



SANTA FE INSTITUTE

Thirty Years of Complexity

~ 80 Shades of Stu ~

*A celebration of
Stuart Kauffman's
contributions to the field*

August 21st – 22nd 2019

Santa Fe, New Mexico

Thirty Years of Complex Thinking:

A Celebration of Stuart Kauffman's Contributions to the Field of Complex Systems

The Santa Fe Institute

	Wednesday August 21, 2019		Thursday, August 22, 2019	
7:30am	Catch bus to SFI (Front Entrance)	Day 1	Catch bus to SFI (Front Entrance)2	Day 2
8:00-8:30	Continental Breakfast		Continental Breakfast	
8:30-8:45	Leon Glass & David Krakauer	Introduction	Keynote Economics: Brian Arthur (8:30 - 9:15)	Combinatorial Evolution
8:45-9:30	Origins of Life: Keynote Roberto Serra	Modelling Protocells	Tim Kohler (9:15 - 9:30)	Tangled Banks: Population, Technology, and Inequality in the Quaternary
9:30-9:45	Wim Hordijk	A History of Autocatalytic Sets	Roger Koppl	The Role of Human Intelligence in Human Progress
9:45-10:00	Joana Xavier	Autocatalytic networks in ancient bacterial and archaeal metabolism	Teppo Felin	Mind-Stuff and the Economy
10:00-10:15	Gonen Ashkenasy	Emergence of Function in Primitive Replication Networks Out of Equilibrium	Naresh Singh	Economics for the SDGs: The Role of Kauffman's Economic Webs
10:15-10:30	David Deamer	A Recipe for Life's Beginning: Self-assembly, cycles, and kinetic traps	The Adjacent Possible 2: Lee Smolin	Precedence in an Approach to Quantum Foundations
10:30-11:00	Break		Break	
11:00-11:15	Doron Lancet	Origin of Life in Lipid Networks: Standing on the shoulders of a giant	Walter Fontana	The Adjacent Possible
11:15-11:30	Gábor Vattay	The Clock of Chemical Evolution	Caryn Devins Strickland	Stare Decisis and Novelty
11:30-11:45	Addy Pross	The Origin of Life: How or Why?	Colin Hill	What is Life?
11:45-12:00	The Adjacent Possible 1: Steven Strogatz	Mathematizing the Adjacent Possible	Richard Melmon	Entrepreneurship: Probing the Econosphere's Adjacent Possible
12:00-1:00	Lunch		Lunch	
1:00- 1:15	Vittorio Loreto	The Experience of the New for Humans and Machines	Keynote: Practical Complexity Lee Hood (1:00-1:45)	Big Data, Wellness & Disease
1:15-2:00	Genetic Regulatory Nets Keynote: Sui Huang	From Waddington Landscapes to Kauffman Nets to Single-Cell FNA-Seq: 50 Years of the Cell Attractor	Barry Selick (1:45-2:00)	Overcoming the Valley of Death in Biomedical Research
2:00-2:15	Sara Walker	Criticality, Information and Life	Bennett Levitan	Would you take a drug that could kill you?
2:15-2:30	Joshua Socolar	Boolean Network Modeling of Genetic Regulatory Networks	Stephen Guerin	Capturing Realtime Earth: Crowd-sourced imagery & shared agent-based models
2:30-2:45	Stefan Bornholdt	Ensembles of Boolean Networks & the Evolution of Gene Regulation	Sasha Outkin	Nasdaq Market Modeling & Complex Systems Prediction
2:45-3:00	Leon Glass	Evolution and Robustness in Gene Networks	Michael W. Brown	A Tale of Phase Transition in Random Graphs & Wall Street Warbling
3:00-3:30	Break		Break	
3:30-3:45	Co-evolution & Landscapes: Stefan Thurner	A Combinatorial-Co-evolutionary-Critical view on Evolution	Biological & Social Evolution: Geoffrey West	Towards a Quantitative Theory of Growth, Aging and Death; Simplicity & Unity in the Complexity of Life
3:45-4:00	Brian Beckage	Modeling the Development and Collapse of Complex Societies	Olli Yli-Harja	Systems Biology W/Stu & Private Thoughts on Occam's Razor
4:00 - 4:15	Michael Epperson	Dipolar Duality: Actuality & Potentiality in Quantum Mechanics	Maximino Aldana	Modeling the Role of the Microbiome in Evolution
4:15 - 4:30	Mael Montevil (w/Giuseppe Longo)	No Entailing Laws but Enablement in the Evolution of the Biosphere	Kepa Ruiz Mirazo	Working at the Edge of Science and Philosophy: Better ways to Advance the Frontiers of Knowledge?
4:30 -4:45	George Johnson	Writing a Book with Stu	Lee Cronin	Spontaneous Abiogenic Networks of self-replicating inorganic salts driven by Molecular Information
5:15pm	Catch bus back to HSF		Catch bus back to HSF	
6:30 -8:30	Dinner (Hotel Santa Fe), Amaya Dining Rm		6:30 Party (Dinner w/spouses, Jazz, Razz & Dancing) - 11:00	
8:30 - 11:00	Self-Organizing Discussions (as desired) Amaya Dining Rm (til 10:00)		Hotel Santa Fe, Kiva A/B/C	Rich; Linda; Leon; Colin; Stu