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### Publications

#### Peer-reviewed

1. *Active width at a slanted active boundary in directed percolation*  
*Chun-Chung Chen, Hyunggyu Park and Marcel den Nijs, Physical Review E* **60**, 2496 (1999)
2. *Interface view of directed sandpile dynamics*  
*Chun-Chung Chen and Marcel den Nijs, Physical Review E* **65**, 031309 (2002)
3. *Directed avalanche processes with underlying interface dynamics*  
*Chun-Chung Chen and Marcel den Nijs, Physical Review E* **66**, 011306 (2002)
4. *Cohesion-induced deepening transition of avalanches*  
*Chun-Chung Chen, Physical Review E* **66**, 061304 (2002)
5. *Ring-chain equilibrium in reversibly associated polymer solutions: Monte Carlo simulations*  
*Chun-Chung Chen and Elena E. Dormidontova, Macromolecules* **37**, 3905 (2004)
6. *Supramolecular polymer formation by metal-ligand complexation: Monte Carlo simulations and analytical modeling*  
*Chun-Chung Chen and Elena E. Dormidontova, Journal of American Chemical Society* **126**, 14972 (2004)
7. *Architectural and structural optimization of the protective polymer layer for enhanced targeting*  
*Chun-Chung Chen and Elena E. Dormidontova, Langmuir* **21**, 5605 (2005)
8. *Monte Carlo simulations of end-adsorption of head-to-tail reversibly associated polymers*  
*Chun-Chung Chen and Elena E. Dormidontova, Macromolecules* **39**, 9528 (2006)
9. *Effect of orientational specificity of complexation on the behavior of supramolecular polymers: theory and simulation*  
*Matthew C. Hagy, Chun-Chung Chen and Elena E. Dormidontova, Macromolecules* **40**, 3408 (2007)

10. *Metabolic implications for the mechanism of mitochondrial endosymbiosis and human hereditary disorders*  
Benjamin Lovegren de Bivort, Chun-Chung Chen, Fabrizio Perretti, Giacomo Negro, Thomas M. Philip and Yaneer Bar-Yam, *Journal of Theoretical Biology* **248**, 26 (2007)
11. *Reversible association and network formation in 3:1 ligand-metal polymer solutions*  
Shihu Wang, Chun-Chung Chen and Elena E. Dormidontova, *Soft Matter* **4**, 2039 (2008)
12. *Mean-field theory of a plastic network of integrate-and-fire neurons*  
Chun-Chung Chen and David Jasnow, *Physical Review E* **81**, 011907 (2010)
13. *Event-driven simulations of a plastic, spiking neural network*  
Chun-Chung Chen and David Jasnow, *Physical Review E* **84**, 031908 (2011)
14. *Variational ansatz for quasispecies in the Eigen model*  
Min-Feng Tu, Ching-I Huang, Hsiu-Hau Lin and Chun-Chung Chen, arXiv:1011.5098 , ()

#### **Non-peer-reviewed**

1. *Computer modeling of reversible association in metallo-supramolecular polymers*  
Chun-Chung Chen and Elena E. Dormidontova, *Polymer Preprints* **45**, 391 (2004)
2. *Computer modeling of reversible adsorption of head-to-tail associating polymers*  
Elena E. Dormidontova and Chun-Chung Chen, *Polymeric Materials: Science & Engineering* **90**, 370 (2004)

#### **Presentations**

##### **Invited**

1. *Interface dynamics prospect of avalanche systems*  
University of British Columbia, Vancouver, British Columbia, April 4, 2002
2. *Monte Carlo simulations of reversibly associated polymers*  
Academia Sinica, Taipei, Taiwan, December 27, 2004  
National Central University, Chungli, Taiwan, January 6, 2005

##### **Contributed**

1. *Interface view of a directed avalanche system*  
with Marcel den Nijs, APS March Meeting 2001, Session S7.006, Seattle, Washington, March 14, 2001
2. *Interface dynamics prospect of avalanche systems*  
Condensed Matter Physics Journal Club, University of Washington, Seattle, Washington, February 6, 2002

3. *Monte Carlo simulations of ring-chain equilibrium in reversibly associated polymer solutions*  
Macromolecular Science and Engineering Graduate Student Seminar, Case Western Reserve University, Cleveland, Ohio, November 14, 2003
4. *Monte Carlo simulations of polymer brushes formed by reversible head-to-tail associating polymers*  
by Elena E. Dormidontova, APS March Meeting 2004, Session V31.010, Montreal, Quebec, March 25, 2004
5. *Computer modeling of reversible association in metallo-supramolecular polymers*  
with Elena E. Dormidontova, The 227th ACS National Meeting, Session POLY 40, Anaheim, California, March 28, 2004
6. *Computer modeling of reversible adsorption of head-to-tail associating polymers*  
by Elena E. Dormidontova, The 227th ACS National Meeting, Session PMSE 226, Anaheim, California, March 30, 2004
7. *Theoretical and computer modeling of supramolecular polymers*  
by Elena E. Dormidontova, 40th IUPAC World Polymer Congress, Symp. 2.4 CL, Paris, France, July 6, 2004
8. *Modeling of chain architecture for targeted drug delivery*  
with Jessica Kingsberg, Macromolecular Science and Engineering Graduate Student Seminar, Case Western Reserve University, Cleveland, Ohio, November 5, 2004
9. *Computer modeling of ring to chain transition in reversibly associated polymers*  
by Matthew Hagy, with Elena E. Dormidontova, ACS Cleveland Section, 2005 Meeting-in-Miniature, Session 5.3, Baldwin-Wallace College, Berea, Ohio, March 23, 2005
10. *Towards improving the targeting efficiency of end-functionalized polymer brushes*  
with Elena E. Dormidontova, APS March Meeting 2005, Session W31.00004, Los Angeles, California, March 24, 2005
11. *Kinetics of chain exchange in diblock copolymer micelles*  
with Elena E. Dormidontova, APS March Meeting 2006, Session G28.00009, Baltimore, Maryland, March 14, 2006
12. *Chain Exchange Kinetics in Diblock Copolymer Micelles: Comparison of Experimental and Simulation Results*  
by Elena E. Dormidontova, with Reidar Lund, Lutz Willner and Dieter Richter, APS March Meeting 2006, Session G28.00010, Baltimore, Maryland, March 14, 2006
13. *Computer simulation of supramolecular assembly by metal-ligand complexation*  
by Shihu Wang, with Elena E. Dormidontova, APS March Meeting 2006, Session K25.00013, Baltimore, Maryland, March 14, 2006
14. *Spike-timing dependent plasticity in integrate-and-fire networks*  
with David Jasnow, APS March Meeting 2008, Session B16.00002, New Orleans, Louisiana, March 10, 2008

15. *Synaptic weight distribution under spike-timing dependent plasticity*  
with David Jasnow, APS March Meeting 2009, Session Q40.00006, Pittsburgh, Pennsylvania, March 18, 2009

### Posters

1. *Interface view of a directed avalanche system*  
*Chun-Chung Chen* and Marcel den Nijs, Boulder School for Condensed Matter and Materials Physics, Boulder, Colorado, July 5–6, 2001
2. *Theoretical modeling of reversibly associated polymers*  
*Chun-Chung Chen* and Elena E. Dormidontova, Research ShowCASE 2003, Case Western Reserve University, Cleveland, Ohio, April 4, 2003
3. *Optimization of targeting for gene delivery: computer modeling*  
*Chun-Chung Chen* and Elena E. Dormidontova, 40th IUPAC World Polymer Congress, Symp. 5.3 P5.3-14, Paris, France, July 6, 2004
4. *Monte Carlo study of reversibly associated polymers*  
*Chun-Chung Chen* and Elena E. Dormidontova, APS March Meeting 2005, Session C1.00176, Los Angeles, California, March 21, 2005; Research ShowCASE 2005, ID 377, Case Western Reserve University, Cleveland, Ohio, April 6-7, 2005
5. *Analytical and computer modeling of ring to chain equilibrium in reversibly associated polymers*  
Matthew C. Hagy, *Chun-Chung Chen* and Elena E. Dormidontova, Research ShowCASE 2005, ID 352, Case Western Reserve University, Cleveland, Ohio, April 6-7, 2005
6. *Molecular modeling of reversible supramolecular complexes*  
Jessica G. Kingsberg, *Chun-Chung Chen* and Elena E. Dormidontova, Research ShowCASE 2005, ID 354, Case Western Reserve University, Cleveland, Ohio, April 6-7, 2005
7. *Monte Carlo Simulation of Reversibly Associating Networks*  
Shihu Wang, *Chun-Chung Chen* and Elena E. Dormidontova, APS March Meeting 2006, Session Q1.00036, Baltimore, Maryland, March 15, 2006; Research ShowCASE 2006, ID 112, Case Western Reserve University, Cleveland, Ohio, April 5-6, 2006