

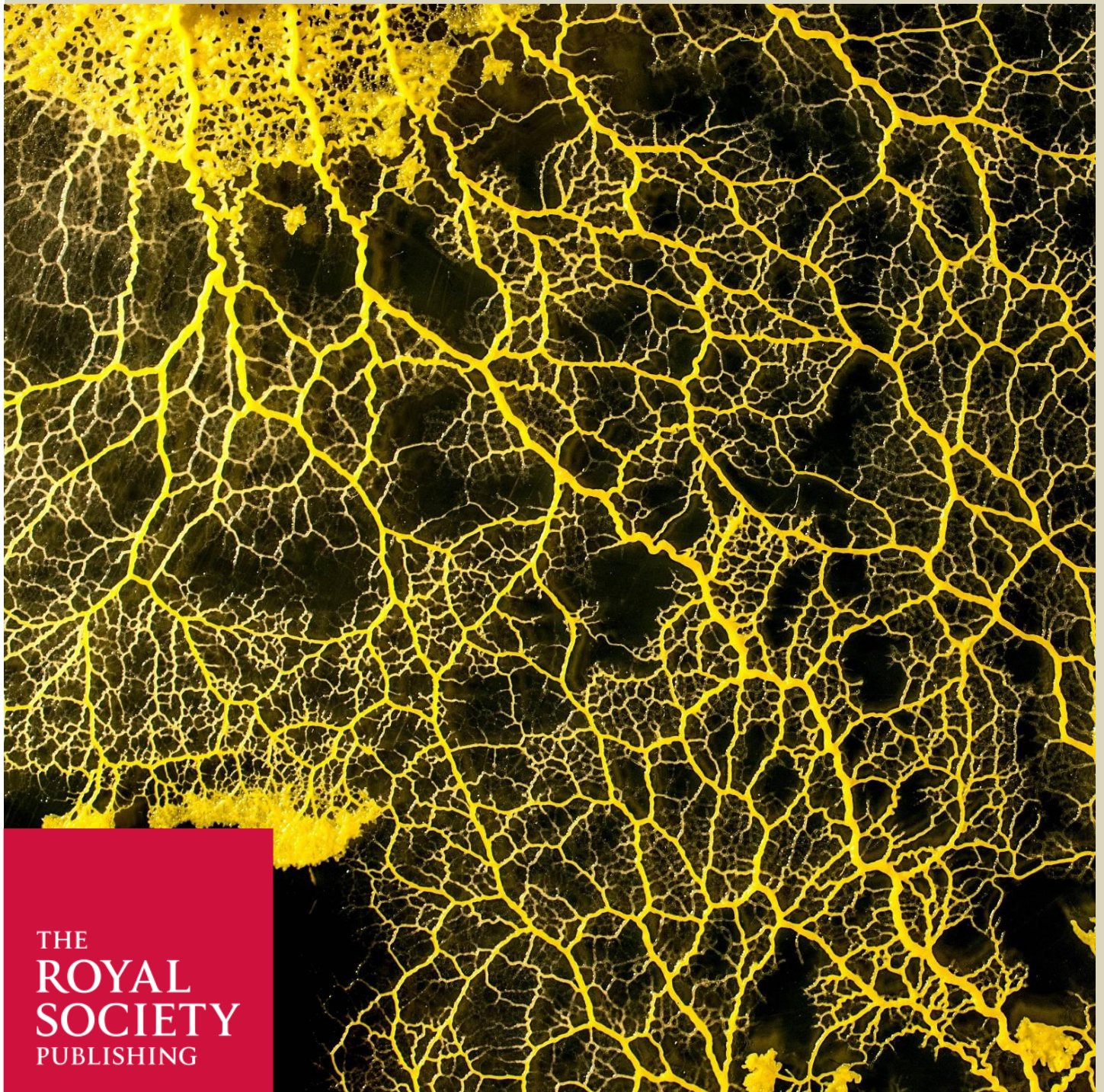
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B

BIOLOGICAL SCIENCES

Liquid brains, solid brains: how distributed cognitive architectures process information

A theme issue compiled and edited by Ricard Solé, Melanie Moses and Stephanie Forrest

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About this issue

Many biological systems, such as ant or termite colonies, or the immune system, are cognitive networks capable of dealing with information, learning and memory. By contrast with our brains, equipped with networks of neurons with fixed locations in space, the components of the former move around and thus have no stable connections over time. Ants walk towards or away from their nest mates and immune cells flow within blood vessels. These are thus “liquid” brains. What is the difference between them and the “solid” brains that many organisms carry within their bodies? Can liquid brains perform complex computations? What are their limits?

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