

Lookahead Optimization in Artificial and Natural Systems

February 21<sup>st</sup> – 22<sup>nd</sup>, 2018

Collins Conference Room

Co-Organizers:

Brendan Tracey [btracey@santafe.edu](mailto:btracey@santafe.edu)

David Wolpert [dhw@santafe.edu](mailto:dhw@santafe.edu)

Mirta Galesic [galesic@santafe.edu](mailto:galesic@santafe.edu)

AGENDA

**Wednesday, February 21<sup>st</sup>, 2018**

- 8:15 a.m. Shuttle to SFI
- 8:30 a.m. Breakfast and coffee at Santa Fe Institute.
- 9:00 – 9:45 a.m. Brendan Tracey: Welcome and introductory remarks; goal of meeting; overview of topics
- 9:45 – 10:30 a.m. Sasha Dall: Genes as cues: phenotypic determination (development) from a Darwinian information processing perspective
- 10:30 – 10:45 a.m. Coffee break
- 10:45 – 11:30 a.m. Hamed Hassani: Sequential information maximization: from theory to designs
- 11:30 – Noon Discussion
- Noon – 1:30 p.m. Lunch
- 1:30 – 2:15 p.m. Kris Lenhardt: The Difficulties in Planning a Mars Mission
- 2:15 – 3:00 p.m. Discussion
- 3:00 – 3:30 p.m. Tea
- 3:30 – 4:15 p.m. Henrik Olsson: Human strategies for dynamic decision making
- 4:15 – 5:00 p.m. Xun Huan: Bayesian Experimental Design
- 5:00 – 5:30 p.m. Discussion
- 5:30 p.m. Bus pickup for hotel

**Thursday, February 22<sup>nd</sup>, 2018**

8:15 a.m.	Shuttle to SFI
8:30 a.m.	Breakfast at SFI
9:00 – 9:45 a.m.	Mirta Galesic: Social offloading of looking ahead
9:45 – 10:30 a.m.	Jon Machta: Population annealing: a massively parallel optimization strategy for rough landscapes
10:30 – 10:45 a.m.	Coffee break
10:30 – 11:30 a.m.	Peter Todd: Heuristics for search in external and internal environments
11:30 a.m. – noon	Discussion
noon – 1:30 p.m.	Lunch
1:30 – 2:15 p.m.	Georg Kreml: Active Learning
2:15 – 3:00 p.m.	Thomas Hills: Internal cognitive processes and looking ahead
3:00 – 3:30 p.m.	Tea
3:30 – 5:00 p.m.	Discussion and Wrap-Up
5:00 p.m.	Shuttle to Hotel

**Attendees & contact information**

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