



SANTA FE INSTITUTE

Collective Intelligence: *Foundations + Radical Ideas*

Overview and Agenda (Subject to change, especially panels)

What is the nature of intelligence in social insect societies, adaptive matter, groups of cells like brains, sports teams, and AI, and how does it arise in these seemingly different kinds of collectives?

In this Symposium & Short Course we will search for unifying principles in collective intelligence by tackling its foundations, and explore radical ideas for harnessing collective potential.

June 20th – Day One: First Principles

7:30 - 9:00 am	Breakfast & Check In
9:00 - 9:15 am	Jessica Flack + Caitlin McShea: Welcome and Introduction
9:15 - 10:15 am	Guy Theraulaz: “Building Collective Intelligence Through Social Interactions” with 20-minute discussion moderated by Iain Couzin
10:15 - 10:30 am	Coffee Break
10:30 - 12:00 pm	Debate + Discussion: 10:30 am: Geoffrey West: “From Individuals to Collectives in Biosocial Systems; A Physics Perspective” 11:00 am: Chris Kempes: “First Principles Thinking in Biology” 11:30 am: Panel Discussion with Geoffrey West and Chris Kempes moderated by Jessica Flack
12:00 - 1:30 pm	Lunch
1:30 - 2:30 pm	Nikta Fakhri: “First Principles of Collective Intelligence in Active Matter” with 20-minute discussion moderated by Orit Peleg
2:30 - 3:30 pm	Maxim Raginsky: “Information, Compression, Generativity in Neural Nets: First Principles” with 20-minute discussion moderated by David Krakauer
3:30 - 3:45 pm	Coffee Break
3:45 - 4:45 pm	Jessica Flack’s Day One Synthesis — “First Principles Thinking for Information Processing Systems” with 20-minute discussion moderated by Chris Kempes
4:45 pm	Break for Evening Events
Evening Events:	4:45 - 6:15 pm: White Board Party on the Terraza rooftop with tacos + cash bar 6:30 pm: Book signing by Andrea Wulf at Lensic Performing Arts Center 7:30 pm: Community Lecture “Magnificent Rebels. The First Romantics & the Invention of the Self” by Andrea Wulf at the Lensic Performing Arts Theater - 211 W. San Francisco Street



June 21st – Day Two: Measures of Intelligence

7:30 - 9:00 am	Breakfast
9:00 - 9:15 am	Jessica Flack: Recap
9:15 - 10:15 am	Iain Couzin: “What is Intelligence in Collectives?” with 20-minute discussion moderated by Andrew Berdahl
10:15 - 10:30 am	Coffee Break
10:30 - 12:00 pm	Debate + Discussion: 10:30 am: Melanie Mitchell: “The Meaning of Intelligence in AI” 11:00 am: David Krakauer: “The Meaning of Intelligence in Brains + Collectives” 11:30 am: Panel discussion with Melanie Mitchell and David Krakauer moderated by Mirta Galesic
12:00 - 1:30 pm	Lunch
1:30 - 2:30 pm	David Ha: “Collective Intelligence and Open Source AI” with 20-minute discussion moderated by Maxim Raginsky
2:30 - 3:30 pm	Panel discussion: “Nature of Intelligence” with Iain Couzin, David Ha, David Krakauer, Melanie Mitchell, and Geoffrey West moderated by Jessica Flack
3:30 - 3:45 pm	Coffee break
3:45 - 4:45 pm	Cesar Hidalgo: “The Nature of Collective Intelligence in Economic Settings” with 20-minute discussion moderated by Geoffrey West
4:45	Break for Evening Events
Evening Events	4:45 - 6:15 pm Poster Session on the Terraza rooftop with light snacks + cash bar

June 22nd – Day Three: Dynamics of Collective Systems

7:30 - 8:45 am	Breakfast												
9:00 - 9:15 am	Jessica Flack: Recap												
9:15 - 10:15 am	Orit Peleg: “The Dynamics of Collective Intelligence” with 20-minute discussion moderated by Cesar Hidalgo												
10:15 - 10:30 am	Coffee Break												
10:30 - 11:30 am	Mirta Galesic: “How Collectives Adapt” with 20-minute discussion moderated by David Ha												
11:30 - 12:30 pm	“Does the Nature of Intelligence Change When There is a Shift from Static Tasks to Performance in Changing Environments?” Panel Discussion with James Evans, Mirta Galesic, Cesar Hidalgo, and Orit Peleg moderated by David Krakauer												
12:30 - 2:00 pm	Lunch												
2:00 - 3:00 pm	“Challenges for Deriving Measures of Intelligence” Panel Discussion with Iain Couzin, Nikta Fakhri, Chris Kempes, and Maxim Raginsky moderated by Jessica Flack												
3:00 - 3:45 pm	“Collective Epistemologies” Discussion with Anthony Eagan and James Evans with 15-minute audience Q&A												
3:45 - 4:00 pm	Coffee break												
4:00 - 4:45 pm	Artist, activist and film maker Godfrey Reggio in discussion with Jessica Flack: “The Role of the Collective in Radical Ideas”												
4:45 - 4:55 pm	Closing Remarks by Caitlin McShea												
4:55 pm	Conclusion of the 2023 Collective Intelligence Short Course & Symposium												
Evening Events	Meow Wolf for concluding reception with cocktails and dessert *please arrive 15 minutes prior to each departure* <table> <tr> <td>7:30 pm</td><td>First bus departs from La Fonda (56 passengers)</td></tr> <tr> <td>7:45 pm</td><td>First shuttle departs (14 passengers)</td></tr> <tr> <td>8:00 pm</td><td>Second bus departs (56 passengers)</td></tr> <tr> <td>8:15 pm</td><td>Second shuttle departs (14 passengers)</td></tr> <tr> <td>9:00 pm</td><td>Announcements, poster prizes</td></tr> <tr> <td>9:45 pm</td><td>Shuttles and busses start back to La Fonda Hotel</td></tr> </table>	7:30 pm	First bus departs from La Fonda (56 passengers)	7:45 pm	First shuttle departs (14 passengers)	8:00 pm	Second bus departs (56 passengers)	8:15 pm	Second shuttle departs (14 passengers)	9:00 pm	Announcements, poster prizes	9:45 pm	Shuttles and busses start back to La Fonda Hotel
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Please reach out to our Collective Intelligence operations team with any issues or questions - ci@santafe.edu



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