

# CURRICULUM VITAE: KEVIN JOHN PAINTER

DATE OF BIRTH: 1<sup>st</sup> July 1973

## CONTACT INFORMATION

**Email:**

**Address:** Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio  
Politecnico di Torino.

**Personal webpage:**

**Orcid ID:**

**ResearcherID:**

**Google Scholar:**

## EMPLOYMENT AND EDUCATION

- 10/20 onwards:** Professore Ordinario (Full Professor), Politecnico di Torino.
- 08/17 to 09/20:** Professor in Mathematics, Heriot-Watt University.
- 08/10 to 07/17:** Associate Professor/Reader in Mathematics, Heriot-Watt University.
- 08/08 to 07/10:** Associate Professor/Senior Lecturer in Mathematics, Heriot-Watt University.
- 09/00 to 07/08:** Lecturer in Mathematics, Heriot-Watt University.
- 03/00 to 08/00:** Research Associate, Heriot-Watt University.
- 04/98 to 03/00:** Research Associate, Universities of Utah/Minnesota
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- 10/94 to 03/98:** Doctor of Philosophy (Mathematics), Brasenose College, University of Oxford. Thesis title: "*Chemotaxis as a mechanism for morphogenesis*".  
Supervisor: Professor Philip K. Maini.
- 10/91 to 06/94:** BSc. Honours (1<sup>st</sup> Class) in Applied Mathematics, University of Warwick.  
Awarded IMA prize for best performance in final year project.
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- 09/84 to 07/91:** Tring Comprehensive School, Tring, Hertfordshire.

## RESEARCH SYNOPSIS

My research involves formulating, analysing and applying mathematical models to processes in biology. I develop targeted models aimed at tackling specific problems in areas including cell biology, developmental biology, physiology, cancer growth and ecology. I also explore more theoretically motivated models that can be adapted to different applications. I collaborate

extensively with a range of scientists, including specialist theoretical and numerical analysts and experimental scientists, at both national and international levels.

## FUNDING, FELLOWSHIPS AND AWARDS

- Funding for Research School “PDEs in Mathematical Biology: Modelling and Analysis.”, May 2019. Awards of **£17,000** from London Mathematical Society, **\$5,000** from Clay Mathematics Institute and **£3,000** from Glasgow Mathematics Journal Trust. M. Ptashnyk and **K.J. Painter**.
- Edinburgh Mathematical Society Research Fund. Grant for short term academic research visit of Professor Thomas Hillen. Awarded £600.
- Visiting Professorship, 2016-2017, Awarded by Politecnico di Torino, Italy. **K.J. Painter**. *Amounts to one year of academic salary, €73,200.*
- R. Erban M. Chaplain, B. Leimkuhler, Y. Kevrekidis, **K. J. Painter**. “Multiscale methods for stochastic dynamical systems in biology: numerical methods, mathematical analysis, and biological models”. *International Centre for Mathematical Science (ICMS) workshop*. Awarded April 2015, **£12,800**.
- D.J. Headon and **K.J. Painter (co-PI)**. “Parameterisation of developmental networks to understand periodic patterning.” *BBSRC, BB/J017124/1*. November 2012-2015. *Local component awarded to KJP, £45,510*.
- J.A. Sherratt and **K.J. Painter**. “Mathematical modelling of epithelial wound healing.” *Heriot-Watt University Global Platform Scholarship*. Funded a 36 month PhD scholarship, January 2013-December 2015.
- J. West, M.P. Collinson and **K.J. Painter (co-PI)**. “An integrated experimental and theoretical approach to understand corneal epithelial maintenance.” *BBSRC BB/J015940/1*. October 2013-2015. *Local component award £32,418*.
- **K.J. Painter (PI)**. “Mathematical Modelling of Embryonic Development. Leverhulme Trust Research Fellowship RF-2011-045. October 2011 – September 2013. 50% of teaching time for 2 years. **£38,174**.
- A. Millar and 9 others, including **K.J. Painter (co-I)**. *BBSRC BB/D019621/1 “Centre for Systems Biology”, 03/2007-02/2012. Total grant: £8,695,631. Heriot-Watt component: £38,245*.
- N. Bourneveas, B. Perthame and **K.J. Painter** CANPDE funded Workshop on “PDEs in Mathematical Biology”. September 2011. **£17,000**.
- N. Bourneveas, B. Perthame and **K.J. Painter** CANPDE funded Instructional Conference and Workshop on “Nonlinear PDEs in Mathematical Biology: Cell Migration and Tissue Mechanics”. 14<sup>th</sup>-21<sup>st</sup> April 2010, ICMS. **£35,000**.
- Mathematical Biosciences Institute (MBI) “Long-term Visitor” (September-December 2008, Mathematical Challenges in Developmental Biology program). *MBI funded teaching replacement: £11,325 to HW*.
- T.S. Deisboeck and 16 others, including **K.J. Painter**. *United States National Institute of Health I-P20-CA11300-01, “Development of a Virtual Tumour”, 09/2004-12/2009. Total: US\$2,406,268. Heriot-Watt component: \$72,900*.
- Royal Society Travel Grant. 2004. **£700**

## VISITING PROFESSORSHIPS AND PRIZES

- Visiting Professor, Scuola Normale Superiore, Pisa, Italy, 11/06-15/06, 2018.

- Visiting Professor, Department of Mathematics, Politecnico di Torino, Italy, October 2016 – September 2017.
- Visiting Academic, Department of Mathematics, University of Alberta, Edmonton. (5 times, each of a period covering 1-4 weeks: 2017, 2010, 2006, 2005, 2001. *In 2017 this was supported by a Pacific Institute for Mathematical Sciences Distinguished Visitor Fund.*
- Long Term Visitor, Mathematical Biosciences Institute, Ohio-State University, 09/2008-12/2008. Special Year: Mathematical Challenges in Developmental Biology. *MBI funded teaching replacement.*
- Visiting Academic, Max Planck Institute for Mathematics, Leipzig. 27/4-2/5, 2004.
- Visiting Academic, Department of Mathematics, University of Minnesota. 18/11-1/12, 2002.
- Long Term Visitor, Isaac Newton Institute, Cambridge. 10/9-26/10, 2001 (*Part of the programme “From Individual to Collective Behaviour in Biological Systems”*).
- Cambridge Philosophical Society Bursary Prize, 2001.
- Best Poster Prize at “On Growth and Form” conference, University of Dundee, 1999).
- Invited Graduate Visitor. Department of Mathematics, University of Utah. January - March 1996. (Part of the University of Utah Special Year in Mathematical Biology).
- Two papers awarded “recommended” status in F1000Prime (articles 17 and 33 in publication list).
- Two papers awarded “ISI highly cited status (corresponds to top 1% of research field)” in ISI Web of Science (articles 17 and 35 in publication list).
- Awarded IMA prize for best performance in final year project, 1994.

## PROFESSIONAL RESEARCH ACTIVITIES

### Editorial roles

- Editorial Board for “Mathematical Biosciences and Engineering”, 2018-Ongoing.
- Editorial Board for “Discrete and Continuous Dynamical Systems B”, 2009-Ongoing.
- Guest Editor for Special Issue on “Multiscale phenomena and patterns in biological systems”, Journal of Mathematical Biology, planned for 2019.
- Guest Editor for PLoS Computational Biology, 2018.
- Editorial Board for “Special Issue on Morphogenesis”, Mathematical Modelling and Natural Phenomena, 2009.

### Academic memberships

- Member of Society for Mathematical Biology.
- Member of European Society for Mathematical and Theoretical Biology.
- Member of Edinburgh Mathematical Society.

### Committees

- Canadian Applied and Industrial Mathematics Society (CAIMS) Research Prize Award committee member, 2018-2019.

- Management Committee of Maxwell Institute Graduate School in Analysis and Applications (MIGSAA), 2014-2017.
- International Centre for Mathematical Sciences (ICMS) Programme Committee, 2009–2015.
- Management Group for Centre for Systems Biology at Edinburgh (CSBE), 2007-2012.
- Mathematical Modelling in Toxicology Grant Assessment Panel member. National Centre for Replacement, Reduction and Refinement of Experiments (NC3Rs), October 2012.
- PhD Studentship Assessment Panel member. NC3Rs, December 2011.
- International Advisory Board, “International Conference on Computational Systems-Biology and Bioinformatics”, Bangkok, Thailand.
- Edinburgh Mathematical Society (EMS) board member, 2003–2006.

### **Examining duties**

- External examiner for Undergraduate Mathematics Programme (Department of Mathematics, University of Dundee), 2014-2018.
- External Examiner for MSc in Mathematics with Modern Applications (Department of Mathematics, University of York), 2011-2012.
- PhD examiner/thesis committees. 21 occasions (14 external, 7 internal). External examinees:
  1. Dr Peter Schofield, External Examiner, University of Dundee 2002;
  2. Dr Jasmina Panovska, External Examiner, University of Oxford 2005;
  3. Dr Sarah Young, External Examiner, University of Nottingham 2009;
  4. Dr Duncan Barrack, External Examiner, University of Nottingham 2010;
  5. Dr Vivi Andasari, External Examiner, University of Dundee 2011;
  6. Dr Christian Yates, External Examiner, University of Oxford 2011;
  7. Dr Uduak George, External Examiner, University of Sussex 2011;
  8. Dr Sotiris Prokopiou, External Examiner, University of Nottingham 2013;
  9. Dr Andrew Savory, External Examiner, University of Dundee 2013;
  10. Dr Jean-Charles Seguis, External Examiner, University of Oxford 2013;
  11. Dr Matthew Eddington, External Examiner, University of Reading 2015;
  12. Dr Katrina Treloar, External Examiner, Queensland University of Technology, 2015;
  13. Dr Alexander Chalmers, External Examiner, University of Sydney, 2016.
  14. Dr Richard Bailleul, Thesis Committee, College de France/INRIA, Paris, 2016, 2018.
  15. Dr Linnea Franssea, External Examiner, University of St Andrews, 2019
  16. Dr Vanni Petrolli, Thesis Committee, University of Grenoble, 2019
  17. Dr Nadia Loy, Thesis Committee, Politecnico di Torino, 2020
  18. Dr Rasa Giniunaite, External Examiner, University of Oxford, 2021

### **Conference/workshop/research school organisation**

- Research school co-organiser (with Mariya Ptashnyk): “PDEs in Mathematical Biology: Modelling and Analysis.”, ICMS, Edinburgh, April 29<sup>th</sup>-May 3<sup>rd</sup>, 2019.
- Research school co-organiser (with Heiko Gimperlein): “Graduate School in Evolution Equations”, ICMS, Edinburgh, Nov 15<sup>th</sup>-17<sup>th</sup>, 2017.
- International workshop co-organiser (with Radek Erban, Mark Chaplain, Ben Leimkuhler): “Multiscale methods for stochastic dynamical systems in biology”, ICMS, Edinburgh, Feb 29<sup>th</sup> – Mar 04<sup>th</sup>, 2016.
- International workshop co-organiser (with Nikolaos Bournaveas, Benoit Perthame): “PDEs in Biology”, ICMS, Edinburgh. Sep 26<sup>th</sup> –Sep 28<sup>th</sup>, 2011.

- Instructional school and international workshop co-organiser (with Nikolaos Bournaveas, Benoit Perthame): “Nonlinear PDEs arising in mathematical biology: cell migration and tissue mechanics”, ICMS, Edinburgh. Apr 14<sup>th</sup>-21<sup>st</sup>, 2010.
- Mini-symposium co-organiser. Mathematical Modelling of Cancer Invasion. ESMTB, Edinburgh, 2008.
- Mini-Symposium co-organiser (with Thomas Hillen). Mathematical Modelling of Chemotaxis. ESMTB Meeting, Milan. 2002.
- Edinburgh Brain Tumour Modelling Workshop co-organiser (with Eliezer Shochat), ICMS, Edinburgh, 27th-28th June 2001.

## Assessment and reviewing

- International research reviews: Assessor for Italian Research and University Evaluation Agency (ANVUR) 2011-2014.
- External assessor for University of Surrey REF 2021 preparations (2018, 2019).
- Reviewing for national grant awarding bodies: Engineering and Physical Sciences Research Council (EPSRC, UK); Biotechnology and Biological Sciences Research Council (BBSRC, UK); Isaac Newton Institute (UK); Medical Research Council (MRC, UK); Leverhulme Trust (UK); NC3Rs (UK); Royal Society (UK).
- Reviewing for international grant awarding bodies. European Research Council (Europe); FWF (Austria Research Funding); Human Frontier Science Programme (France); BIRS (Canada); Canadian Institutes of Health Research (CIHR, Canada); Natural Sciences and Engineering Research Council (NSERC, Canada); Royal Society of New Zealand; National Science Centre (Preludium, Poland).
- Academic Promotion evaluations. For University of Dundee (UK), Simon Fraser University (Canada), University of Minnesota (USA), Centre de Recerca Matemàtica (CRM, Barcelona), University of Maryland Baltimore County.
- Books and journals. Reviewer for more than 30 different journals, including: Behavioural Ecology, Bulletin of Mathematical Biology, Developmental Dynamics, Discrete and Continuous Dynamical Systems-B, Deep Sea Research, Ecological Modelling, IEEE Transactions in Biomedical Engineering, IMA Journal of Mathematics in Medicine and Biology, International Journal of Nonlinear Mechanics, Journal of Biological Dynamics, Journal of Comparative Physiology A, Journal of Differential Equations, Journal of Mathematical Analysis and Applications, Journal of Mathematical Biology, Journal of Nonlinear Science, Journal of Theoretical Biology, Journal of Theoretical Medicine, Luminescence, Mathematics in Medicine and Biology, Mathematical Biosciences, Marine Ecology Progress Series, Mathematical Modelling of Natural Phenomena, Nature Communications, Nonlinearity, PLoS Computational Biology, PLoS Biology, PLoS Genetics, Plos One, Proceedings of National Academy of Sciences USA, Physical Biology, Physical Review Letters, Physica D, Physical Review E, Pigment Cell and Melanoma Research, Proceedings of Edinburgh Mathematical Sciences, Proceedings of the Royal Society A, Proceedings of the Royal Society London B (Biological Sciences), Philosophical Transactions of the Royal Society London B, Royal Society Interface, Scientific Reports, SIAM Dynamical Systems, WIREs Computational Molecular Science, Zeitschrift für Angewandte Mathematik.
- Book reviewing. Springer; Garland Science.

## RESEARCH SUPERVISION

### PhD thesis supervision (Sole supervisor unless stated otherwise)

#### Current:

- Viktoria Freingruber (2020-, co-supervised with Dr Mariya Ptashnyk, Heriot-Watt University and Dr Linus Schumacher, University of Edinburgh)
- Thomas Hodgson (2019-, co-supervised with Dr Michela Ottobre, Heriot-Watt University).

#### Completed:

- Dr Eleni Moraki (co-supervised with Dr Ramon Grima, University of Edinburgh, graduated 2021).
- Dr Aleksandra Plochocka (Heriot-Watt, co-supervised with Dr Lyuba Chumakova, University of Edinburgh, graduated 2019).
- Dr Radhia Eljazi (Heriot-Watt, graduated 2016).
- Dr Arianna Bianchi (Heriot-Watt, graduated 2016, co-supervised with Prof Jonathan Sherratt).
- Dr Gordon Hunt (Heriot-Watt, graduated 2013).
- Dr Giorgios Vasilopolous (Heriot-Watt, 2012).
- Dr Jennifer Bloomfield (Heriot-Watt, 2011, co-supervised with Prof Jonathan Sherratt).
- Dr Treenut Saithong (University of Edinburgh, 2009, co-supervised with Prof Andrew Millar, Edinburgh).
- Dr Nicola Armstrong (Heriot-Watt, 2007, co-supervised with Prof Jonathan Sherratt).

### MSc/post-graduate dissertation supervision

**18 students:** Giorgios Vasiliopolous (2005), Douglas Henderson (2006), Laura Bennett (2007), Gordon Hunt (2008), Jennifer Alexander (2009), Morag MacPherson (2010), Amal Al-Ghatani (2010), Deborah Kerr (2011), Eleni Moraki (2014,2015), Joseph Brook (2015), Karina Zile (2015), Euan McRae (2016), Lucy Pitches (2016), Aleksandra Plochocka (2016), Maximillian Strack (2018), Emiko Kemp (2019), Bandar Alharbi (2019), Thomas Hodgson (2019).

(At least) 10 of the above MSc students have subsequently completed and/or started PhD positions.

## TEACHING AND ADMINISTRATION

### Teaching: course and programme development

- Development of new degree programme: MSc in Applied Mathematics with Biological and Ecological Modelling (ran from 2005 until 2018).
- Development of new course: Mathematical Biology and Medicine (Final year undergraduate and MSc).

### Teaching: organisation

- Mathematics MSc dissertations coordinator (2007-2009).
- Final year Undergraduate Director of Studies: (2007-2010, 2017-now).

- MIGSAA Taster project coordinator (2015-2017).

### Teaching: courses taught

- Virtual teaching via SMSTC (Audience: Scotland-wide PhD mathematics students)
- Reaction-diffusion equations (MSc level course, 2001)
- Foundation Mathematics (Service teaching level, 2002 - 2007)
- Introductory Mathematics (Service teaching level, 2003 - 2005)
- Mathematics for Engineers and Scientists (Service teaching, 2018-2020)
- Mathematical Biology and Medicine (Final Year Undergraduate/MSc, 2006 – 2011, 2014-2016, 2018-)
- Quantitative Techniques for Biology (Service Teaching, 2006-2008)
- Ordinary Differential Equations (3<sup>rd</sup> Year, 2010 - 2016)
- Case studies in Mathematical Biology (Graduate course at Politecnico di Torino, 2017).
- Final Year Dissertation Supervision (from 2004, typically 2 per year)
- Calculus for Architects (2020-)
- Numerical Analysis and Scientific Computing (2021)
- Probability and Statistics (part of the Urban and Territory Design Studio (2021).

### University Administrative Duties

Administrative duties include activities at departmental, school, university and inter-university levels

- Final Year Undergraduate Director of Studies (Mathematics) (2007-2011, 2017-2020). Coordinate smooth running of Final Year courses, liaison between staff and students, organising end of year Examination board.
- Course director for Mathematics with Finance (2013-2020).
- Dean's Representative (2012-2020).
- Maxwell Institute Graduate School for Analysis and Applications (Heriot-Watt/University of Edinburgh), Cohort Director (2014-2017)
- University Library committee (2008-14).
- Heriot-Watt Internal Library Review Board, 2009.
- Mathematics Learning and Teaching Committee member (2007-2011, 2017-2020). Contribute to the future development of the teaching and learning strategy.
- Elected member of University Senate (2006-2009).
- Course director for Mathematics with Psychology (2005-2015).
- Heriot-Watt representative for Edinburgh Mathematical Society (from 09/2003-08/2006).
- Mathematics Department Research Committee member (from 09/2002).
- Personal tutor to undergraduate students (from 2001-2020).

### PUBLIC ENGAGEMENT AND KNOWLEDGE EXCHANGE

- Presentation stand at a Public Engagement Showcase, Royal Society of Edinburgh, 2000.
- Presentation at American Association for the Advancement of Science Annual Meeting (Topic: Modelling cell movement in development and disease), Boston, USA, 2002. *This resulted in subsequent companion piece/consultation for a short Nature News article, published February 2004: <http://www.nature.com/news/2002/020218/full/news020218-10.html>.*

- Presentation of research during visit of Cabinet Secretary for Education and Lifelong Learning (Fiona Hyslop), October 2007.
- Consultation for article appearing in popular science magazine “The Scientist” (Publication January 2004: <http://www.the-scientist.com/?articles.view/articleNo/15811/title/Pattern-Prediction/>)
- Publication “Cryptic patterning of avian skin confers a developmental facility for loss of neck feathering” featured in mass media (BBC News, Daily Mail, National Geographic, Economist etc), March 2011. For examples, see  
<https://www.bbc.com/news/uk-scotland-edinburgh-east-fife-12745163>  
<https://www.nature.com/articles/471413c>  
<https://news.nationalgeographic.com/news/2011/03/110315-transylvanian-naked-neck-chicken-churkeys-turkens-science/>  
<https://www.dailymail.co.uk/sciencetech/article-1366748/Scientists-reveal-Transylvanian-naked-neck-chicken-sheds-feathers.html>  
<https://www.economist.com/science-and-technology/2011/03/31/some-chicken-some-neck>
- Publication “Reconciling diverse mammalian pigmentation patterns with a fundamental mathematical model” featured in mass media (The Guardian, Daily Telegraph, Huffington Post, The Conversation etc), January 2016. For examples, see  
<https://www.theguardian.com/science/2016/jan/06/piebald-mystery-solved-scientists-discover-mutated-gene-animals>  
<https://www.telegraph.co.uk/news/science/12084612/How-black-and-white-cats-get-their-patchy-fur-and-why-it-could-help-explain-health-defects.html>  
<http://theconversation.com/how-the-cat-got-its-coat-and-other-furry-tails-52184>
- Publication “Multimodal navigation strategies for turtle homing” featured in mass media (Mail Online, Daily Telegraph, Scotsman, Edinburgh Evening News, ITV, BBC Radio Suffolk, Orkney and Highlands. Over 190 items in total). For examples, see:  
<https://www.itv.com/news/2019-04-22/new-insights-into-how-turtles-navigate-hundreds-of-miles-to-ascension-island/>  
<https://www.dailymail.co.uk/wires/pa/article-6945693/New-insights-turtles-navigate-hundreds-miles-Ascension-Island.html>  
<https://www.thenational.scot/news/17588764.new-insight-from-edinburgh-university-into-how-turtles-navigate-journeys/>



## ACADEMIC PRESENTATIONS

- ▶ Invited talk at scientific meeting, workshop or conference
- Invited mini-symposium talk at conference
- Departmental seminar or colloquium
- Contributed talk at conference

- 2021:** 126 ▶ Virtual Talk, "Modeling and Computational Approaches to Individual and Collective Cell Movement in Complex Environments", CMO-BIRS, Mexico, September 2021.
- 125 ▶ Virtual Plenary talk, ICCMB 2021, Bangladesh, July 2021.
- 124 ● Virtual Seminar talk, Cold Place Seminar Series, June 2021.
- 123 ■ Virtual minisymposium talk, Society for Mathematical Biology Annual Conference, University of California Riverside, June 2021
- 122 ● Virtual seminar talk, Department of Mathematics, University of Sheffield, February 2021.
- 2020:** 121 ▶ Virtual conference talk at Bangladesh.
- 120 ● Virtual Seminar, Interdisciplinary Center for Quantitative Modeling in Biology, University of California, Riverside, November 2020.
- 119 ● Virtual Seminar at FIAS, University of Frankfurt, June 2020.
- 2019:** 118 ▶ Invited speaker at workshop "PDE models in cancer invasion", Belfast, December 2019.
- 117 ▶ Invited speaker at Scottish Mathematical Biology Forum, Edinburgh, December 2019.
- 116 ▶ Invited speaker at "On growth and pattern formation: Philip Maini's 60<sup>th</sup> birthday workshop", Oxford, September 2019.
- 115 ▶ Invited speaker at "Bridging cellular and tissue dynamics from normal development to cancer: mathematical, computational and experimental approaches", Banff International Research Station, Banff, Canada, June 2019. *Talk available online at <https://www.birs.ca/events/2019/5-day-workshops/19w5080/videos/watch/201906202043-Painter.html>.*
- 114 ● Two departmental seminars at Politecnico di Torino, Italy, April 2019.
- 112 ● Seminar at School of Mathematics and Statistics, University of Glasgow.
- 111 ▶ Invited talk at "Cell Migration and Mechanical Forces" (workshop of the PhD Programme in Complex Systems, University of Torino), Candiolo Cancer Institute, University of Torino, March 2019.
- 110 ● Seminar at Department of Mathematics, Imperial College London, March 2019.
- 109 ● Inaugural Lecture, Heriot-Watt University, January 2019. *Talk available online at <https://www.youtube.com/watch?v=02IYYXXp-WM>*
- 108 ● Seminar at Division of Mathematics, University of Dundee, January 2019.
- 2018:** 107 ● Seminar at Dipartimento di Scienze Matematiche, Politecnico di Torino, Italy, November 2018.
- 106 ▶ Invited talk at "Differential Equations Arising from Organising Principles in Biology", Oberwolfach, Germany, September 2018
- 105 ▶ Invited talk at "Collective dynamics and self-organization in biological sciences" workshop, ICMS, Edinburgh, UK, May 2018.
- 104 ● Seminar, Laboratoire J.-L. Lions, Sorbonne Université, Paris, France, March 2018.
- 103 ▶ Invited talk at "CancerTo 2018, Imaging-based approaches to cancer", University of

- Torino, March 2018.
- 2017:**
- 102** ● Seminar at Department of Mathematics, University of Birmingham, UK, February 2018.
  - 101** ● Seminar at Department of Mathematics, University of Trento, Italy, November 2017.
  - 100** ► Invited talk at “Multiscale analysis and modeling of collective migration in biological systems” workshop, Bielefeld University, Germany, October 2017.
  - 99** ● Seminar. Department of Mathematics, Politecnico di Milano, September 2017.
  - 98** ► Invited talk MOBI-2017, Rome, Italy, June 2017.
  - 97** ► Invited talk at ECM 2017, Hong Kong Polytechnic University, Hong Kong, June 2017.
  - 96** ● Seminar/lecture for Graduate School, University of Torino, May 2017.
  - 95** ► Invited plenary talk at Alberta Mathematics Dialogue, MacEwan University, Canada, May 2017.
  - 94** ● Series of 2 seminars at Department of Mathematics, including the CAIMS distinguished lecture, University of Alberta, May 2017.
  - 92** ► Invited talk at workshop on “Nonlinear Cross Diffusion and Multiscale Models”, Politecnico di Torino, February 2017.
- 2016:**
- 91** ● Series of 5 research seminars at Politecnico di Torino, Italy, October-December 2016.
  - 86** ► Conference “International Conference on Reaction- Diffusion Equations and their Applications to the Life, Social and Physical Sciences”. Renmin University, Beijing, China. May 2016.
  - 85** ● Department of Mathematics, University of St Andrews, UK, May 2016.
  - 84** ● Department of Mathematics, University of Bath, UK. March 2016.
  - 83** ► Talk at “Multiscale methods for stochastic dynamical systems in biology, March 2016 (one of conference organisers), ICMS, Edinburgh, UK, February 2016.
- 2015:**
- 82** ► Conference “Self organisation modelling and analysis”, ICMMA 2015, Meiji University, Tokyo, Japan. October 2015.
  - 81** ► Graduate school “2<sup>nd</sup> Graduate School on Evolution equations”, ICMS, Edinburgh, UK. September 2015.
  - 80** ► Workshop “Computational and multiscale modelling of cancer growth and spread”, ICMS, Edinburgh, UK. June 2015
  - 79** ► Conference of the graduate school “Cells in Motion – IMPRS”, Muenster University, Germany. May 2015.
  - 78** ● Department of Mathematics, University of Edinburgh, UK. March 2015.
  - 77** ● Department of Mathematics, Heriot-Watt University, UK. February 2015.
- 2014**
- 76** ► Workshop “International BIOMS workshop on modeling cellular systems”, Heidelberg University, Germany. October 2014.
- 2013:**
- 75** ● Department of Mathematics, University of Dundee, UK. November 2013
  - 74** ► Workshop “The mathematics of cells and tissues”, Cortona, Italy, September 2013.
- 2012:**
- 73** ● CCCS, University of Basel, Switzerland. December 2012.
  - 72** ► Workshop on “Grand biological challenges for mathematicians”, LMS-EP SRC Durham Symposia, University of Durham, UK. July 2012
  - 71** ● Graduate Minicourse on “Models for Biological Pattern Formation”. Politecnico di Torino, Italy, June 2012 (3 2-hour lectures).
  - 70** ► Workshop on “Pattern Formation: The inspiration of Alan Turing”, St John’s College,

- University of Oxford, UK. March 2012
- 2011:** 69 ▶ Workshop: “Cell migration in networks”, University of Muenster, Germany. November 2011
- 68 ● OCCAM, Department of Mathematics, University of Oxford, October 2011.
- 67 ● Informatics, University of Edinburgh, July 2011.
- 66 ■ ESMTB 2011. Session: “Modelling and Analysis of Tumour Invasion”, Krakow, Poland, June/July 2011.
- 65 ■ ESMTB 2011. Session: “Cell migration during development: modelling and experiment”, Krakow, Poland. June/July 2011.
- 64 ▶ Edinburgh SIAM Student Chapter Conference 2011, Edinburgh, UK. February 2011.
- 2010:** 63 ● Department of Mathematics, University of Alberta, Canada, November 2010.
- 62 ● Department of Mathematics, University of Alberta, Canada, November 2010.
- 61 ▶ Conference: “PDEs in kinetic theories: kinetic description of biological models”, ICMS, Edinburgh, UK. November 2010.
- 60 ■ Conference: SIAM Emerging Topics in Dynamical Systems and PDEs. Session: “Models for chemotaxis”. Barcelona, Spain. May/June 2010.
- 59 ▶ Workshop: “Nonlinear PDEs arising in Mathematical Biology”, ICMS, Edinburgh, UK. April 2010.
- 2009:** 58 ● Department of Mathematics, University of Warwick, UK, November 2009.
- 57 ▶ Conference: “Patterning and Networks”. Instituto de Física, UNAM, Mexico City, Mexico. October 2009.
- 56 ● Roslin Institute, University of Edinburgh, UK. April 2009.
- 55 ● Department of Mathematics, University of Strathclyde, UK. March 2009.
- 54 ● Edinburgh Centre for Rural Research (ECRR): Directors lunch. Heriot-Watt University. March 2009.
- 2008:** 53 ▶ Workshop: “Morphogenesis, Limb Growth, Gastrulation, Somitogenesis, Neural Tube Formation”. Mathematical Biosciences Institute, Ohio State University, Columbus, USA. November 2008.
- 52 ▶ Workshop: “Cell and Tissue Movement”. Mathematical Biosciences Institute, Ohio State University, Columbus, USA. September 2008.
- 51 ■ ESMTB 2008. Session: “Mathematical Modelling in Tumour Invasion”. Edinburgh, UK. June/July 2008.
- 50 ● Department of Mathematics, University of Stirling, UK, March 2008.
- 2007:** 49 ▶ Workshop: “Mathematical Modelling of cell migration”. RICAM, University of Linz, Austria. December 2007.
- 48 ● Department of Mathematics, University of Leeds, UK, May 2007.
- 47 ▶ Workshop: “Complex networks in the life sciences”. MITACS-MATHEON, Berlin, Germany. April 2007.
- 46 ● Department of Mathematics, University of Glasgow, UK, March 2007.
- 2006:** 45 ● Department of Mathematics, University of Alberta, Canada, November 2006.
- 44 ● Department of Mathematics, University of British Columbia, Canada, October 2006.
- 43 ▶ Workshop: “Computational Tumor Modeling”, DIMACS, Rutgers University, New Jersey, USA. August 2006.
- 42 ▶ Workshop: “Tumour modelling”, University of Dundee, June 2006.
- 41 ▶ Workshop: “Multiscale Modelling of Multicellular Systems”, Biocomplexity Institute, University of Indiana, Bloomington, USA, May 2006.

- 40 ■ British Applied Mathematics Conference, University of Keele, UK. April 2006.
- 39 ● Department of mathematics, University of Liverpool, UK. March 2006.
- 2005: 38 ► Workshop: "Pattern Formation on Growing Domains", Isaac Newton Institute, Cambridge, UK. October 2005.
- 37 ● Department of Mathematics, University of Edmonton, Canada, September 2005.
- 36 ► Workshop: "Theoretical Medicine", University of Leeds, June 2005.
- 35 ► Workshop: "CViT", Massachusetts General Hospital, Boston. USA. March 2005.
- 34 ● Department of mathematics, Birmingham University, UK. March 2005.
- 2004: 33 ► Workshop: "Modelling of Cell Motility and Angiogenesis", University of Vienna, Vienna, Austria. November 2004.
- 32 ► LMS network meeting workshop, University of Nottingham, UK. September 2004.
- 31 ■ Society of Mathematical Biology annual meeting. Session: "Modelling tumour growth", University of Michigan, Ann Arbor, USA. July 2004.
- 30 ● Max Planck Institute for Mathematics in the Natural Sciences, Leipzig, Germany. April 2004.
- 2003: 29 ► Workshop: "Mathematical Modelling of Cancer". Kavli Institute, Institute of Theoretical Physics, University of California, Santa Barbara, USA. December 2003.
- 28 ► Workshop: "Mathematical Modelling of Cancer". Mathematical Biosciences Institute, Ohio State University, Columbus, Ohio, USA. November 2003.
- 27 ● Mathematics Department, University of Stirling, UK, November 2003.
- 26 ■ SIAM conference on Applications of Dynamical Systems. Minisymposium. Snowbird, Salt Lake City, USA. May 2003.
- 25 ● Mathematics Department, Loughborough University, UK, Mar 2003.
- 24 ■ Applied Mathematics and Applications of Mathematics conference. University of Nice, Nice, France. Minisymposium: "Modelling cell migration. February 2003.
- 2002: 23 ● Dept of Mathematics, University of Minnesota, USA, Nov 2002.
- 22 ■ Society of Mathematical Biology Annual conference. University of Tennessee, Knoxville, USA. Minisymposium speaker. July 2002.
- 21 ■ European Society of Mathematical and Theoretical Biology (ESMTB) conference, University of Milan, Italy. Minisymposium speaker. July 2002
- 20 ○ European Society of Mathematical and Theoretical Biology (ESMTB) conference. Milan, Italy. Contributed talk. July 2002.
- 19 ► Scottish Theoretical Biology Forum, Heriot-Watt, UK. June 2002.
- 18 ● Dept of Mathematics, University of Cologne, Germany, May 2002.
- 17 ■ AAAS annual meeting. Boston, USA. February 2002.
- 2001: 16 ► Conference: "Pattern Formation by Swimming Micro-organisms and Cells". University of Leeds, UK. December 2001
- 15 ● Mathematics Colloquium, University of Alberta, Canada, November 2001.
- 14 ● Mathematical Biology Seminar, University of Alberta, Canada, November 2001.
- 13 ● Isaac Newton Institute, Cambridge, UK, October 2001.
- 12 ● Mathematics Colloquium, Heriot-Watt University, UK, January 2001.
- 2000: 11 ● Department of Mathematics, University of Dundee, UK. December 2000.
- 10 ● Department of Mathematics, Heriot-Watt University, UK. November 2000.
- 9 ● Department of Mathematics, University of Glasgow, UK. May 2000.
- 1999: 8 ● Department of Mathematics, University of Tübingen, Germany, November 1999.
- 7 ► Oberwolfach Mathematical Biology meeting. Oberwolfach, Germany. October 1999.

- 6 ▶ Conference of the Japanese Society of Industrial and Applied Mathematics. Matsuyama, Japan. October 1999.
- 5 ■ Equadiff '99, Berlin, Germany. August 1999.
- 1998: 4 ▶ Workshop: "Pattern Formation and Morphogenesis: Model Systems". IMA conference, University of Minnesota, Minneapolis, USA. October 1998
- 3 ● Department of Mathematics, University of Utah, USA. August 1998.
- 2 ● Department of Mathematics, University of Oxford, UK. February 1998.
- 1997: 1 ▶ IMA conference: "Mathematical Theory of Biological Systems", Oxford, UK. July 1997.

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Go to <http://tinyurl.com/kjpainterscholar>.

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2. M.R. Myerscough, P.K. Maini and **K.J. Painter** (1998). Pattern formation in a generalized chemotactic model. *Bulletin of Mathematical Biology*, 60, 1-26. [doi:10.1006/bulm.1997.0010](https://doi.org/10.1006/bulm.1997.0010).
3. **K.J. Painter**, H.G. Othmer and P.K. Maini (1999). Stripe formation in juvenile *Pomacanthus* via chemotactic response to a reaction-diffusion mechanism. *Proceedings of the National Academy of Sciences of USA*, 96, 5549-5554.
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6. **K.J. Painter**. Modelling of pigment patterns in fish (2001). In “*Mathematical Models for Biological Pattern Formation*” (Eds: P.K. Maini and H.G. Othmer), IMA Volumes in Mathematics and its Applications, 121, 59-82. Springer-Verlag, Berlin/Heidelberg.
7. S. Schnell, **K.J. Painter**, P.K. Maini and H.G. Othmer (2001). Spatiotemporal pattern formation in early development: a review of primitive streak formation and somitogenesis. In “*Mathematical Models for Biological Pattern Formation*” (Eds: P.K. Maini and H.G. Othmer), IMA Volumes in Mathematics and its Applications, 121, 11-38. Springer-Verlag, Berlin/Heidelberg.
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## MISCELLANEA

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