

## BIOGRAPHICAL SKETCH

### Arlette R. C. Baljon

#### Appointments

<u>Institution</u>	<u>Rank</u>	<u>Date</u>
San Diego State University	Assistant Professor	1999-2005
San Diego State University	Associate Professor	2005-

#### Professional Preparation

<u>Predocutorial</u>	<u>Major</u>	<u>Degree and Year</u>
University of Utrecht, The Netherlands	Physics	Doctoraal (MS) 1988
University of Chicago	Physics	Ph.D. 1993

<u>Postdoctoral</u>	<u>Area</u>	<u>Years</u>
Johns Hopkins University	Soft Condensed Matter	1993-1996
Cornell University	Soft Condensed Matter	1996-1999

#### Selected Publications

- "End-bridging Monte Carlo simulation of bulk and grafted amorphous polyethylene above and below the glass transition", O. Alexiadis, V. Mavrantzas, R. Khare, J. Beckers, and A. Baljon, *Macromolecules*, **41**, 987 (2008).
- "Numerical study of the gel transition in reversible associating polymers," A. R. C. Baljon, D. Flynn, D. Krawzsenek, *J. Chem. Phys.* **126**, 044907 (2007), also selected to appear in the *Virtual Journal of Biological Physics Research*.
- "Modelling Tubular Shapes of Mitochondrial Membranes," A. Ponnuswamy, J. Nulton, J. M. Mahaffy, P. Salamon, T.G. Frey, and A.R.C. Baljon, *Physical Biology* **2**, 73 (2005).
- "Glass Transition Behavior of Polymer Films of Nanoscopic Dimension," Arlette R.C. Baljon, Regina Barber DeGraaff, Maarten H.M. v. Weert, and Radjesh Khare, *Macromolecules* **38**, 2391 (2005).
- "Percolation of Domains of Immobile Segments in Supercooled Thin Polymeric Films," Arlette R.C. Baljon, J. Billen, and R. Khare, *Phys. Rev. Lett.* **93**, 255701 (2004), also selected to appear in the *Virtual Journal of Biological Physics Research*.
- "Transitory response of confined polymer films subjected to oscillatory shear," Arlette R. C. Baljon, *J. Chem. Phys.* **121**, 11402 (2004), also selected to appear in the *Virtual Journal of Nanoscale Science and Technology* and that of *Biological Physics Research*.
- "Computational studies of time dependent adhesion increase due to strong specific interfacial interactions," Arlette R. C. Baljon, Travis Depuy, and Joris Vorselaars, *Macromolecules* **37**, 5800 (2004).
- "Simulations of crazing in polymer glasses: Effect of chain length and surface tension," Arlette R.C. Baljon and Mark. O. Robbins, *Macromolecules*, **34**, 4200 (2001).
- "Molecular Dynamics Study of the Intercalation of Diblock Copolymers into Layered Silicates," Jae Youn Lee, Arlette R.C. Baljon, Dotsevi Y. Sogah, and Roger F. Loring, *J. Chem. Phys.*, **112**, 9112 (2000).

## Invited Talks

- 9/05 ``Jamming in supercooled nanoscale polymeric films," CECAM (Centre Européen de Calcul Atomique et Moléculaire) Workshop, Lyon, France
- 8/03 ``Spatio-temporal patterns in ultra-thin polymeric films," Conference on Pattern Formation in Physics and Biology," Kalvi Institute for Theoretical Physics, Santa Barbara. This talk can be viewed online at: [http://online.kitp.ucsb.edu/online/pattern\\_c03/baljon/](http://online.kitp.ucsb.edu/online/pattern_c03/baljon/)
- 6/03 ``Computational studies of time dependent adhesion increase due to strong specific interfacial interactions," Polymer Consortium Meeting, Accelerlys Inc, San Diego.

## Recent Funding

- 8/05- ``*Spatio-dynamical Order in Reversible Polymeric Gels*," National Science Foundation, Division of Materials Research, \$240,000.
- 6/02-8/06 ``*Structure-composition relationships for curved membranes*," Petroleum Research Fund, American Chemical Society, \$35,000.

## Teaching

- Graduate Classical Mechanics and Statistical Mechanics
- Undergraduate Modern Physics, Thermodynamics, and Classical Mechanics
- Introductory Physics (Mechanics)
- Elective on Polymers and Biophysics

## Service and Leadership

### Committee Work

- Senate Committee on Academic Resources and Planning 2005-
- Senate Committee on Undergraduate Curriculum 2001-2005
- College Research Committee 2000-2001
- Department Retention, Tenure and Promotion Committee 2005-

### Curriculum Development

- Restructured the undergraduate degree in Chemical Physics at SDSU.
- Designed a new course in Polymer Science (on synthetic and biological polymers) for undergraduate and graduate students in Physics and Chemistry.

### Referee

Physical Review, Macromolecules, Journal of Polymer Science, European Physical Journal.