

## Leslie Lou Chavez

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### EDUCATION

1999-2005 Ph.D. physics/biophysics, University of CA, San Diego

1995-1999 B.S. physics, University of New Mexico  
magna cum laude in physics  
summa cum laude in university honors  
minor in math

### EMPLOYMENT

2000-2005 *graduate student researcher, University of California, San Diego  
department of physics and Center for Theoretical Biological  
Physics*

I am finishing my dissertation on protein folding with Dr. José N. Onuchic. Using molecular dynamics simulations, I create protein models to study how the topology (structure) of the protein affects its folding mechanism. To analyze the data, I find and develop reaction coordinates that characterize the folding process.

1999-2001 *graduate teaching assistant, University of California, San Diego  
department of physics*

I held problem sessions, wrote homework solutions, and graded homework for upper-level undergraduate quantum mechanics, electricity and magnetism, and pre-medical level physics.

1996-1998 *undergraduate research assistant, University of New Mexico  
physics department*

I helped construct a wire chamber muon detector as part of the PHENIX collaboration with Dr. Bernd Bassaleck. I aided in the design of a device to check the tension of the wires in the detector and programmed in LabVIEW to automate this process.

## PUBLICATIONS

**Leslie L. Chavez**, José N. Onuchic, and Cecilia Clementi. "Quantifying the roughness on the Free Energy Landscape: Entropic bottlenecks and protein folding rates". *J. Am. Chem. Soc.* **126**(27) 8426 – 8432 (2004).

Margaret S. Cheung, **Leslie L. Chavez**, and José N. Onuchic. "The energy landscape for protein folding and possible connections to function". *Polymer*, **45** 547-555 (2004).

Melinda Roy, **Leslie L. Chavez**, David K. Heidary, José N. Onuchic, and Patricia A. Jennings. "The native energy landscape for interleukin-1 $\beta$ . Modulation of the population ensemble through native-state topology." *submitted to the Journal of Molecular Biology*.

## HONORS and AWARDS

*2003-present*    *MARC predoctoral fellow, NIH grant #1 F31 GM070412-01*

Individual fellowship based on research proposal and accomplishments. Received score of 125.  
Provides tuition, stipend, and travel grant.  
Advisors: José Onuchic and Patricia Jennings.

*2001-2003*    *Molecular Biophysics Training Grant fellow*

UCSD based fellowship for graduate students in biophysics.  
Provided tuition and stipend.

*1999-2001*    *Teaching Assistant Fellowship*

*1999-2000*    *Mayer Fellowship*

\$3000 award for top applicants to the UCSD physics dept.

*1999*    *Erin Grey award for "Top Graduating Senior in Physics",  
University of New Mexico physics department.*

*1995-1999*    *Regent Scholar at University of New Mexico*

Full tuition, room, board, and books paid for undergraduate education:  
awarded to accomplished valedictorians from New Mexico high schools.

## PRESENTATIONS

### Posters

2004 Oct. Sigma Pi Sigma conference, NM: *Protein Topologies and Folding Mechanisms*

2004 Jan. Gordon research conference, CA: *Quantifying the Roughness on the Free Energy Landscape*

2003 Oct. APS graduate student conference, Merida, Yucutan, Mexico: (awarded travel fellowship)  
*Discovering and Sculpting the Free Energy Landscape in Theory and Experiment*

2002 Aug. Protein Society meeting, CA: *Topology and Folding Kinetics: a Focus on the Route Measure, the Effective Loop Length, and the Partial Contact Order*

2002 Jan. Gordon research conference on protein folding, CA: *Topology and Folding Rates*

### Oral

2003 Jan. Molecular Biophysics Seminar, UCSD, CA: *Characterizing Topology and Frustration on the Free Energy Landscape*

1998 Apr. APS four corners meeting, NM: (awarded best undergraduate talk) *Measuring the tension of wires in a muon detector for PHENIX*

## Professional Memberships

Protein Society  
American Physical Society  
Sigma Pi Sigma, physics honors society

## REFERENCE:

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