

Editorial: Year of Mathematical Biology 2018

José A. Carrillo (Imperial College London, UK), Chair of the Applied Mathematics Committee of the EMS and Mats Gyllenberg (University of Helsinki, Finland), Treasurer of the EMS



The year of Mathematical Biology 2018 is a joint venture of the European Mathematical Society (EMS) and the European Society for Mathematical and Theoretical Biology (ESMTB).

The main objectives are to celebrate the huge increase and importance of applications of mathematics to biology and life sciences in the last few years and to foster the feedback loop between life sciences and mathematics for years to come. Applications of mathematics in biology are opening completely new pathways of interactions and they are a huge source of new mathematical problems.

The activities already scheduled during this event are summarised in three large programmes in different aspects of mathematical biology at three ERCOM institutes:

- Simons Semester on Mathematical Biology, December 2017–March 2018, Banach Center, Warsaw, Poland.
- Intensive Research Program in Mathematical Biology, April–June 2018, Centre de Recerca Matemàtica, Spain.
- Thematic Program in Mathematical Biology, September–December 2018, Institut Mittag-Leffler, Sweden.

There are also many other activities across Europe spanning a wide range of current aspects of interest in mathematical biology.

The Year of Mathematical Biology will kick off with an event sponsored by the EMS and the ESMTB: the EMS-Finnish Mathematical Society-ESMTB Joint Mathematical Weekend, 4–5 January 2018, Joensuu, Finland.

Later in the year, the largest European mathematical biology conference series will be organised jointly by the EMS and the ESMTB: the 11th European Conference on Mathematical and Theoretical Biology (ECMTB 2018), 23–27 July 2018, Lisbon, Portugal.

We encourage all our fellow society members with an interest in mathematical biology to get involved in this transversal event and actively participate.

Other activities include the following events (and more are being planned):

- Dynamical systems applied to biology and natural sciences (DSABNS2018), 7–9 February 2018, Torino, Italy.
- Collective dynamics and self-organisation in biological sciences, 30 Apr–4 May 2018, ICMS, Edinburgh, UK.
- Models in population dynamics, ecology and evolution (MPDEE'18), 9–13 April 2018, University of Leicester, UK.
- Mathematical biology modelling days of Besançon, 19–22 June 2018, Besançon, France.
- International conference on mathematical methods and models (BIOMATH 2018), 24–29 June, Sofia, Bulgaria.
- Mathematical perspectives in the biology and therapeutics of cancer, 9–13 July 2018, CIRM, France.
- CEMRACS 2018, Numerical and mathematical modelling for biological and medical applications: deterministic, probabilistic and statistical descriptions, 16 July–24 August 2018, CIRM, Marseille, France.
- The Helsinki summer school on mathematical ecology and evolution, August 2018, Helsinki, Finland.
- Differential equations arising from organising principles in biology, 23–29 September 2018, Mathematisches Forschungsinstitut Oberwolfach, Germany.
- Workshop on mathematical biology, 8–12 October, Institut Mittag-Leffler, Sweden.

An organisation committee for the Year of Mathematical Biology has been set up through the Applied Mathematics Committee of the EMS:

- José A. Carrillo, Imperial College London, UK. (Chair)
- Mathisca de Gunst, University of Amsterdam, The Netherlands.
- Mats Gyllenberg, University of Helsinki, Finland.
- Torbjorn Lundh, Chalmers University, Sweden.
- Anna Marciniak-Czochra, Heidelberg Universität, Germany.
- Roeland Merks, CWI, The Netherlands.
- Marek Niezgodka, ICM, Poland.
- Gael Raoul, École Polytechnique, France.

If you have any suggestions or ideas that you want to share with us, activities to be included or any queries, please contact any member of the committee. We want

to thank everybody involved in the organisation committee and the scientific committee and speakers of each of the events above for the effort put into this endeavour. It is a pleasure to see how this idea has developed over the years from a very small-scale project, with origins in 2014 of celebrating collaborations between mathematics and biology, to a full year of mathematical biology events. This could not be done without the generous effort of a large community who believe in the fantastic outcome that this cross-pollination between disciplines can bring to mathematics as a whole.



José A. Carrillo holds a Chair of Applied and Numerical Analysis at Imperial College London. He is an expert in Partial Differential Equations, their numerical approximations, and their use in modelling across science and engineering.



Mats Gyllenberg is a Professor of Applied Mathematics at the University of Helsinki. He is an expert in population models in mathematical biology and a long serving editor of the Journal of Mathematical Biology.