



INSIDE SFI: ON AND OFF THE COWAN CAMPUS

<http://www.santafe.edu/events/update/insidesfi.php>

Study Could Affect HIV Vaccine

In the March 16, 2007, issue of *Science Magazine* SFI Professor **Tanmoy Bhattacharya** and Visiting Researcher **Bette Korber** report the findings of a study that could affect an HIV vaccine. The March 16, 2007, issue of *The New Mexican* quotes Korber as saying, "Since HIV escapes the immune system of the human host by mutation, and the virus finds multiple ways of escaping immune recognition, our findings have practical implications for defining relevant variants for inclusion in vaccine antigens."

For more information, please see <http://www.sciencemag.org/cgi/content/full/sci;315/5818/1583>

Savage and West in Harvard University Gazette

Van Savage, former SFI Postdoctoral Fellow, and **Geoffrey West**, SFI President and Distinguished Professor, appeared in an article entitled "Sleep Found to Repair and Reorganize the Brain: Why Mice Sleep Longer than Humans," in the Harvard University Gazette on March 15, 2007. The article discusses why we eat, drink, breath, and move around, however, no one can explain why we need to sleep. Van and Geoffrey believe they have found an answer.

For more information, please see <http://www.news.harvard.edu/gazette/2007/03.15/01-sleepsize.html>

Frauenfelder Honored at Physics of Quantum Electronics Conference

Hans Frauenfelder, former SFI Science Board member and Distinguished Theoretical Physicist and senior Los Alamos National Laboratory Fellow, has been named one of three 2007 Willis E. Lamb Award winners for Laser Science and Quantum Optics at the 37th Physics of Quantum Electronics (PQE) Conference.

For more information, please see http://www.lanl.gov/news/index.php/fuseaction/home.story/story_id/9998

BUSINESS NETWORK NEWS

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

New Book by SFI Faculty

Complex Adaptive Systems: An Introduction to Computational Models of Social Life, by **John Miller** (SFI Professor and Carnegie Mellon University) and **Scott Page** (SFI External Professor and Professor, University of Michigan) premiered March 16 by Princeton University Press.

This book provides the first clear, comprehensive, and accessible account of complex adaptive social systems, by two of the field's leading authorities. Such systems—whether political parties, stock markets, or ant colonies—present some of the most intriguing

theoretical and practical challenges confronting the social sciences. Miller and Page show how to combine ideas from economics, political science, biology, physics, and computer science to illuminate topics in organization, adaptation, decentralization, and robustness.

For more information, please see <http://press.princeton.edu/titles/8429.html>

Last Chance to Register for Agent-Based Modeling and Simulation Course, April 16-20, Argonne National Laboratory

Back by popular demand, the sixth annual ABMS Course, "Capturing Business Complexity with Agent-Based Modeling and Simulation: Useful, Usable, and Used Techniques," will be held at Argonne National Laboratory from April 16-20, 2007, in Woodridge, IL. This course is an intensive introduction to agent-based modeling and simulation (ABMS) with a focus on business applications. Leaders **Michael North** and **Charles Macal** are well-known experts in the field and the course routinely receives rave reviews from attendees.

The first two days of the course will focus on ABMS concepts from the perspective of company managers and analysts. The second half of the course will focus on ABMS implementation from the perspective of company software developers and will include extensive hands-on exercises. Participants are invited to attend the first session, the second session, or both, depending on their interests. For more information, please visit the ABMS Course website <http://www.dis.anl.gov/abms/abms.html>. The ABMS Course schedule and registration forms are available on this event's information pages at http://www.santafe.edu/events/workshops/index.php/Agent_Based_Modeling_and_Simulation_Course_at_Argonne_National_Laboratory.

Topical Meeting on Diversity Generates Dynamic Discussions

Our most recent Topical Meeting held March 16 in Chicago, "Diverse Teams, Wise Crowds, and Informed Experts," offered attendees a wealth of practical information on the benefits and pitfalls of diversity in groups. Presenters included **Cass R. Sunstein** (University of Chicago Law School), **Philip E. Tetlock** (UC Berkeley Haas School of Business), **Elizabeth Mannix** (Cornell University), and **Scott Page** (SFI External Professor and University of Michigan). Many thanks to our presenters, co-host UBS, and SFI Trustees **Michael Mauboussin** and **David Weinberger** for their assistance in organizing the meeting.

A DVD and a written summary of the event will be sent to Business Network representatives in the coming weeks and follow-up events are in preparation.

2007 Topical Meeting Schedule

April 16-20 – Agent-Based Modeling and Simulation Course, Argonne National Laboratory, Woodridge, IL

TBD – Flows on Distributed Networks with **David Krakauer**, Seattle, WA

September 6-7 – Conflict, Robustness, and Creativity with **Jessica Flack**, Washington, DC

September 26 – Adaptive and Resilient Computer Security Workshop (ARCS) 2007, Sixth Annual Workshop at BT, London

November 1-2 – Diversity Collapse: When, Where, and What are the Consequences?, Annual Business Network and Board of Trustees' Symposium, Santa Fe, NM

ARCS 2007 Call for Papers—September 27, London

The Adaptive and Resilient Computer Security Workshop (ARCS) 2007 will be held this year at the Imperial War College, London. This is the sixth meeting of a workshop designed to bring together senior industrial researchers, policy makers, and leading academics in the area of adaptive approaches to computer security. The format of the meeting is one day of presentations and discussions. We are seeking high-quality presentations that can educate as well as stimulate discussion. If you are interested in attending, please submit a four-page paper to the Program Chair. The topic areas of relevance are, broadly, adaptive and biologically inspired approaches to all aspects of computer security.

For more information, please see this event's information pages at http://www.santafe.edu/events/workshops/index.php/ARCS_2007_%28Adaptive_and_Resilient_Computer_Security%29_Workshop

Business Network Fellowship Application—Deadline Passed

Thank you to all who have applied. The application period for the 2007 Fellowship ended March 31, 2007. SFI Faculty are responsible for evaluating all Fellowship submissions and Fellowship awards will be announced by June 1. Please direct all further inquiries to **Kay Frew** (kfrew@santafe.edu). Criteria and additional information are available online for your information <http://www.santafe.edu/network/fellowship.php>

SFI News Available via RSS Feed

Beginning March 1, SFI News will be available via RSS (Really Simple Syndication) Feed to your computer or PDA. This service allows you to subscribe to SFI news and read it in a variety of ways including having it delivered directly to your desktop. Please see <http://www.santafe.edu/news.php> to view and subscribe to the SFI news feed.

For details on how to subscribe from your particular platform, please visit the comprehensive RSS tutorial at <http://www.wizard-creek.com/rss/tutorial/rss-tutorial-outline.htm>

If you have further questions please email **Kay Frew** (kfrew@santafe.edu).

2006 ARCS Workshop Presentations Available

Presentations from the 2006 ARCS Workshop, held November 1-2 in Santa Fe are now available on the ARCS Workshop website <http://www.arcs-workshop.org/>. This meeting featured keynote presen-

tations by **Dr. Richard Ford** and **Dr. Richard Power** in addition to several presentations by Business Network members.

April Business Network Mailing

The April Business Network mailing will include a recent article from the *European Physical Journal B* by SFI Professor **J. Doyne Farmer**, and a DVD of the February 20 Topical Meeting co-hosted by Cisco, "Collective Intelligence in Synthetic Environments."

Business Network members will also soon receive a DVD of **Scott Page's** (SFI External Professor and University of Michigan) March 14 Public Lecture, and *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*, by **John Miller** (SFI Professor and Carnegie Mellon University) and **Scott Page**.

For more information on Complex Adaptive Systems please see <http://press.princeton.edu/titles/8429.html>

PUBLICATIONS

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

Refereed Literature

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

Bhattacharya, T., M. Daniels, D. Heckerman, B. Foley, N. Frahm, C. Kadie, J. Carlson, K. Yusim, B. McMahon, B. Gaschen, S. Mallal, J. I. Mullins, D. C. Nickle, J. Herbeck, C. Rousseau, G. H. Learn, T. Miura, C. Brander, B. Walker, and B. Korber. "Founder Effects in the Assessment of HIV Polymorphisms and HLA Allele Associations." *Science* 315(5818) (2007): 1583-1586.

Clauset, A., M. Young, and K. S. Gleditsch. "On the Frequency of Severe Terrorist Events." *Journal of Conflict Resolution* 51(1) (2007): 58-87.

Farmer, J. D., and N. Zamani. "Mechanical vs. Informational Components of Price Impact." *European Physical Journal B* 55(2) (2007): 189-200.

Ingham, K. L., A. Somayaji, J. Burge, and S. Forrest. "Learning DFA Representations of HTTP for Protecting Web Applications." *Computer Networks* 51(5) (2007): 1239-1255.

Morvan, M., E. Remila, and E. Thierry. "A Note on the Structure of Spaces of Domino Tilings." *Discrete Mathematics* 307(6) (2007): 769-773.

Queiros, S. M. D., L. G. Moyano, J. de Souza, and C. Tsallis. "A Nonextensive Approach to the Dynamics of Financial Observables." *European Physical Journal B* 55(2) (2007): 161-167.

Sardanyes, J., and R. V. Solé. "Red Queen Strange Attractors in Host-Parasite Replicator Gene-for-Gene Coevolution." *Chaos Solitons & Fractals* 32(5) (2007): 1666-1678.

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/calendar.php>

April 16-20, 2007

Business Network Topical Meeting — “Agent-Based Modeling and Simulation Course at Argonne National Laboratory.” Held at Argonne National Laboratory, IL.

April 18, 2007

Public Lecture — “Inevitable Life?” **D. Eric Smith** (SFI - Frontiers in Integrative Biological Research Program) organized by **Ginger Richardson** (SFI). Held at the James A. Little Theater, New Mexico School for the Deaf.

May 4-5, 2007

Meeting — “Annual Science Board Meeting and Symposium,” organized by **Geoffrey West** and **Chris Wood** (SFI), and Science Board Co-Chairs **David Campbell** (Boston University) and **Simon Levin** (Princeton University). Held at the Santa Fe Institute.

May 9, 2007

Public Lecture — “New Mexico’s Renewable Energy Future,” **Ben Luce** (Los Alamos National Laboratory; Director, New Mexico Coalition for Clean Affordable Energy) organized by **Ginger Richardson** (SFI). Held at the James A. Little Theater, New Mexico School for the Deaf.

June 1 - August 15, 2007

Educational Program — “NSF Undergraduate Internship Program,” organized by **Geoffrey West** (SFI). Held at the Santa Fe Institute.

June 3-29, 2007

Educational Program — “Complex Systems Summer School 2007 - Santa Fe,” Director: **Daniel Rockmore** (SFI & Dartmouth College). Held at St John’s College, Santa Fe & the Santa Fe Institute.

June 4-15, 2007

Educational Program — “Growing Up Thinking Scientifically (GUTS) Program,” organized by **Irene Lee** (SFI). Held at the Santa Fe Institute.

June 4-15, 2007

Educational Program — “Student Internship-Mentorship Program,” organized by **Irene Lee** (SFI). Held at St John’s College, Santa Fe.

June 13, 2007

Public Lecture — “Stylish Mathematics,” **Dan Rockmore** (SFI & Dartmouth College, Mathematics) organized by **Ginger Richardson** (SFI). Held at the James A Little Theater, New Mexico School for the Deaf.

June 14-15, 2007

Workshop — “Rule-Based Modeling of Biochemical Systems,” organized by **James R. Faeder** (Los Alamos National Laboratory),

William S. Hlavacek (Los Alamos National Laboratory), **Michael Hucka** (California Institute of Technology), and **Walter Fontana** (Harvard Medical School & SFI). Held at the Santa Fe Institute.

June 18 - July 6, 2007

Educational Program — “Student Internship-Mentorship Program,” organized by **Irene Lee** (SFI). Held at the Santa Fe Institute.

June 19-21, 2007

Workshop — “Nucleic Acid: The First Billion Years,” organized by **Harold Morowitz** (George Mason University), **Eric Smith** (SFI), **Shelley Copley** (University of Colorado), and **Nigel Goldenfield** (University of Illinois). Held at the Santa Fe Institute.

July 8-21, 2007

Educational Program — “Graduate Workshop in Computation Social Science Modeling and Complexity,” organized by **John Miller** (SFI & Carnegie Mellon University) and **Scott Page** (SFI & University of Michigan). Held at St John’s College, Santa Fe & the Santa Fe Institute.

July 8 - August 4, 2007

Educational Program — “Complex Systems Summer School - Beijing,” Co-directors: **David P Feldman** (SFI & College of the Atlantic) and **Chen Xiao-song** (Institute for Theoretical Physics, CAS). Sponsored by SFI in cooperation with the Institute of Theoretical Physics and the Graduate School, Chinese Academy of Sciences (CAS). Held at the Institute of Theoretical Physics in Beijing, China.

July 9-13, 2007

Workshop — “Scaling in Biological and Social Networks,” organized by **Paul Bourguine** (Ecole Polytechnique & ISC-PIF Paris), **Cris Moore** (University of New Mexico & SFI), and **Michel Morvan** (Ecole Normal Supérieure de Lyon, IXXI Lyon & SFI). Held at the Santa Fe Institute.

July 23 - August 3, 2007

Educational Program — “Growing Up Thinking Scientifically (GUTS) Program,” organized by **Irene Lee** (SFI). Held at the Santa Fe Institute.

July 25, 2007

Public Lecture — “Sexual Violence during War,” **Elisabeth Wood** (SFI & Yale University, Political Science) organized by **Ginger Richardson** (SFI). Held at the James A Little Theater, New Mexico School for the Deaf.

August 13-24, 2007

Educational Program — “Growing Up Thinking Scientifically (GUTS) Program,” organized by **Irene Lee** (SFI). Held at the Santa Fe Institute.

August 15, 2007

Public Lecture — “Investor Behavior and Market Efficiency,” **Terrence 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 6-7, 2007

Business Network Topical Meeting — “Conflict and Cooperation: Strategy in Complex Systems” Co-presented by **William Glenney**, CNO-SSG, and the Santa Fe Institute. 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. Held at the Imperial War College, London.

October 7-10, 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 17, 2007

Public Lecture — “Borders and Gateways: Computer Networking in Everyday Life,” **Stephanie Forrest** (SFI & University of New Mexico) 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 of American Research & SFI) and **Timothy R. Pauketat** (University of Illinois). Held at the Santa Fe Institute.

November 14, 2007

Public Lecture — “Technology Creating Technology,” **W. Brian Arthur** (SFI & Intelligent Systems Lab, PARC) organized by **Ginger Richardson** (SFI). Held at the James A Little Theater, New Mexico School for the Deaf.

APRIL VISITORS AND ARRIVALS

<http://www.santafe.edu/events/monthlyvisitors.php>

Nick Chater (4/17-26), Professor of Cognitive and Decision Sciences, University College London. Purpose of visit: Research Collaboration. SFI host: Morten Christiansen.

Laurence Gonzales (4/18-21), Comcast. Purpose of visit: Research Collaboration. SFI host: Chris Wood.

David Virgil Griffith (4/30-6/29), Indiana University. Purpose of visit: Research Collaboration. SFI host: Doyne Farmer.

Barbara Grosz (4/9-12), Maxwell-Dworkin Laboratory, Harvard University. Purpose of visit: Colloquia. SFI host: David Krakauer.

Erica Jen (4/11-19), Faculty, Santa Fe Institute. Purpose of visit: External Professor. SFI host: Chris Wood.

David Michayluk (4/7-16), Finance and Economics, University of Technology Sydney. Purpose of visit: Research Collaboration. SFI host: Doyne Farmer.

Thor Veen (4/3-6/9), Theoretical Biology Group, University of Groningen. Purpose of visit: Research Collaboration. SFI host: Sander van Doorn.

Max Wolf (4/3-6/9), Theoretical Biology Group, Centre for Ecological and Evolutionary Studies, University of Groningen. Purpose of visit: Graduate Studies. SFI host: Sander van Doorn.



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