

JAMES P. MCCLYMER
PROFESSOR
DEPARTMENT OF PHYSICS AND ASTRONOMY
UNIVERSITY OF MAINE
5709 BENNETT HALL, ORONO, ME 04469-5709
PHONE:(207)-581-1034 FAX (207)-581-3410
E-MAIL: McClymer@maine.edu

EDUCATION:

B.S. 1980 University of Delaware, Physics
Ph.D. 1986 University of Delaware, Minor in Astrophysics

Research Interests

- Liquid crystals (Phase transitions, defect structures)
- Pattern formation in non-equilibrium fluids
- Complex fluids
- Dynamic light scattering and computer aided imaging

EXPERIENCE:

2001 NASA-ASEE Summer Faculty Fellowship, Biotechnology Division, Marshal Space Flight Center: Light scattering study of colloidal and protein crystals
2000-2001 University of Maine Teaching and Technology Fellow: Electronic optics presentations and learning aids
1997 & 1998 NASA-ASEE Summer Fellowship; Lewis Research Center, Microgravity Fluids Program: Diffusing Wave Spectroscopy in colloidal and Liquid Crystal solutions
1997 Visiting Associate Professor, Liquid Crystal Institute, Kent State University
1992- present Associate Professor, Department of Physics and Astronomy, University of Maine
1987-1992 Assistant Professor, Department of Physics and Astronomy, University of Maine
1985-1987 Post-Doctoral Fellow, Department of Chemistry, Temple University
1980-1985 Bartol Graduate Fellow, Bartol Research Foundation of the Franklin Institute, Department of Physics and Astronomy, University of Delaware

PROFESSIONAL SOCIETIES:

American Physical Society
Forum on Education/Forum of Physics and Society
Sigma Pi Sigma
International Liquid crystal Society

James McClymer (cont.)

PUBLICATIONS (1997-present):

- Breakdown of Dynamic Scaling of Disclination Loop Decay Biased by Electrohydrodynamic Convection in a Nematic Liquid Crystal. *Phys. Rev. Lett.*, 79, 4206 (1997).
Diffusing Wave Spectroscopy, NASA-ASEE Final Report page 73-75, Ohio Aerospace Institute (1997).
The effects of finite temporal coherence on diffusing wave spectroscopy, NASA-ASEE Final Report, page 67-69, Ohio Aerospace Institute (1998).
Liquid crystal electrohydrodynamics in the presence of a magnetic field: the dynamic scattering transition., *Liquid Crystals*, 27, 1305 (2000).
The Kinetics of Crystallization of Colloids and Proteins: a Light Scattering Study, NASA-ASEE Final Report, C33, XXXIII-1, XXXIII-5, in press (2001).

PRESENTATIONS (1997-present)

- August 2001 NASA Marshal Space Flight Center, "The Kinetics of Crystallization of Colloids and Proteins: a Light Scattering Study"
April 2001 ACS meeting, "Liquid crystalline gold phosphine complexes", Larkin, Aksenov, Dyadchenko, Lemenovskii, McClymer, A. Bruce; M. Bruce.
March 2001 APS March Meeting, " Multiple light scattering study of the Nematic to Smectic A transition"
March 2000 Trinity College Physics Department Colloquium, "Diffusing Wave Spectroscopy: A Coherence Story"
May 1999 Colloquium, University of Maine, "Diffusing Wave Spectroscopy: A Coherence Story"

June 1998 17 International Liquid Crystal Conference, "Probe Diffusion in Lyotropic Nematics"
March 1999 APS March Meeting, "Diffusing Wave Spectroscopy applied to Multiple Scattering in a Cylindrical Geometry"
August 1998 Microgravity Fluids Group at NASA Lewis Research Center, Cleveland, OH "Diffusing Wave Spectroscopy: A Coherence Story"
October 1997 Liquid Crystal Institute at Kent State University, OH, "The Breakdown of Dynamic Scaling and Other Fun Things with EHD"
August 1997 Microgravity Fluids Group at NASA Lewis Research Center, Cleveland, OH "Diffusing Wave Spectroscopy and Liquid Crystals"

Department Service

- 2001 Chair BA/BS assessment committee
1999-2001 Peer Committee
2000, 1990, Faculty Search Committees; (chair - 2000)
1990
1999 Postdoc Search Committee (chair)
1996-2000 Volunteer member of **Maine Space Grant Consortium**
1994-1996 Graduate Review Committee

James McClymer (cont.)

Department Service

1995 Chair Search Committee
1990-1995 Department Curriculum Committee
1991-1992 Local organizing Committee of the **American Association of Physics Teachers** 1992 Summer Meeting
1990 Department Development Committee
1988-1990 Department Committee to Plan BS degree
1987-1995, Graduate Admissions Committee
1998,1999, 2000

Supervised three work study students (1990, 1991, and 1992) and a work merit student(1992)

Planning member of 1997 New England section APS/AAPT meeting

Undergraduate recruitment czar (1996-2000)

Colloquium czar 1999-present

Campus Service

2001-present AFUM campus president
1999-present AFUM campus executive committee
1998-present, Member of the Faculty Senate
1989-1992
1999-2001 AFUM campus vice president
1999-2000 Member of Senate Institutional Finance Committee
1998-1999 CLAS Salary Committee
1988-1996 Participated in New Student orientation/registration,
Fall, 1996 Participated in Pulp and Paper Foundation/ College of Engineering activities at Maine School for science and Mathematics.
1996-1997 Member of BA Committee for new college of Liberal Arts and Science
1990-1992 Chair of the Faculty Senate Committee on Research and Public Service
1990-1992 Member of the Faculty Senate Executive Committee
1989-1992 Member of the Faculty Senate Committee on Research and Public Service
1987-1988, Recruitment Activities: Participated in the "Maine Difference" open,
1996, 1999, houses. Tours for prospective students
2000-present
AFUM bargaining council 1996-present