



INSIDE SFI:

ON AND OFF THE COWAN CAMPUS

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

West Presents Colloquium at Cornell

SFI President and Distinguished Professor **Geoffrey B. West** was a featured colloquium speaker at Cornell University's College of Engineering on April 24. West presented a colloquium entitled, "The Complexity, Simplicity, and Unity of Living Systems; Universal Scaling Laws from Cells to Cities."

Smith Presents April Public Lecture

D. Eric Smith (SFI Professor) presented a well-received, well-attended Public Lecture on April 18 entitled "Inevitable Life?" **David Krakauer** (SFI Professor) joined Eric as discussant after the lecture. Quoting Chris Wood (SFI Vice President), "We were treated to a tour de force of science communication. I was proud to be in the audience as a member of the Institute."

May Public Lecture

The next Public Lecture will be on Wednesday, May 9, 2007, at the James A. Little Theatre. **Ben Luce** (Physicist at Los Alamos National Laboratory and Director of the New Mexico Coalition for Clean Affordable Energy), will present a talk entitled "New Mexico's Renewable Energy Future." **Jessika Trancik** (SFI Postdoctoral Fellow) will join him as a discussant.

Abstract: New Mexico has made significant progress over the past decade adopting strong renewable energy incentives and requirements; these in turn have led to significant solar, wind, and biomass development in the state. Luce explains some of these cutting-edge technologies, including new wind power and large-scale "concentrating solar power" technologies, some of which could be providing a large fraction of New Mexico's power in the near future. He will also describe new photovoltaic (solar electric) technologies, including some that almost completely diminish the need for costly materials such as silicon. On the policy side he will discuss the continuing implementation of the state's Renewable Energy Standard along with associated tax incentives and other energy legislation.

Cormac McCarthy Wins 2007 Pulitzer Prize

Cormac McCarthy (SFI Fellow) has been awarded the prestigious 2007 Pulitzer Prize for Fiction for his 2006 novel *The Road*. McCarthy is the author of nine previous novels. Among his honors are the National Book Award and the National Book Critics Circle Award.

SFI Researcher in New York Times

An article by SFI Researcher **Duncan J. Watts** (Columbia University) appeared April 15 in the *New York Times*. Entitled, "Is Justin Timberlake a Product of Cumulative Advantage?" Watts details the extensive effects of cumulative advantage on everything from

cultural marketing to business to politics. Watts is the author of "Six Degrees: The Science of a Connected Age."

Sander van Doorn Wins 2007 Young Investigator Prize

Sander van Doorn (SFI Postdoctoral Fellow) has won one of the 2007 Young Investigator Prizes, awarded annually by the American Society of Naturalists. The prize was awarded for sexual selection and sympatric speciation. The Young Investigator Prizes recognize outstanding and promising work by investigators who have received their doctorates in the three years preceding the application deadline or who are in their final year of graduate school.

Collaboration Featured in *The Scientist*

The landmark collaboration of **Geoffrey B. West** (SFI President and Distinguished Professor), **James Brown** (University of New Mexico and SFI External Faculty), and **Brian Enquist** (University of Arizona and former SFI Postdoctoral Fellow) on the laws of biological scaling was featured in the March issue of *The Scientist* in an article entitled, "A Grand Unifying Theory of Biology?" The article covered the history of the collaboration as well as their most recent work on metabolic theory.

Scientists Discover Why Life is Faster in Big Cities

SFI President and Distinguished Professor **Geoffrey B. West** recently led a team of scientists from various institutions that has found the key to understanding and quantifying seemingly contradictory features of urbanization. For many, cities are viewed as the principal source of our social and environmental problems such as crime, pollution, poverty and, often, incidence of disease. But cities have also always been disproportionately the birthplaces for most of human prosperity, innovation, and culture.

Global Survey of Lizards Reveals Greater Abundance of Animals on Islands Than in Mainland Ecosystems

Lauren Buckley (SFI Postdoctoral Fellow and UCSD Visiting Scholar) in collaboration with **Walter Jetz** (UCSD Assistant Professor) have surveyed lizard populations on islands around the world, confirming that animals on islands are much more abundant than their counterparts on the mainland. They present their results and talk about the effects on these populations of global warming. For more information go to: <http://ucsdnews.ucsd.edu/newsrel/science/04-07LizardsKM-LNI.asp>

BUSINESS NETWORK NEWS

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

Fidelity Investments and Google Join Business Network

The SFI Business Network is pleased to announce its newest members Fidelity Investments and Google. Fidelity Investments is represented by **Jason Weiner**, head of a Fidelity research arm. Mr. Weiner is based in the Boston area.

SFI is also pleased to announce that Google Inc. has joined the Business Network and formed a multi-year partnership with SFI.

45 Participants for This Year's Agent-Based Modeling and Simulation Course

The sixth annual ABMS Course, "Capturing Business Complexity with Agent-Based Modeling and Simulation: Useful, Usable, and Used Techniques," featured talks by **John Pepper** (SFI External Professor), **Stephen Guerin** (RedFish Group), and was organized by Business Network representatives **Michael North** and **Charles Macal** (Argonne National Laboratory). The participants used modeling techniques to explore a wide variety of business problems including health care plans and hospital management; the impact of civic participation among local citizens on electoral outcomes; and insurance plan management.

For more information on the annual course, please visit the ABMS website at <http://www.dis.anl.gov/abms/abms.html>.

Steelcase CEO Featured in HBR

Business Network representative **James P. Hackett**, CEO of Steelcase, Inc. was featured in last month's *Harvard Business Review*. In an article entitled, "Preparing for the Perfect Product Launch," Hackett details Steelcase's efforts to ramp up the critical thinking involved in product development.

Steelcase, Inc. is based in Grand Rapids, MI and has been a member of the Business Network since May 2007.

Seattle Topical Meeting Set for July 30

The Seattle-area Topical Meeting, "Flows on Distributed Networks" with **David Krakauer** (SFI Faculty) is set for Monday, July 30. Thank you to all who have expressed interest in this event. Registration details will be announced in next month's email update

PUBLICATIONS

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

Refereed Literature

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

Bowles, S., and Arjun Jayadev. "Garrison America," *The Economist's Voice* 4(2), Article 3 (2007).

Available at: <http://www.bepress.com/ev/vol4/iss2/art3>

Hamilton, M. J., B. T. Milne, R. S. Walker, and J. H. Brown. "Nonlinear Scaling of Space Use in Human Hunter-Gatherers." *Proceedings of The National Academy of Sciences of The United States of America* 104(11) (2007): 4765-4769.

Longini, I. M., Jr., M. E. Halloran, A. Nizam, Y. Yang, S. F. Xu, D. S. Burke, D. A. T. Cummings, and J. M. Epstein. "Containing a Large Bioterrorist Smallpox Attack: A Computer Simulation Approach." *International Journal of Infectious Diseases* 11(2) (2007) 98-108.

Savage, V. M., A. P. Allen, J. H. Brown, J. F. Gillooly, A. B. Herman, W. H. Woodruff, and G. B. West. "Scaling of Number, Size, and Metabolic Rate of Cells with Body Size in Mammals." *Proceedings of The National Academy of Sciences of The United States of America* 104 (11) (2007): 4718-4723.

Varn, D. P., G. S. Canright, and J. P. Crutchfield. "Inferring Planar Disorder in Close-Packed Structures Via Epsilon-Machine Spectral Reconstruction Theory: Structure and Intrinsic Computation in Zinc Sulfide." *ACTA Crystallographica Section B-Structural Science* 63(Pt 2) (2007): 169-182.

Wang, S. Y., S. Narendra, and N. Fedoroff. "Heterotrimeric G Protein Signaling in the Arabidopsis Unfolded Protein Response." *Proceedings of The National Academy of Sciences of The United States of America* 104 (10) (2007): 3817-3822.

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>

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 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 Ghanee-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.

MAY VISITORS AND ARRIVALS

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

Dirk Brockmann (5/20-30), Max-Planck-Institute for Dynamics and Self-Organization. Purpose of visit: Research Collaboration. SFI host: Chris Wood.

Doug Erwin (5/2-25), National Museum of Natural History, Smithsonian Institution. Purpose of visit: Resident Faculty. SFI host: Chris Wood.

Duncan Foley (5/19-6/4), Economics, New School for Social Research. Purpose of visit: External Faculty. SFI host: Chris Wood.

John Geanakoplos (5/3-12), Cowles Foundation, Yale University. Purpose of visit: Science Board. SFI host: Chris Wood.

David Virgil Griffith (5/1-7/1), Indiana University. Purpose of visit: Research Collaboration. SFI host: Doyne Farmer.

Ardeshir Kianercy (5/6-15), Mechanical Engineering, University of Southern California, L.A.. Purpose of visit: Research Collaboration. SFI host: Doyne Farmer.

Wolfgang Kiessling (5/6-12), Museum für Naturkunde, Humboldt Universität. Purpose of visit: Research Collaboration. SFI host: Doug Erwin.

Pablo Marquet (5/15-8/10), Departamento de Ecología, Pontificia Universidad Católica de Chile. Purpose of visit: International Fellow. SFI host: Shannon Larsen.

Massimo Ricottilli (5/29-31), Economics, University of Bologna. Purpose of visit: Research Collaboration. SFI host: Doyne Farmer.

Horacio Wio (5/15-30), Instituto de Física de Cantabria, Universidad de Cantabria - CSIC. Purpose of visit: Research Collaboration. SFI host: Miguel Fuentes.



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