

Initiatives & infrastructure

Applied mathematics research in Birmingham is integrated with a number of collaborative initiatives in science, industry, medicine and technology both within and beyond the university. We have a wealth of experience across a range of different areas and are enthusiastic about leading and contributing to further collaborations.

Please follow the links below for more details about some of the main initiatives:

BlueBEAR

[Open all sections](#)

BlueBEAR (<http://www.bear.bham.ac.uk/index.shtml>) is Birmingham University's high performance computing facility, used by members of the applied mathematics group for modelling and simulation.

CMMCE

Centre for Mathematical Modelling in Chemical Engineering (</research/activity/cmmce/index.aspx>) is a collaboration between members of the applied group and the School of Chemical Engineering, with a strong focus on industrial and pharmaceutical applications.

CSB

Centre for Systems Biology (<http://www.csb.bham.ac.uk/>), based in the School of Biosciences, brings together scientists from Biology, Computer Sciences and Mathematics, collaborating on the application of modelling and simulation to understand the complexity of biological systems.

ChRS

Centre for Human Reproductive Science (<http://www.bhamivf.org.uk/bwfc-research.htm>), based at Birmingham Women's Hospital Fertility Centre, is the centre of an international network bringing together multidisciplinary expertise, including cell biology, chemistry, imaging, engineering and mathematical modelling to develop new diagnostics and treatments for infertility.

SSfH

Systems Science for Health (<http://www.ssfh.bham.ac.uk/>) is a major University of Birmingham initiative bringing together existing expertise and new appointments in clinical and medical research, biology, computing, analytic technologies, and mathematical modelling, with a focus on inflammation and haematological cancers. As part of this initiative, a new **MSc in Mathematics and Computing in Biology and Medicine** (</postgraduate/courses/taught/maths/mathematical-modelling.aspx>) is being offered.

Birmingham Science City

Birmingham Science City (<http://www.birminghamsciencecity.co.uk/>) is a regional initiative which develops and uses science and technology to improve the prosperity and quality of life of the West Midlands and the UK. The School hosts two current and one former Science City Research Alliance Fellows.