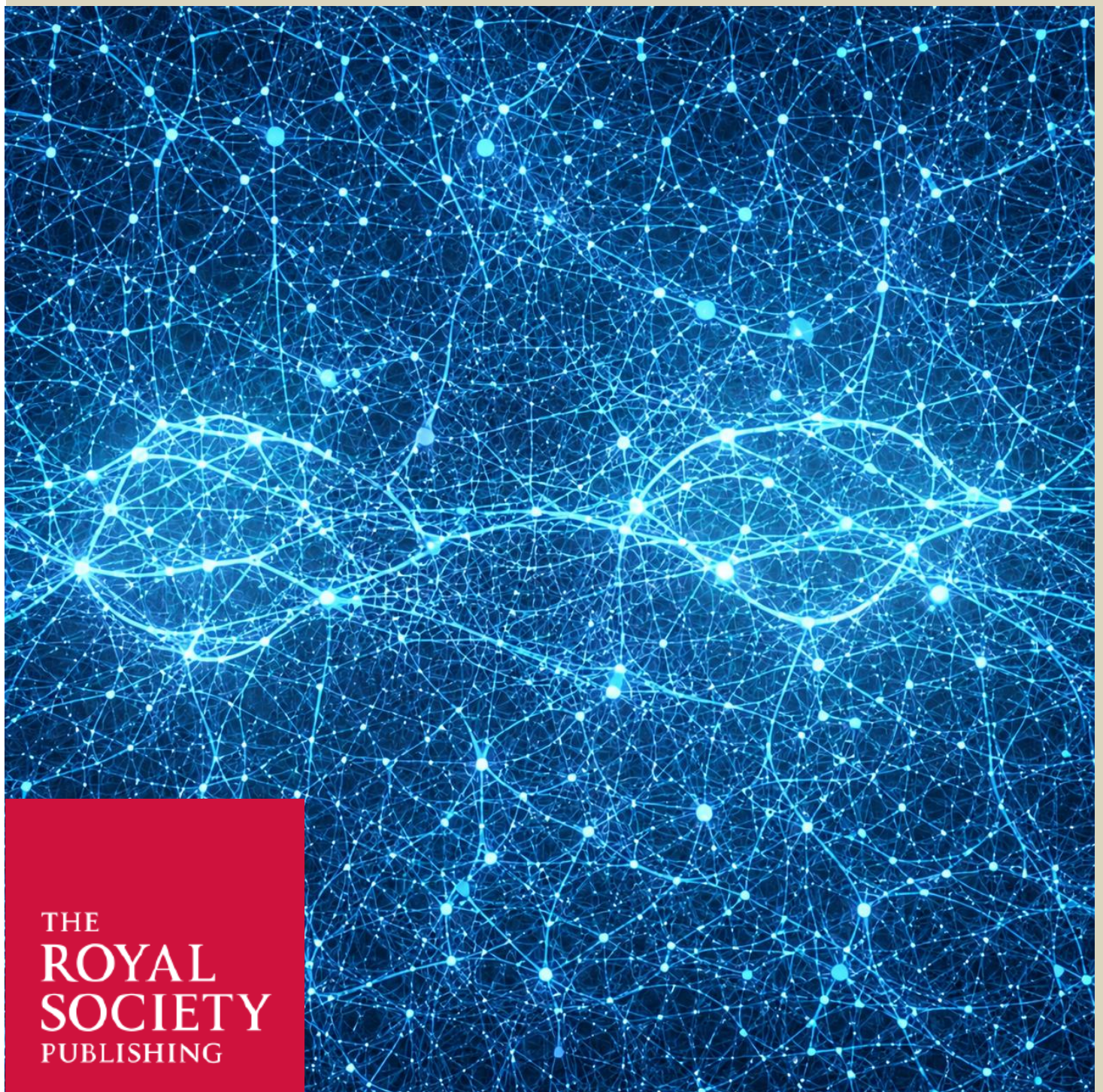


INTERFACE FOCUS

Data-driven modelling for living systems

A theme issue organised by Maia Angelova, Krassimir Atanassov, Sergiy Shelyag and Chandan Karmakar

Published August 2026



THE
ROYAL
SOCIETY
PUBLISHING

About this issue

Data-driven modelling in the living system has increasing significance with the abundance of complex data of different modalities. Data are being collected at different scales, from molecular to genetic, cellular, organ, organism and vital signs, electronic health records. In addition, we produce individual health data, sleep and mobility data collected with wearable devices, as well as data collected from social media, professional networks, workplace, and the environment in general. Modelling these data is now possible with the advances of several methods and technologies, all part of the artificial intelligence framework. Modern data analysis is a powerful lense, with which we can zoom in and out of the living system, similar to what we can observe with a microscope.

This theme issue presents data-driven models which reflect several different angles and lenses to zoom in and out of the human body, to observe and analyse the role and functions of its genes, cells, organs and the interactions between them, as well as the role of the human in the society and environment.

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For more information, contact:

The Royal Society
6 – 9 Carlton House Terrace
London
SW1Y 5AG
T +44 20 7451 2500
E publishing@royalsociety.org

Contents

Introduction *Data-driven modelling for living systems* Maia Angelova

A mechanistically inspired geometric model to predict microbial growth across environments Thomas Tunstall, Urszula Lapinska, Stefano Pagliara and Krasimira Tsaneva-Atanasova

Periodic patterns in simple biological differential delay models Anatoli F Ivanov and Sergiy Shelyag

Effect of stochasticity on the dynamics of a lac operon model with multiple delays Asma ben Halim, Sergiy Shelyag, Krishna Busawon, Tania Pencheva and Maia Angelova

Using antibuoyant capacities to account for species importance when modelling biodiversity Gleb Beliaikov, Simon James, Dale G Nimmo and Jian-Zhang Wu

A variant intercriteria analysis method based on mean value: an application to prostate cancer data Krassimir Atanassov, Lyudmila Todorova, Peter Vassilev, Elenko Popov, Angel Bozhkov, Chavdar Slavov and Vassia Atanassova

Blood donation landscape in Bulgaria: data analytics insights from 2024 Ivo Umlenski *et al.*

Effectiveness of sleep stage transition probability features to detect sleep disorders from single-night hypnogram Emran Ali, Chandan Karmakar, Alireza Daneshkhah, Jason Ellis and Maia Angelova

From prediction to explanation for price–volume dynamics in real estate market Dat Le, Sutharshan Rajasegarar, Wei Luo, Thanh Thi Nguyen and Maia Angelova