



**The Principles of Complexity: Life, Scale, and Civilization**

**August 6 – 8, 2012  
Santa Fe, New Mexico 87501**

**Agenda**

**Monday, August 6, 2012**

Reception: 5.45pm Hotel Santa Fe  
7.00pm Shuttle to the James A. Little Theater

**SFI COMMUNITY LECTURE**

Complexity: A Discussion of Life, Scale, and Civilization

**7.30 pm James A. Little Theater**, 1060 Cerrillos Road, Santa Fe, NM  
Moderator: David Krakauer *University of Wisconsin, SFI External Professor*  
Panel: Murray Gell-Mann *Santa Fe Institute*  
Sir Christopher Llewellyn Smith *Oxford University*  
Lord Colin Renfrew *University of Cambridge*  
Melanie Mitchell *Portland State University, SFI External Professor*

**Tuesday, August 7, 2012**

**DAY 1**

**SANTA FE INSTITUTE  
Robert Noyce Conference Room**

8.15am Shuttle from Hotel Santa Fe to SFI

8.30am – 9.00am **BREAKFAST**

9.00am – 9.15am **Welcome**  
Jerry Sabloff  
*President, Santa Fe Institute*

9.15am – 9.45am **The Global and Urban Energy Challenges**  
Sir Christopher Llewellyn Smith  
*Oxford University*

9.45am – 10.15am **General Discussion**

10.15am – 10.45am	<b>Metabolic Ecology of Humans</b> Jim Brown <i>University of New Mexico, SFI External Professor</i>
10.45am – 11.15am	<b>General Discussion</b>
11.15am – 11.30am	<b>COFFEE BREAK</b>
11.30am – 12.30pm	<b>Complexity and the Future of Learning and Education</b> David Krakauer <i>University of Wisconsin, SFI External Prof.</i> Eric Klopfer <i>Massachusetts Institute of Technology</i> Kurt Squire <i>University of Wisconsin</i>
12.30pm – 1.45pm	<b>LUNCH</b>
1.45pm – 2.30pm	<b>Framing the Rise and Variability of Past Complex Societies</b> Gary Feinman <i>The Field Museum, Chicago</i>
2.30pm – 3.00pm	<b>General Discussion</b>
3.00pm – 3.30pm	<b>TEA</b>
3.30pm – 4.15pm	<b>The Variational Universe: From Strings to Neurons</b> Vijay Balasubramanian <i>University of Pennsylvania</i>
4.15pm – 4.30pm	<b>General Discussion</b>
5.00pm – 5.15pm	Shuttle will leave SFI for the reception at Mari Kooi residence
5.30pm – 7.30pm	<b>COCKTAIL RECEPTION at Mari Kooi Residence</b>
7.00pm and 7.30pm	Shuttle will leave for Hotel Santa Fe

**Wednesday, August 8, 2012**

**DAY 2**

**SANTA FE INSTITUTE  
Robert Noyce Conference Room**

- |                   |   |
|-------------------|---|
| 8.15am            | Shuttle from Hotel Santa Fe to SFI  |
| 8.30am – 9.00am   | <b>BREAKFAST</b>  |
| 9.00am – 9.10am   | <b>Introduction and Recap</b><br>Geoffrey West <i>SFI</i>   |
| 9.10am – 9.25am   | <b>Universal Patterns in the Emergence of Complex Societies</b><br>Project leader presentation Jerry Sabloff <i>SFI</i>   |
| 9.25am – 10.00am  | <b>Faculty, post docs, interns present research</b><br>Scott Ortman <i>SFI</i> and Lily Blair <i>Stanford and SFI</i><br>Anne Kandler <i>SFI</i><br>Paula Sabloff <i>SFI</i> and Rob Weiner <i>Brown University and SFI</i> |
| 10.00am – 10.20am | <b>The Hidden Laws that Pervade Complex Phenomena</b><br>Project leader presentation<br>Geoffrey West and Luis Bettencourt <i>SFI</i>   |
| 10.20am – 10.50am | <b>Post docs and students present research</b><br>Marcus Hamilton <i>SFI</i><br>Hyejin Youn <i>SFI</i><br>Drew Cabaniss <i>University of North Carolina</i>   |
| 10.50am – 11.05am | <b>COFFEE BREAK</b>   |
| 11.05am – 11.25am | <b>The Evolution of Complexity and Intelligence on Earth</b><br>Project leader presentation<br>David Krakauer and Jessica Flack<br><i>University of Wisconsin, SFI External Professors</i>                                  |
| 11.25am – 11.45am | <b>Post docs and grad students present research</b><br>Brian Daniels <i>University of Wisconsin</i><br>Eleanor Brush <i>University of Wisconsin</i>   |
| 11.45am – Noon    | <b>Group Discussion</b>   |

Noon – 1.00pm

**LUNCH**

1.00pm – 2.00pm

**Complexity Explorer: a Web-Based System for Complexity Education**

Project leader presentation

Ginger Richardson *SFI*

Melanie Mitchell *Portland State University and SFI External Professor*

2.00pm – 2.45pm

**Comments and Observations**

Moderator - Geoffrey West *SFI*

Gary Feinman *The Field Museum, Chicago*

Eric Klopfer *Massachusetts Institute of Technology*

Chris Llewellyn Smith *Oxford University*

Colin Renfrew *University of Cambridge*

Kurt Squire *University of Wisconsin*

2.45pm – 3.30pm

**TEA**

3.30pm – 4.30pm

**Open Discussion, an Assessment of Project Activities, Research Data and Future Direction**

Moderator - Geoffrey West *SFI*

Luis Bettencourt *SFI*

Jim Brown *University of New Mexico, SFI External Prof.*

Jessica Flack *University of Wisconsin, SFI External Prof.*

Murray Gell-Mann *SFI*

David Krakauer *University of Wisconsin, SFI External Prof.*

Melanie Mitchell *Portland State University, SFI External Prof.*

Ginger Richardson *SFI*

Jerry Sabloff *SFI*

4.30pm

**Closing Remarks**

Jerry Sabloff *SFI*

5.00pm

Shuttle from SFI to Hotel Santa Fe Institute

7.00pm

**SPEAKER DINNER**