Fedoroff Named Science and Technology Adviser to the U.S. Secretary of State

U.S. Secretary of State Condoleezza Rice has named Dr. Nina V. Fedoroff (SFI External Professor) to be her new Science and Technology Adviser. Nina Fedoroff is the Wil-laman Professor of Life Sciences and Evan Pugh Professor in the Biology Department and the Huck Institutes of the Life Sciences, Pennsylvania State University. Dr. Fedoroff is also a member of the SFI Science Steering Committee.

Fedoroff receives National Medal of Science and Technology from President Bush

President George W. Bush announced the recipients of the nation’s highest honor for science and technology, naming the recipients of the 2006 National Medals of Science and Technology. The National Science Foundation (NSF) administers the prestigious award program, which was established by Congress in 1959. It honors individuals for pioneering scientific research in a range of fields, including physical, biological, mathematical, social, behavioral, and engineering sciences, that enhances our understanding of the world and leads to innovations and technologies that give the United States its global economic edge. 2006 National Medal of Science Laureates include Dr. Nina V. Fedoroff (SFI External Professor and Willaman Professor of Life Sciences and Evan Pugh Professor in the Biology Department and the Huck Institutes of the Life Sciences, Pennsylvania State University).

Holland in NOVA

John Holland (SFI Trustee, SFI External Professor, and University of Michigan) appeared on the July 10 broadcast of the NOVA scienceNow program on emergence.

West Interviewed by Smart City™ Radio

Geoffrey B. West (SFI President and Distinguished Professor) will be interviewed by Smart City™ radio about his research regarding the structure and dynamics of social organizations, such as cities and corporations. Smart City™ is a weekly, hour-long public radio talk show that takes an in-depth look at urban life, the people, places, ideas, and trends shaping cities. The air date of the interview will be announced (www.smartcityradio.com).

2007 CSSS in Beijing, China

The Complex Systems Summer School in Beijing, China took place July 8 - August 4, 2007, on the campus of the Institute of Theoretical Physics, Chinese Academy of Sciences. David P. Feldman (Professor of Physics & Mathematics, College of the Atlantic) and Chen Xiaosong (Vice President, Institute of Theoretical Physics) returned to direct this four-week intensive introduction to complex behavior in mathematical, physical, living, and social systems. Fifty graduate students and postdoctoral fellows from China, the United States, and 12 other countries around the world participated in lectures and group research projects.

August Public Lecture

The next Public Lecture will be on Wednesday, August 15, 2007, at the James A. Little Theatre. Terrance Odean (Willis H. Booth Professor of Banking and Finance at the Haas School of Business, University of California at Berkeley) will give a talk entitled “Investor Behavior and Market Efficiency.” J. Doyne Farmer (SFI Professor) will join him as a discussant.

Abstract: The trading records of hundreds of thousands of individual and institutional investors show that individual investors tend to trade too frequently, hold on to their losing investments, and buy stocks that are in the news. Psychological motivations for these behaviors are overconfidence, a desire to avoid feeling regret, and the limits of human attention. These trading behaviors lead to substantial reductions in portfolio returns for individual investors. Furthermore, the trading of individual investors forecasts future asset returns.

Graduate Workshop in Computational Social Science Modeling and Complexity

The 13th annual Graduate Workshop in Computational Social Science Modeling and Complexity concluded last week. The workshop brought together ten graduate students from across the social sciences (computer science, economics, geography, philosophy, political science, and sociology) for an intensive two-week study of computational social science modeling and complexity. Students participated in lectures given by Rob Axtell, Sam Bowles, Jennifer Dunne, Charles Efferson, John Miller, Scott Page, and Jon Wilkins, and then worked on their own projects. More information about the workshop can be found at http://zia.hss.cmu.edu/econ/cw07.html

BUSINESS NETWORK NEWS

http://www.santafe.edu/events/update/businessnetwork.php

Dynamics of Flows on Networks Generates Discussion

The Business Network is pleased to report that our most recent Topical Meeting, held July 30 in Seattle, “Dynamics
of Flows on Networks,” offered attendees a dynamic series of presentations and discussions. Many thanks to our presenters, David Krakauer (Santa Fe Institute), Sidney Redner (Boston University), Peter S. Dodds (University of Vermont), and Dennis O. Donoghue (Boeing).

A DVD of the event will be sent to Business Network members in the September monthly mailing.

### 2007 Topical Meeting Schedule

- **September 6** – “Conflict, Robustness, and Creativity” with Jessica Flack (SFI Researcher). This event will be held at the L’Enfant Plaza Hotel in Washington, D.C. on September 6. Co-presented by William Glenney (CNO-SSG) and the Santa Fe Institute, the meeting will give insight into the role of conflict in the generation of novelty and complexity in complex systems.

- **September 27** – Adaptive and Resilient Computer Security Workshop (ARCS) 2007. Sixth annual Workshop co-hosted by BT and held at Imperial College London.

- **November 2-3** – “Diversity Collapse: When, Where and What are the Consequences?” Annual Business Network and Board of Trustees’ Symposium, held at Bishop’s Lodge, Santa Fe, NM.

### Publications

http://www.santafe.edu/events/update/publications.php

**Working Papers**

http://www.santafe.edu/research/publications/working-papers.php

**07-07-015**
Animal Cell Differentiation Patterns Suppress Somatic Evolution
*John W. Pepper, Kathleen Sprouffske, and Carlo C. Maley*

**07-06-014**
A General Mathematical Theory of Discounting
*Robert Axtell and Gregory McRae*

**07-06-013**
Spontaneous Emergence of Modularity in Cellular Networks
*Ricard V. Solé and Sergi Valverde*

### Refereed Literature

http://www.santafe.edu/events/update/publications.php


### Library Acquisitions

For a list of recent purchases by the SFI Library, please see http://www.santafe.edu/events/update/library.php.

### Calendar of Events

http://www.santafe.edu/events/

**August 9, 2007**
Working Group — “Southwest Archaeology,” organized by Doug Erwin (Smithsonian Institute & SFI). Held at the Santa Fe Institute.

**August 13-15, 2007**
Working Group — “Future Challenges in Theoretical Biology,” organized by Manfred Laubichler (ASU), Sonja J. Prohaska (ASU), Peter F. Stadler (University of Leipzig), and David Krakauer (SFI). Held at the Santa Fe Institute.

**August 13-24, 2007**
Educational Program — “Growing Up Thinking Scientifically (GUTS) Program,” organized by Irene Lee (SFI). Held at the Soouthside Library, Santa Fe, NM.

**August 15, 2007**
Public Lecture — “Investor Behavior and Market Efficiency,” Terrance Odean (Haas School of Business, University of California at Berkeley) organized by Ginger Richardson (SFI). Held at the James A. Little Theater, New Mexico School for the Deaf.

**September 6, 2007**
Business Network Topical Meeting — “Conflict and Cooperation: Strategy in Complex Systems,” Co-presented by William Glenney (CNO-SSG) and Shannon Larsen (SFI). This meeting will take place in Washington, D.C.

**September 11, 12, & 13, 2007**
ULAM Memorial Lecture Series — “Ancient Perspectives on Future Climate,” Daniel Schrag (Harvard University, Laboratory for Geochemical Oceanography), organized by Ginger Richardson (SFI). Held at the James A. Little Theater, New Mexico School for the Deaf.

**September 27, 2007**
Business Network Topical Meeting — “ARCS 2007 (Adaptive and Resilient Computer Security) Workshop.” This meeting is co-organized by Dr. Robert Ghanea-Hercock (BT) and
Shannon Larsen (SFI). Held at the Imperial War College, London.

October 8-10, 2007
Workshop — “High-Level Perception and Low-Level Vision: Bridging the Semantic Gap,” organized by Melanie Mitchell (Portland State University & SFI) and Garrett Kenyon (LANL). Held at the Santa Fe Institute.

October 10-12, 2007
Working Group — “Modern Malware II,” organized by Matt Williamson (Sana Security) and Eric Davis (Google). Held at the Santa Fe Institute.

October 17, 2007
Public Lecture — “Borders and Gateways: Computer Networking in Everyday Life,” Stephanie Forrest (University of New Mexico & SFI) organized by Ginger Richardson (SFI). Held at the James A. Little Theater, New Mexico School for the Deaf.

October 28-31, 2007
Workshop — “A Comparative Analysis of the Transmission and Evolution of World View Concepts,” organized by George J. Gumerman (School for Advanced Research & SFI) and Timothy R. Pauketat (University of Illinois). Held at the Santa Fe Institute.

November 2-3, 2007

November 14, 2007

November 16-19, 2007
Workshop — “Theoretical Glycobiology: The Search for a Third Language,” organized by Harold Morowitz (SFI & George Mason University), D. Eric Smith (SFI) and Lokesh Joshi (Arizona State University). Held at the Santa Fe Institute.

December 6-9, 2007
Workshop — “Models of Emergent Behavior in Complex Adaptive Systems,” organized by David Pines (UC Davis & LANL), Simon Levin (Princeton University & SFI) and Carl Simon (University of Michigan). Held at the Santa Fe Institute.

AUGUST VISITORS AND ARRIVALS
http://www.santafe.edu/events/monthlyvisitors.php


Nils Bertschinger (8/20-29) Purpose of visit: Research Collaboration. SFI host: David Krakauer.

Melissa Brown (8/19-23), Anthropology, Stanford University. Purpose of visit: Research Collaboration. SFI host: Chris Wood.

Doug Erwin (8/9-9/13), National Museum of Natural History, Smithsonian Institution. Purpose of visit: Resident Faculty. SFI host: Chris Wood.

Haim Goldberg (8/20-24), Physics, Northeastern University. Purpose of visit: Research Collaboration. SFI host: Geoffrey West.

James Hartle (8/16-9/1), Department of Physics, University of California at Santa Barbara. Purpose of visit: External Faculty. SFI host: Murray Gell-Mann.

Kunihiko Kaneko (8/7-16), Physics/Theoretical Biology, University of Tokyo. Purpose of visit: Colloquium. SFI host: Chris Wood.

Tim Kohler (8/5-11), Department of Anthropology, Washington State University. Purpose of visit: External Faculty. SFI host: Chris Wood.

Terry Laskowski (8/6-14) Purpose of visit: Research Collaboration. SFI host: Chris Wood.

Sperling Martin (8/7-10), Information Resources Management. Purpose of visit: Technical Staff. SFI host: Chris Wood.


Cris Moore (8/20-12/31), External Faculty, Santa Fe Institute. Purpose of visit: Resident Faculty. SFI host: Chris Wood.

Susanne Neckermann (8/6-26), Institute for Empirical Research in Economics, University of Zurich. Purpose of visit: Research Collaboration. SFI host: Charles Efferson.

Helen Nissenbaum (8/22-26), Culture & Communication, New York University. Purpose of visit: Research Collaboration. SFI host: Chris Wood.

Eckehard Olbrich (8/20-29), Max Planck Institute for Mathematics in the Sciences. Purpose of visit: Research Collaboration. SFI host: David Krakauer.
**Kenneth Pomeranz** (8/22-28), Department of History, University of California-Irvine. Purpose of visit: Research Collaboration. SFI host: David Krakauer.

**Arthur Robson** (8/5-18), Department of Economics, Simon Fraser University. Purpose of visit: Research Collaboration. SFI host: Sam Bowles.

**Peter Stadler** (8/1-31), Bioinformatik, Inst.f.Informatik, University of Leipzig. Purpose of visit: External Faculty. SFI host: Chris Wood.

**James Truncer** (8/19-23), Anthropological Sciences, Stanford University. Purpose of visit: Research Collaboration. SFI host: Chris Wood.