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# RICARD SOLÉ

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CV

PARTICIPANT AT:

## SYNTHETIC BIOLOGY. FROM STANDARD BIOLOGICAL PARTS TO ARTIFICIAL LIFE

**September, 17<sup>th</sup>-18<sup>th</sup>, 2015, Barcelona**

**Ricard Solé**, ICREA research professor, head of the Complex Systems Lab, Universitat Pompeu Fabra, Barcelona.

Ricard Solé is ICREA research professor (the Catalan Institute for research and Advanced Studies) currently working at the Universitat Pompeu Fabra, where he is the head of the Complex Systems Lab located at the PRBB. He teaches undergraduate courses on Biomathematics, principles of biological design and cell-tissue engineering. He completed degrees in both Physics and Biology at the University of Barcelona and received my PhD in Physics at the Polytechnic University of Catalonia. He is also External Professor of the Santa Fe Institute (New Mexico, USA). He has received a European Research Council Advanced Grant (ERC 2012) and support from the Fundación Botín. His main goal is exploring the evolutionary origins of complexity in both natural and synthetic/artificial systems. A key aspect of this research is considering the nature and universality of the so called Major Evolutionary Transitions and to what extent we can replicate them (or not) using synthetic approaches, including artificial life approaches, synthetic biology experiments and evolved neural networks.

B-DEBATE IS AN INITIATIVE OF:



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ABSTRACT

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### **Synthetic Transitions**

The evolution of life in our biosphere has been marked by several major innovations, including the origin of cells, multicellularity, language or even consciousness. With the rise of synthetic biology and advanced simulation modelling techniques, novel perspectives to these problems have led to a rather interesting scenario, where not only the major transitions can be studied or even reproduced, but even new ones might be potentially identified or even created.

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