

Evolution of Hierarchical Organization in Adaptive Systems



Wissenschaftskolleg zu Berlin
INSTITUTE FOR ADVANCED STUDY

Wednesday, January 30

7.30pm Dinner, Trattoria Toscana

Thursday, January 31

8.00am-9.00am Breakfast, WIKO

Session 1

9.00am-9.10am Opening remarks, introduction

9.10am-10.10am T1¹: How and why did transcription and chromosomes arise?

A multilevel selection approach / *Eörs Száthmáry*

C1²: Multilevel selection from quasi first-principles / *Joshua Christie*

10.10am-11.10am T2: Energy and evolutionary conflict in the origin of the eukaryotic cell /
Neil Blackstone

C2: Evolution of eukaryotic membranes / *Victor Sojo*

11.10am-11.20am Coffee!

11.20am-12.30pm [Discussion 1: Selection at many levels](#)

12.30pm-2.00pm Lunch, WIKO

Session 2

2.00pm-3.00pm T3: The evolutionary transition to multicellularity / *Katrin Hammerschmidt*
C3:

3.00pm-4.00pm T4: Germline evolution / *Andrew Pomiankowski*
C4:

4.00pm-4.15pm Coffee!

4.15pm-5.15pm T5: Variational independence and the levels of developmental evolution
/ *James DiFrisco*

C5:

5.15pm-6.00pm Summary of Day 1

6.00pm Dinner, WIKO

¹ 40-minute talk, 10 minutes for Q&A

² 10-minute comment offering a different perspective on the same subject [no slides]

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Friday, February 1

8.00am-9.00am Breakfast, WIKO

Session 3

9.00am-10.00am T6: Optimal structure of groups in complex environment: how the incompleteness of information calls for hierarchy / *Anna Zafeiris*
C6:

10.00am-11.00am T7: Evolution of hierarchical organization in language / *Luc Steels*
C7:

11.00am-11.15am Coffee!

11.15am-12.30pm [Discussion 2: Why do individuals choose to live in hierarchies?](#)

1.00pm-2.00pm Lunch, WIKO

Session 4

2.00pm-3.00pm T8: Self-reflection from the Axial Age to the Singularity
/ *Simon DeDeo*

C8:

3.00pm-3.15pm Coffee!

3.15pm-4.15pm [Discussion 3: Hierarchical organisation—a universal property of life?](#)