

Drew Levin

CONTACT INFORMATION	Department of Computer Science University of New Mexico MSC01 1130 1 University of New Mexico Albuquerque, NM 87131-0001	<i>Voice:</i> (505) 366-9305 <i>Fax:</i> (505) 277-6927 <i>E-mail:</i> drew@cs.unm.edu
CITIZENSHIP	USA	
RESEARCH INTERESTS	Complex systems, randomized intelligent search, agent-based models, distributed autonomous systems, biological modeling, competitive co-evolution	
EDUCATION	University of New Mexico, Albuquerque, NM USA Ph.D. Candidate, Computer Science (expected graduation date: Winter 2014) <ul style="list-style-type: none">• Research Topic: The Cost of Communication in Distributed Autonomous Systems• Advisor: Professor Stephanie Forrest• Area of Study: Complex Systems Harvey Mudd College, Claremont, CA USA B.S., Computer Science, May 2002 <ul style="list-style-type: none">• Focus in artificial intelligence and computer algorithms	
AWARDS	Harvey Mudd College <ul style="list-style-type: none">• Dean's List: Spring 1999, Fall 2000, Spring 2000, Fall 2001, Spring 2001	
ACADEMIC EXPERIENCE	University of New Mexico, Albuquerque, NM USA <i>Research Assistant</i> August 2006 to present <ul style="list-style-type: none">• Current Project: Spatially explicit model of the lymphocyte diaspora in influenza-infected lung quantifies constraints of chemokine directed migration In Draft <i>Graduate Student</i> August 2006 to present <ul style="list-style-type: none">• Passed Comprehensive Examination (Jan 2008)• Graduate GPA: 4.02 Harvey Mudd College, Claremont, CA USA <i>Undergraduate Researcher</i> May 2001 to August 2001 <ul style="list-style-type: none">• Summer Research Fellow with Professor Jim Marshall• Improved and modified code of Metacat for distribution	
PUBLICATIONS	Mitchell H, Levin D, Forrest S, Beauchemin C, Tipper J, Knight J, Donart N, Layton C, Pyles J, Gao P, Harrod K, Perelson A, Koster F <i>Higher replication efficiency of 2009 (H1N1) pandemic influenza than seasonal and avian strains: kinetics from epithelial cell culture and computational modeling</i> J. Virology, Jan 2011, p. 1125-1135.	

Banerjee S, Levin D, Moses M, Koster F, Forrest S
The Value of Inflammatory Signals in Adaptive Immune Responses
 ICARIS, 2011, p. 1-14

POSTERS	<p>Drew Levin, et. al. <i>Replication efficiency of influenza: kinetics from cell culture and modeling</i> UNM CS Student Conference, March 1, 2010 University of New Mexico, USA</p>	
PRESENTATIONS	<p><i>Designing and fitting an adjusted SIR model to experimental data</i> UNM CS Student Conference, April 2, 2009 University of New Mexico, USA</p> <p><i>The Value of Inflammatory Signals in Adaptive Immune Responses</i> ICARIS, July 18, 2011 Cambridge University, UK</p>	
FELLOWSHIPS	<p><i>PIBBS: Program in Interdisciplinary Biological & Biomedical Sciences</i> Research Fellowship \$22,537 per year for 2 years UNM Department of Biology University of New Mexico, USA</p>	2009-2011
ENRICHMENT	<p><i>Santa Fe Institute: Complex Systems Summer School</i> Student St. Johns College and the Santa Fe Institute Santa Fe, NM USA</p>	June 2010
COURSES TAUGHT	<p><i>UNM Bio 409 / Bio 509 / Stat 479: Probability for Scientists</i> Hands-on introduction to probability and statistics for non-math majors Co-teachers: Christian Gunning, Ara Kooser Fall 2013</p>	
GUEST LECTURES	<p><i>Complex Numbers and the Unit Circle</i> UNM CS 530: Geometric and Probabilistic Methods in Computer Science Professor Lance Williams, Fall 2007</p> <p><i>Introduction to Modeling</i> UNM CS 365: Introduction to Scientific Modeling Professor Stephanie Forrest, Fall 2012</p> <p><i>Fitting an ODE Model to Data</i> UNM CS 365: Introduction to Scientific Modeling Professor Stephanie Forrest, Fall 2012</p>	

Modeling T cell search in the human lung
UNM CE 691: Civil Engineering Graduate Seminar
Professor Andrew Schuler, Fall 2013

PROFESSIONAL
EXPERIENCE

Infotech Systems Management, San Diego, CA USA

Software Engineer

January 2004 to October 2004

- Created web applications to manage health records for local hospitals and insurance companies
- Applications included use of HTML, JavaScript, ASP, COM, Visual Basic, and SQL programming

Avail Medical Products, San Diego, CA USA

Software Developer

December 2002 to December 2003

- Created new software applications to aid the management and accounting staff
- Applications included use of Visual Basic, VBA, FoxPro, and MS Access programming

Marine Biological Laboratory, Woods Hole, MA USA

Harvey Mudd College: Senior Clinic Participant **September 2001 to May 2002**

- Created a parallelized implementation of the Smith-Waterman algorithm for sequencing DNA
- Algorithm was specifically designed and optimized for the Itanium 64 processor
- Code was written in C and assembly

Pipeworks Software, Eugene, Or USA

Programming Intern

June 2000 to August 2000

- Created software tools to aid senior programmers and artists in the development of games for the Microsoft XBox
- Code was written in C++

SERVICE

Author: Matlabgeeks.com

May 2011 to present

- Author of a five-part Matlab tutorial regarding the use of ODEs and DDEs in data fitting and analysis

Tutor: Intro to Computer Programming

Fall 2010 - Spring 2011

- Tutored two eighth graders. We focused on object-oriented programming in Java.

President: CS Graduate Student Association

May 2008 to May 2009

- Initiated and organized activities for the graduate students of the Department of Computer Science, University of New Mexico
- Organized and hosted the 2009 Computer Science UNM Student Conference

TECHNICAL
SKILLS

Programming: C, C++, Java, Scala, Python, SML, Scheme, Prolog, Visual Basic, HTML, JavaScript, VBA, SQL, SVN, GIT, and others

MATLAB experience: linear algebra, neural networks, non-linear differential equations, genetic algorithms, statistics, gradient descent search, visualization

Applications: \TeX , \LaTeX , \BibTeX , MS Visual Studio, Microsoft Office, Open Office, Inkscape, and other common productivity packages for Windows, OS X, and Linux platforms

Operating Systems: Microsoft Windows, Linux

MATHEMATICAL
EXPERTISE

Function Minimization including Gradient Descent and Genetic Algorithm methods

System Modeling using Systems of ODEs and Agent Based Models

Algorithmic Optimization, Probability and Statistics, Computation Theory