologica Acta, ISSN: 0035-4511, Vol: 47, Issue: 2, Date: (2008)-3, Pages: 121-127
- MRS Symp. Proc. 899E – Dynamics in Small Confining Systems VIII, edited by John T. Fourkas, Pierre Levitz, René Overney, Michael Urbakh, 2006, 0899-N09-03.

"An experimental teaching tool for phonons that demonstrates the linear theory" D. Lueerssen, N. Easwar, A. Malhotra\*, L. Hutchins\*, K. Schulze\*, B. Wilcox\* American Journal of Physics, **72**, 197 (2004)

"Chiral Interactions within Short Fragment DNA cholesteric spherulites" Biophysical Journal ,86(1):312A-312A, Part2 Suppl.S. JAN 2004 (2004)

"Large Force Fluctuations in Flowing Granular Medium" E. Longhi\*, N. Easwar and N. Menon, Physical Review Letters, 89, Number 4, 045501-1(2002), cond-mat/0203379

"Simultaneous measurement of thickness and refractive index change coefficients of thin films using optical interferometry" N. Easwar, R. Fantini\*, E. Willis\*, Review of Scientific Instruments **72**, Number 6, 2842 (2001).

'Soft matter under osmotic stress'. Michael Leonard, Helen Hong\*, Nalini Easwar and Helmut Strey. Polymer **42** (13) 5823-5827 (2001).

"Picker Engineering Program: Building a new educational paradigm and bridging the gender gap." Comment invited by the editor, American Journal of Physics **67**(10), 849 (1999) M. Pfabe and N. Easwar.

- "Spontaneous formation of monodisperse vesicles near the cloud point of an aqueous amphiphilic system." K. Murthy, N. Easwar, E. Singer\*. Journal of Colloid & Polymer Science, 276 (10), 940 (1998).
- "Phase-separation in binary nearly hard sphere colloids: Evidence for the depletion force," S. Sanyal, N. Easwar, S. Ramaswamy, and A.K. Sood. Europhysics Letters, 2, 107 (1992).
- "The effect of continuous stirring on off-critical and critical samples of a phase separating binary liquid mixture." N. Easwar. Physical Review Letters, 68, 186 (1992).
- "Study of the effect of relativistic time dilation on Cosmic Ray muon flux - undergraduate Modern Physics experiment," The American Journal of Physics, 59, 589, (1991). N. Easwar and D.A. MacIntire. (Cited in AJP among 60 memorable papers).
- Diffusion of star and linear polymers in porous glass," Macromolecules, 23, 738 (1990). N. Easwar, K.H. Langley and F.E. Karasz.
- "Diffusion of linear polystyrene in controlled pore glasses - comparison of experimental data with a theoretical model of entropic barriers: Macromolecules, 22, 3492 (1989). N. Easwar.
- "Search for an Instability on a Quenched Liquid Interface," Phys. Rev A., 35, 3481 (1987). S.N. Rauseo, N. Easwar and J.V. Maher.
- "Turbulent Suppression of Spinodal Decomposition," Phys. Rev. A, 29, 308 (1984). D.J. Pine, N. Easwar, J.V. Maher and D.J. Pine and W.I. Goldberg.
- "Active-coupling Mixing Times for a Stirred Binary Liquid," Phys. Rev. Lett., 51, 1272 (1983). N. Easwar, J.V. Maher, D.J. Pine and W.I. Goldberg.
- "Observation of the Relaxation of Composition Fluctuations in a Binary Liquid Mixture," Physica 118A, 268 (1983). N. Easwar, M. Joshua, J.V. Maher and W.I. Goldberg.
- "Evidence for Coupling of Velocity and Composition Fluctuations a Binary Liquid Mixture," Phys. Rev. Lett. 49, 1850 (1982). J.V. Maher, N. Easwar, W.I. Goldberg and M. Joshua.
- "Complete Fusion of  $F^{19}$  with A1 and Si Isotopes," Physical Review C24, 2507 (1981). W.S. Chiou, M.W. Wu, N. Easwar and J.V. Maher.

**Papers Presented at Professional Meetings** (\*: Smith College students)

“Investigation of the effect of wall friction on the flow rate in 2D and 3D Granular Flow”

Brenda Carballo-Ramirez\*, Mollie Pleau\*, Nalini Easwar, Smith College, Northampton, MA; Sumit K. Birwa, TCIS Hyderabad; Neil Shah, Shubha Tewari, University of Massachusetts, Amherst, MA. Presented at the March APS meeting, Baltimore, MD (2016)

“Interplay between packing and flow in the shear zone at the wall of a granular hopper flow”

Brenda Carballo Ramirez\*, Maya Lewin-Berlin\*, N.Menon, N.Easwar\_Presented at the March APS meeting, Baltimore, MD (2013)

“Using the science of granular materials to engage middle and high school students in the process of scientific enquiry”.

Jennifer Podel\*, Nalini Easwar, Smith College; Shubha Tewari, Karl Martini, Western New England University, Springfield, MA; Kristin Dolcimascolo, Amherst Regional Middle School, Amherst, MA; Eric Newman, Northampton High School, Northampton, MA.  
-presented at the March meeting of APS(2013)

“Spatial Force Correlations in 3D Granular Flow”

Kelsey Hattam\*, Alisa Stratulat\*, Efrosyni Seitaridou\*, Nalini Easwar, Smith College, Northampton, MA, Narayanan Menon, University of Massachusetts, Amherst, MA.  
-presented at the American Physical Society meeting, Pittsburgh, PA (2009)

“Shear zones at the walls of a 2D gravity-driven flow of grains” Kelsey Hattam\*, Nalini Easwar, Smith College, Northampton, MA; Narayanan Menon, University of Massachusetts, Amherst, MA.  
- presented at the American Physical Society meeting, Pittsburgh, PA (2009)

“Force fluctuations in collisional and frictional granular flows” Emily Gardel\*, Efrosyni Seitaridou\*, Ellen Keene\*, Nalini Easwar, Smith College, Northampton, MA., Narayanan Menon, University of Massachusetts, Amherst, MA. Poster presented at the Gordon Research Conference, July 24-28, 2007 Queen’s Collge, Oxford, UK.

“Force fluctuations in collisional and frictional granular flows” Emily Gardel\*, Efrosyni Seitaridou\*, Ellen Keene\*, Nalini Easwar, Smith College, Northampton, MA., Narayanan Menon, University of Massachusetts, Amherst, MA. March 2006 meeting of the American Physical Society, Baltimore, MD

“ Crossover from Collisional to Frictional regime in a 3-dimensional Granular Flow” Effrosyni Seitaridou\*, Ellen Keene\*, Nalini Easwar, Narayanan Menon. March 2005 meeting of the American Physical Society, Los Angeles, CA.

“ Velocity and Force Fluctuations in 2D granular Flow” paper presented at the International Statistical Physics Conference” Calcutta, India: July 2004

“Local Correlations of Velocity and Force in a 2D Granular Flow” Emily Gardel\*, Sonia M. Dragulin\*, Nalini Easwar, Narayanan Menon. March 2004 meeting of the American Physical Society, Montreal, Canada

“Spatial and temporal correlations of Velocity and Force in a 2D Granular Flow” Emily Gardel\*, Sonia M. Dragulin\*, Nalini Easwar, Narayanan Menon. March 2004 meeting of the American Physical Society, Montreal, Canada

“Correlations between velocity and force fluctuations in a 2-D granular flow” E. Gardel\*, S. Dragulin\*, N.Easwar, N.Menon Greater Boson Statistical Mechanics Conference” August 2003.

“Velocity and Force fluctuations in a 2D granular flow” N. Easwar, S. Dragulin\* and N. Menon presentation at the ‘Complex Fluids Workshop’ July 19, 2002 at the University of Massachusetts

“Velocity and Force fluctuations in a 2D granular flow” N. Easwar, S. Dragulin\* and N. Menon, poster presentation at the Gordon Research Conference on granular materials and granular flow, June30-July 4, 2002.

“Correlations between velocity and force fluctuations in a 2D granular flow” S. Dragulin\*, N. Easwar and N. Menon. American Physical Society meeting, March 2002

“Force Fluctuations in Flowing Granular Material” Emily Longhi\*, N. Easwar and N. Menon. American Physical Society Meeting, March 2000. Bull. Am. Phys. Soc 45, No 1. (2000)

"Structure and free energy of cholesteric DNA droplets". H. Strey, H. Hong\*, N. Easwar. American Physical Society Meeting, March 2000. Bull. Am. Phys. Soc 45, No 1, 661(2000)

"Observation of Normal and Localized Vibrational Modes in a Non-uniformly Loaded string". A. Malhotra\*, D. Lueerssen, N. Easwar. New England Section meeting of the American Physical Society. Spring 2000

"Localized modes on a loaded string". Presented at the Hudson Valley Mathematics Symposium, Spring 2000. A. Malhotra\*, D. Lueerssen, N. Easwar.

"Implementation of Moore's IUPP-Based "Six Ideas" at Smith College: I. First-Semester Classes". N. Fortune, N. Easwar, D. Weinberger. American Physical Society Meeting, March 1999 Bull. Am. Phys. Soc 44, 642 (1999).

"Implementation of Moore's IUPP-Based "Six Ideas" at Smith College: II. Second-Semester Classes". N. Easwar, N. Fortune, D. Weinberger, American Physical Society Meeting, March 1999 Bull. Am. Phys. Soc 44, 642 (1999).

"Development of Laboratories to Supplement Moore's IUPP-Based "Six Ideas" at Smith College: II. Electricity, Magnetism, Waves, and Optics". D. A. Weinberger, N. Fortune, N. Easwar, J. Pfabe, American Physical Society Meeting, March 1999. Bull. Am. Phys. Soc 44, 735 (1999).

"Development of Laboratories to Supplement Moore's IUPP-Based "Six Ideas" at Smith College: I. Mechanics and Thermodynamics" D. A. Weinberger, N. Fortune, N. Easwar, J. Pfabe, American Physical Society Meeting, March 1999 Bull. Am. Phys. Soc 44, 735 (1999).

“Highly Monodisperse aggregate structures near the cloud point of an aqueous amphiphilic system” K. Murthy, N. Easwar, E. Singer\*. Presented at the Materials Research Society Meeting (MRS) Fall 1997.

“Monodisperse Vesicular structures produced from a structureless aqueous amphiphilic system” K. Murthy, N. Easwar, E. Singer\* American Physical Society Meeting, March 1998. Bull. Am. Phys. Soc 43, 399 (1998).

“Simultaneous measurement of thickness and refractive index changes of a thin film using optical interferometry” N. Easwar, R. Fantini\*, E. Moon\*. American Physical Society Meeting, March 1996 Bull. Am. Phys. Soc 41, No. 1 (1996).

“Angle dependent dynamic light scattering measurements of the diffusion of high molecular weight polystyrene in a good solvent” R. Dawood\*, K. Ohlmann\*, N. Easwar. New England Section meeting of the American Physical Society. Spring 1995.

"Investigation of possible hysteresis effects in the coil globule transition of polystyrene” K. Ohlmann\*, R. Dawood\*, N. Easwar. New England Section meeting of the American Physical Society. Spring 1995.

"Diffusion of strongly confined linear polymers and weakly confined star polymers in porous glass: Invited paper presented at the workshop on "Novel applications of light scattering to problems in polymer physics", Istanbul, Turkey, May 15-18, 1994.

"Optical Interferometric Method for the Measurement of out-of-plane thickness changes in thin films" N.Easwar, C.Ofcarcik\*, R.Farris, J.Vrtis. American Physical Society Meeting, March 1993. Bull.Am. Phys.Soc., 38 (544) 1993.

"Effective combination of student involvement and software in the undergraduate Physics laboratory," - 1991 IBM Academic Computing Conference.

"Bridging the effects of turbulence in the nucleation and spinodal regions of a phase separating binary mixture" - presented at the spring APS-NES meeting. Bull.Am. Phys. Soc., 36 (2040) 1991.

"Phase Separation in a binary system of colloidal spheres: evidence for entropic depletion forces" - presented at the Condensed Matter Conference in the Bhabha Atomic Research Center, Bombay, India (Nov. 1990) and the March, 1991 APS meeting. Bull. Am. Phy. Soc., 36 (546) (1991).

"Relativistic Time Dilation - an experiment with Cosmic Ray muons" 1989 APS-NES spring meeting. Bull. Am. Phys. Soc., 34 1855 1989.

"The effect of turbulence on the phase transition in a binary liquid mixture: presented at the March 1989 APS meeting. Bull. Am. Phys. Soc., 34 1019 (1989).

"Diffusion of linear and star polymers confined in a porous material," presented at the March 1988 APS meeting. Bull. Am. Phys. Soc., 33 641 (1988).

"Search for Instability on a Quenched Liquid Interface," presented at the March 1984 meeting. Bull. Am. Phys. Soc 29 485 (1984).

"Velocity-Composition Coupling in a Stirred Binary Mixture," presented at the March 1983 meeting. Bull. Am. Phys. Soc., 28 303 (1983).

"Suppression of Spinodal Decomposition by Stirring," Bull. Am. Phys. Soc., 28 302 (1983).

"Complete Fusion of  $^{19}\text{F}$  with  $^{27}\text{Al}$  and  $^{28,30}\text{Si}$ ," Bull. Am. Phys. Soc., 26, 1221 (1981).



"Fusion of  $^{180}$  with A1, Si," Bull. Am. Phys. Soc., 26, 1221 (1981).

"Search for  $\alpha$  cluster states in the giant resonance region." Bull. Am. Phys. Soc., 24 723 (1980).

### **OTHER PROFESSIONAL ACTIVITIES**

Secretary/Treasurer : New England Section of the American Physical Society (2008-2010)

Executive Committee: New England Section of the American Physical Society

Reviewer: Science Talent Reports from Massachusetts High Schools

Reviewer: Grant Proposals to the Science Scholars fellowship program of Radcliffe College and Petroleum Research Fund.

Reviewer: For papers in Macromolecules, American Journal of Physics.

Chair: Theme session of the Spring Meeting of the New England Section of the American Physical Society

Executive Committee: American Chapter of Indian Physics Association.  
New England Section of APS.

Smith Chapter of Sigma Xi: served as nomination committee chair, treasurer and the president

### **Professional Memberships**

American Physical Society

Sigma Xi

American Chapter of the Association of Indian Physicists

### **Committees and College Service**

1. Library Committee- Department representative (1987-90)
2. Five College Advanced Lab Committee
3. TRION Project - A day of Science at Smith (1988-89)
4. GTE Science Day at Smith (1988)\_
5. Open campus talk to newly admitted students
6. Chair - Sigma Xi Admissions Committee (1991-93)
7. Department representative to Science Planning Committee (1991-92)
8. Current Students/Future Scientists Workshop (1992)
9. Smith Summer Science Program (1992, 1994)
10. Elected member (3 year term) CFCD Committee (1994-97)(Campus Committee on Faculty Compensation and Development)
11. Search Committees: Dean for Religious Life, Director of Ed. Technology
12. Search Committee: Director of Educational Technology
13. Sigma Xi: President (2000 - 2001)
14. Executive Committee: American Physical Society - New England Section
15. Nominations Committee: American Physical Society - New England Section
16. Nominated to the Board of Counsellors, Smith College

17. Science Center Programming Committee and Renovation Sub committee.(2002,2003)
18. Board of Admissions
19. Board of Pre-health Advisors
20. Library Committee (elected member)

## Student Participation in Research

Since my appointment at Smith College, I have directed the work of several students in the research laboratory. It has been a very pleasant experience working with these young, bright and enthusiastic students. A brief summary of each student's involvement follows (summer internships and semester work: \*, special studies: #, honors thesis: \*\*).

A brief summary of each student's involvement follows:

- Jenny Banh, 2014-2015 AEMES student “ Design of the Gripper Arm using force chains in granular material”
- Sarah Thalheimer, 2014-2015 SRIDE student “ Design of a Gripper Arm based on granular force chains”
- Brenda Carballo-Ramirez'14 Post- Bach (2014-2015) Friction on Granular Flow
- Maya Lewin-Berlin, Research Assistant: Packing Structure of flowing granular columns
- AEMES student ( 2010-2012) Brenda Carballo Ramirez working on Complex Fluids
- Aimee Shore, Adrienne Muenchow and Catherine Mc.Guinness (Spring 2008)
- Alisa Stratulat'09 (Fall 2007) Research Project: ‘Distribution of durations of high forces at the boundary of granular flow’
- Kelsey Hattam '09 (Summer 2007, Fall 2007, Spring 2008 and honors thesis\*\* 2008-2009) Research Project: Direct spatial force correlations at the boundaries of granular flow’
- Elizabeth Jensen'07 Research assistant (Summer 2005\* and Fall 2005\*): Light Scattering and Rheological study of Laponite-polymer solutions”
- Ellen Keene'05 Research Assistant (Fall 2003\*, 2004-2005 \*\*). Project “Spatial Velocity Correlations”
- Emily Gardel'06 Research Assistant “ Mapping force and velocity correlations in granular 2D flow” (Spring 2005#Spring 2003, summer 2003\*, fall 2003,2005-2006\*\*)
- Efrosyni Seitaridou'02 (Spring 2002 and Summer 2002\*). Force fluctuations in granular 3D flow.
- Sonia Dragulin '03 (Spring 2001, Summer 2001\* & Fall 2001, Summer2003\*) Research in collaboration with University of Massachusetts on ‘force fluctuations in 2D granular flow’. Student symposium presentation, paper presented at American Physical Society Meeting in March 2002.
- Brandi Wilcox '03(Fall 2002) Research Assistant: Waves in discrete media. Co-author in paper submitted to the American Physical society.

- Kim Schulze '01 (Spring 2001). Research Assistant: Wave propagation in discrete media. Co-author in paper submitted to the American Physical society.
- Elizabeth Hutchinson '01 (Spring 2001). Research Assistant: Wave propagation in discrete media. Co-author in paper submitted to the American Physical society.
- Reyasini Calistes '01 (Spring 2001). Special Studies<sup>#</sup> “Sedimentation in Bi-disperse Colloids”
- Mambi Madzivire (Summer 2000\*). "Polyelectrolyte-surfactant complexes".
- Kate Byers '02 (Summer 1999\*) Granular matter project. Mentor for outreach project with 2 high school students.
- Adriane Boscardin/Molly Breitbart (Summer 1999). Both high school students are from Amherst Regional High School, developed 4 demonstration experiments on ‘Complex fluids’.
- Helen Hong '01 (Biochemistry Student) (Summer 1999\*) Biophysics project. Conference paper (APS 2000). Paper published in “Polymer”
- Alexa Mattheyses '00 (Summer 1999\* + Special Studies 1999-00<sup>#</sup>) Liquid Crystalline phases in Chiral Systems"
- Emily Longhi '00 (Interterm 99, Summer 99\*, Special Studies 99-00<sup>#</sup>) "Force fluctuations in 2D granular flow" Conference presentation and co-author in paper published in the Physical Review Letters.
- Ayesha Malhotra '00 Summer 1999\* + Special Studies 99-00<sup>#</sup> "Wave Propagation in Discrete Media" –Co-author in paper submitted to the American Journal of Physics
- Shiho Iwanaga '99 (Special Studies 1998-99<sup>#</sup>) "Flow of granular materials"
- Jackie Nyamwanda (1996-98) (Summer work in 97\* & semester RA in 97-98) "Light Scattering from Disperse Systems"
- Hyun Kyung Chung (1996-97) Honors thesis\*\* on “Diffusion studies using dynamic light scattering”
- Emily Singer (1996-97 Special Studies<sup>#</sup>, Summer 96\* and 1997-98 pre graduate fellowship) “protein molecule complexation using dynamic light scattering” (conference paper), co-author in paper published in the Journal of Colloidal Science
- Emily Moon (Summer 1995\* and Spring 1996 Special Studies<sup>#</sup>) NSF supported collaboration with MRSEC (Materials Research Science and Engineering Center)

University of Massachusetts. Conference paper and co-author in paper published in the Review of Scientific Instruments.

- Ronni Fantini (summer 1995\* and Spring 1996 Special Studies<sup>#</sup>) NSF supported collaboration with MRSEC (Materials Research Science and Engineering Center) University of Massachusetts. Conference paper and co-author in paper published in the Review of Scientific Instruments.
- Kristin Ohlmann 1994 summer\* on a General Electric fellowship followed by Honors thesis\*\* and a conference paper (1996-96).
- Romineh Dawood 1994 summer\* on Sherman Fairchild Internship followed by Honors thesis \*\*project and a conference paper (1995-96).
- Christine Ofcarcik (Fall 1992 and Summer 1992\*) continued the above work on films through the summer. The project has proceeded successfully and Christine will be continuing work on this as her senior Honor's thesis\*\*. The abstract from the summer work is enclosed under the section of grants (CUMIRP). Awarded PolyEd Award for outstanding Undergraduate Research.
- Gretchen Walker (Fall 1992) worked on “Thickness measurements of Thin Films” - a collaboration with Umass Polymer Science and Engineering.
- Tabassum Jahangir (Summer 1991\*) received the Ford Fellowship to work on clustering in colloidal systems. She continued working on this project in Fall 1991. (Abstract from her work is included in the correspondence related to grants (FORD)).
- Smita Srinivas (Fall 1989) worked on a special studies<sup>#</sup> project on “A conical lens arrangement for the measurement of the angular distribution of scattered light”. She also presented this at a poster session at the University of Massachusetts.
- David Nolan (Summer 1989) A physics major from Harvard College worked through the NECUSE (New England Consortium for Undergraduate Science education) summer student exchange program.
- Elizabeth Karagosian (Summer 1988\*) helped develop a practical version of an undergraduate experiment in Modern Physics. She will be presenting this project entitled “Relativistic Time Dilation - an experiment with Cosmic Ray Muons” at the Spring 1989 Conference of the New England Section of the American Physical Society.
- Vasanthi Chandrasekaram (summer 1988\*) received the Dana Fellowship to work on the project: “Effect of turbulence on phase separation in a binary mixture”. She collected data and wrote software for data analysis. (Work presented at the March APS meeting).

- Louma Ghandour (Fall '87, Spring '88, Spring '89) developed computer software for online data acquisition. She worked on data analysis and interpretation of the data collected in Summer 1987. (Work was presented at the March 88 APS meeting).
- Sonya Toczek (Fall 1987) helped set up the equipment for the light scattering study of phase separation in a binary liquid mixture.

**Grants (Last ten years)** Major ones (not including travel grants, student travel, CFCD etc)

.NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts) (2008-2015) (\$177K)

.NSF -IMR (Instrumentation for Materials Research) Grant for instrumentation for imaging fast dynamics in macroscopic disordered media, 2002 (\$110K)

.NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts) (2002-2008) (\$183K)

.NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts) (1998-02) (\$174K)

.NSF Grant (Joint Collaboration through the Material Research Science and Engineering Center at the University of Massachusetts.) (1994-1999) (\$157K)

.HP Instrument Grant (1994) for electronics instrumentation for teaching lab (\$19K)