

CURRICULUM VITÆ FOR FRANCIS CLARKE

Full name: Francis Willoughby Clarke

Home Page: <http://www.franciswclarke.webspace.virginmedia.com>

1958–1964	University College School, London
Jan–Apr 1965	Technician, Imperial College, London
1965–1968	Birmingham University
June 1968	1st Class Honours Degree in Pure Mathematics Corbett Prize
1968–1971	University of Warwick
1969	M.Sc. by examination and dissertation (“Group Actions on Hamiltonian Systems”) with distinction
1971	Ph.D. (“On the K -theory of the Loop Space of a Lie Group”)
1971–1991	Lecturer in Pure Mathematics, University College Swansea
1972–1976	Part-time Open University tutor
1976	Visited Göttingen, funded by S. R. C. European short visit grant
1982	Invited lecture at British Mathematical Colloquium, Bangor
Feb–Apr 1987	Visited Université de Paris-Sud, funded by British Council and C. N. R. S
Mar 1988	Visited Evanston, part funded by Royal Society travel grant
Apr 1988	Visited Dalhousie University, Halifax, Nova Scotia, funded by Dalhousie
Jun 1989	S. E. R. C. visiting Fellowship for Keith Johnson
Sep 1989	Invited lecture at British Association, Sheffield
Oct 1989	Attended Homotopy workshop at M. S. R. I., Berkeley, partly funded by N. S. F.
Nov 1989	Lectures in three Canadian universities (Toronto, Queens, Dalhousie)
Mar–Apr 1990	Visit to M. S. R. I., Berkeley, funded by N. S. F.
Jul 1990	Invited lecture at Adams Memorial Symposium, Manchester
Oct 1991	Promoted to Senior Lecturer at University College Swansea
Apr 1997	Invited lecture at British Mathematical Colloquium, Royal Holloway
Apr 1999	Organised British Topology meeting, Swansea, funded by London Mathematical Society
Oct 1999	Promoted to Reader at University of Wales Swansea
2000–	member of EPSRC College; member of 6 prioritisation panels, chair of one of them; member of 5 Fellowships panels
Sep 2002	Lectures at Chulalongkorn University, Bangkok, Thailand
2003–2007	External examiner in Pure Mathematics at University of Aberdeen
May 2004	External assessor on Teaching Programme Review of Mathematics, Edinburgh University
2004–2007	Member of B. M. C. Scientific Committee
Jul 2005	Organiser of LMS/EPSRC Short Course on Algebraic Topology
Jan 2007–Dec 2009	Seconded to Heilbronn Institute for Mathematical Research , Bristol
Apr 2007	Secretary to Swansea B. M. C.
2007–2012	Member of EPSRC’s Mathematics Strategic Advisory Team
2008–2010	Member of EPSRC’s Transformative Research Advisory Group
2008–	Contributor to Sage development
2009–2013	External member of the Academic Steering and Management Group of the Scottish Mathematical Sciences Training Centre
Jan 2010–	Consultant at Heilbronn Institute
Sept 2010	Early retirement from Swansea University
2012–	Member at Large of Council of London Mathematical Society
2015–	Deputy Programme Secretary of LMS

PUBLICATIONS

- [1] *On the K -theory of the loop space of a Lie group*, Proc. Cambridge Philos. Soc. **76** (1974), 1–20, [MR 50:1240](#).
- [2] *The commutator subgroup of a free topological group*, Proc. Amer. Math. Soc. **57** (1976), 354–356, [MR 53:8314](#).
- [3] (with J. F. Adams), *Stable operations on complex K -theory*, Illinois J. Math. **21** (1977), 826–829, [MR 56:13219](#).
- [4] *On $\text{Ext}_{K_*(K)}(\pi_*(K), K_*(MU))$* , Proc. Amer. Math. Soc. **74** (1979), 156–160, [MR 80f:55019](#).
- [5] (with A. D. Thomas and D. A. Waller), *Embeddings of covering projections of graphs*, J. Comb. Theory Ser. B **28** (1980), 10–17, [MR 81f:05066](#).
- [6] *The K -theory of $\Omega Sp(n)$* , Quart. J. Math. Oxford Ser. (2) **32** (1981), 11–22, [MR 82f:55008](#).
- [7] *On the homology of ΩSp* , J. London Math. Soc. (2) **24** (1981), 346–350, [MR 83h:57062](#).
- [8] *Self-maps of BU* , Math. Proc. Cambridge Philos. Soc. **89** (1981), 491–500, [MR 82f:55007](#).
- [9] (with G. Jacobs), *French on the Run (educational computer software)*, Silversoft, London, 1985, ISBN 1–85082–025–2.
- [10] *Continued fraction expansions and the Legendre polynomials*, Bull. London Math. Soc. **18** (1986), 255–260, [MR 87f:11086](#).
- [11] (with R. Chan), *p -adic transforms and digital convolution*, Elec. Lett. **22** (1986), 161.
- [12] *Operations in K -theory and p -adic analysis*, Groupe de travail d’analyse ultramétrique, vol. 14, Paris, 1986/87, 12 pages, Electronic Version at http://www.numdam.org/item?id=GAU_1986-1987__14__A7_0.
- [13] (with A. Baker, N. Ray and L. Schwartz), *The Kummer congruences and the stable homotopy of BU* , Trans. Amer. Math. Soc. **316** (1989), 385–432, [MR 90c:55003](#).
- [14] *The universal von Staudt theorems*, Trans. Amer. Math. Soc. **315** (1989), 591–603, [MR 90a:11026](#).
- [15] *Integer-valued polynomials in algebraic topology*, Proceedings of the ‘Rencontre autour des polynômes entières’, Luminy, 1990, vol. 91-17, Laboratoire de Mathématiques, Marseille, 1991, pp. 5–8.
- [16] *On Dibag’s generalisation of von Staudt’s theorem*, J. Algebra **141** (1991), 420–421, [MR 92k:11020](#).
- [17] *The Gray code function, p -adic methods and their applications* (Andrew J. Baker and Roger J. Plymen, eds.), Oxford Univ. Press, 1992, [MR 93i:11143](#), pp. 1–7.
- [18] (with K. Johnson), *Cooperations in elliptic homology*, Adams Memorial Symposium on Algebraic Topology, Volume 2 (N. Ray and G. Walker, eds.), London Math. Society Lecture Note Series No. 176, Cambridge Univ. Press, 1992, [MR 94i:55010](#), pp. 131–143.
- [19] *Hensel’s lemma and the divisibility by primes of Stirling-like numbers*, J. Number Theory **52** (1995), 69–84, [MR 96c:11028](#).
- [20] (with I. Sh. Slavutskii), *The integrality of the values of Bernoulli polynomials and of generalised Bernoulli numbers*, Bull. London Math. Soc. **29** (1997), 22–24, [MR 97k:11022](#).
- [21] *The discrete Fourier transform of a recurrent sequence*, Applicable Algebra in Engineering, Communication and Computing **8** (1997), 485–490, [MR 98g:65133](#).
- [22] (with W. N. Everitt, L. L. Littlejohn and S. J. R. Vorster), *H. J. S. Smith and the Fermat two squares theorem*, Amer. Math. Monthly **106** (1999), no. 6, 652–665, [MR 2000j:01021](#).

- [23] (with J. Hunton and N. Ray), *Extensions of umbral calculus II: double delta operators, Leibniz extensions and Hattori-Stong theorems*, Ann. Inst. Fourier (Grenoble) **51** (2001), no. 2, 297–336, [MR 2002f:05021](#).
- [24] (with M. D. Crossley and S. Whitehouse), *Bases for cooperations in K -theory*, K -theory **23** (2001), no. 3, 237–250, [MR 2002h:55019](#).
- [25] (with Christine Jones), *A congruence for factorials*, Bull. London Math. Soc. **36** (2004), no. 4, 553–558, [MR 2005b:11020](#).
- [26] (with M. D. Crossley and S. Whitehouse), *Algebras of operations in K -theory*, Topology **44** (2005), no. 1, 151–174, [MR 2006c:55015](#).
- [27] *Counting abelian group structures*, Proc. Amer. Math. Soc. **134** (2006), no. 10, 2795–2799, [MR 2007d:20048](#).
- [28] (with S. Whitehouse), *Algebraic properties of stably numerical polynomials*, J. Pure Applied Algebra **207** (2006), no. 3, 607–617, [MR 2007m:13028](#).
- [29] (with M. D. Crossley and S. Whitehouse), *The discrete module category for the ring of K -theory operations*, Topology **46** (2007), no. 2, 139–154, [MR 2008g:55027](#).
- [30] (with Keith Johnson), *On the classifying ring for Abel formal group laws*, J. Pure Appl. Algebra **213** (2009), no. 7, 1290–1298, [MR 2010a:55004](#).
- [31] *A basis for numerical functionals*, Proceedings of the ‘Troisième Rencontre Internationale sur les Polynômes à Valeurs Entières’, Luminy, 2010, vol. 2, no. 2, CIRM, Marseille, 2011, pp. 79–80.

73 reviews in Math. Reviews, 1978–2012. Review of P.-J. Cahen and J.-L. Chabert, “Integer-Valued Polynomials”, *Mathematics Today* **34** August 1998, p. 120.

INVITED LECTURES AND SEMINARS

23rd January 1974, University of London, Topology Seminar, “Cooperations in K -theory”.

14th November 1975, University of Warwick, Topology Seminar, “Operations in K -theory”.

4th June 1976, University of Glasgow, Mathematics Colloquium, “The Ubiquitous Dynkin Diagram”.

2nd May 1979, University of London, Topology Seminar, “ K -theory and the Bernoulli Numbers”.

10th October 1979, University of Manchester, Pure Mathematics Seminar, “The Bernoulli Numbers 1713–1980”.

30th November 1979, University of Hull, Pure Mathematics Colloquium, “ K -theory and the Kummer Congruences”.

3rd November 1980, Oxford Topology Seminar, “ K -theory and the Bernoulli Numbers”.

13th December 1982, Homotopy Theory Mini-Meeting, Manchester, Lecture, “The Kummer Congruences and $\pi_*^S(BU)$ ”.

1st April 1982, British Mathematical Colloquium, Bangor, Plenary Lecture, “Integer-valued Polynomials and K -theory”.

12th May 1982, Pure Mathematics Colloquium, Gregynog, Lecture, “The Bernoulli Numbers”.

14th June 1982, University of Oxford, Topology Seminar, “Integer-valued Polynomials and K -theory”.

10th August 1982, Odense University, Denmark, Topology Seminar, “The Bernoulli Numbers in Stable Homotopy Theory”.

21st May 1986, Pure Mathematics Colloquium, Gregynog, Lecture, “Some Remarks about Continued Fractions”.

14th July 1986, Brunel University, Mathematics Colloquium, “Some Remarks about Continued Fractions”.

20th October 1986, University of Edinburgh, Mathematics Colloquium, “Computing with Finite Fields”.

15th January 1987, Topology Mini-Meeting, Warwick, Lecture, “ K -theory Comodules”.

9th March 1987, Groupe d’Étude d’Analyse Ultramétrique, Paris, Seminar, “ p -adic Analysis and Operations in K -theory”.

11th March 1987, Séminaire de Topologie Algébrique, École Polytechnique, Seminar talk, “Co-operations in K -theory”.

19th March 1987, Université de Paris-Sud, Orsay, Departmental Seminar, “Non-embedding Theorems and K -theory”.

23rd March 1988, Homotopy Theory Conference, Northwestern University, Evanston, Illinois, U. S. A., 30 minute talk, “Adams Operations and Non-embedding Results”.

31st March 1988, Dalhousie University, Halifax, Nova Scotia, Canada, Functional Analysis Seminar, “ K -theory Operations and p -adic Analysis”.

14th May 1988, Mathematical Association, S. W. Wales Branch, Lecture, “Mathematics at Sea”.

14th September 1989, British Association, Sheffield, Mathematical Section, Lecture, “The Bernoulli Numbers, Ancient and Modern”.

27th September 1989, p -adic Methods and their Applications Meeting, Manchester, Main lecture, “Hensel’s Lemma and the Divisibility of Stirling Numbers of the Second Kind”.

28th September 1989, p -adic Methods and their Applications Meeting, Manchester, Short talk, “The Interpolation Series for the Gray Code Function”.

6th November 1989, Queens University, Kingston, Ontario, Canada, Number Theory Seminar, “Hensel’s Lemma and the Divisibility of Stirling Numbers”.

6th November 1989, Queens University, Kingston, Ontario, Canada, Algebra Seminar, “The Universal Bernoulli Numbers”.

8th November 1989, Toronto University, Ontario, Canada, Topology Seminar, “Operations in p -adic K -theory”.

10th November 1989, Dalhousie University, Halifax, Nova Scotia, Canada, Department Colloquium, “The Universal Bernoulli Numbers”.

22nd November 1989, Institute of Mathematics and its Applications, South Wales Branch, “Mathematics at Sea”.

8th February 1990, University of Cambridge, Topology Seminar, “Operations in p -adic K -theory”.

25th May 1990, University of Kent, Departmental Colloquium, “The Universal Bernoulli Numbers”.

4th July 1990, Adams Memorial Symposium, Manchester, Main lecture, “Cooperations in Elliptic Cohomology”.

19th November 1990, University of Oxford, Topology Seminar, “Operations in p -adic K -theory”.

22nd November 1990, Exeter, Departmental Seminar, “The Universal Bernoulli Numbers”.

11th December 1990, Integer-valued Polynomials Meeting, C. I. R. M., Marseille, Lecture, “Integer-valued Polynomials in Algebraic Topology”.

14th March 1991, University of Warwick, Topology Seminar, “Operations in p -adic K -theory”.

12th June 1991, Brunel University, Mathematics Colloquium, “The Universal Bernoulli Numbers”.

27th February 1992, Glasgow University, Number Theory Seminar, “The Universal Bernoulli Numbers”.

28th February 1992, Edinburgh University, Scottish Topology Seminar, “Cooperations in Elliptic Cohomology”.

19th May 1992, Pure Mathematics Colloquium, Gregynog, Lecture, “The Universal Bernoulli Numbers”.

9th August 1994, International Congress of Mathematicians, Zürich, Poster Session, “Hensel’s Lemma and the Divisibility of Stirling Like Numbers”.

16th March 1995, Université de Franche Comté, Besançon, Departmental Colloquium, “Les Nombres de Bernoulli universels”.

12th July 1995, Third International Conference on Finite Fields and Applications, Glasgow, “The Discrete Fourier Transform of a Recurrent Sequence”.

9th February 1996, University of Birmingham, Mathematics Colloquium, “The Universal Bernoulli Numbers”.

11th November 1996, [Transpennine Topology Triangle](#), Manchester, “Differential Operators, Homology Theories and Divisibility”.

31st January 1997, Workshop on Elliptic Cohomology and Related Topics, Glasgow, “Hattori-Stong Theorems”.

4th April 1997, British Topology Meeting, Oxford, “Hattori-Stong Theorems for Landweber exact functors”.

15th April 1997, British Mathematical Colloquium, Royal Holloway and New Bedford College, London, Morning Lecture, “[Formal Group Laws in Algebraic Topology](#)”.

7th July 1997, Mathematics Department, Universität Mannheim, Germany, “Formal Group Laws in Algebraic Topology”.

26th February 1998, Exeter, Departmental Seminar, “The Taylor Series Coefficients of the Jacobi Elliptic Functions”.

13th May 1998, Edinburgh University, Scottish Topology Seminar, “Hattori-Stong Theorems for Landweber Exact Functors”.

14th May 1998, Glasgow University, Number Theory Seminar, “Closed Formulas for Representing Primes by Binary Quadratic Forms”.

20th August 1998, International Congress of Mathematicians, Berlin, Poster Session, “Closed Formulas for Representing Primes by Binary Quadratic Forms”.

22nd October 1999, Liverpool, Mathematics Colloquium, “The Taylor Series Coefficients of the Jacobi Elliptic Functions”.

27th October 1999, [Transpennine Topology Triangle](#), Manchester, “The Kummer Congruences and the Lazard Ring”.

3rd November 1999, Leicester, Pure Mathematics Seminar, “The Taylor Series Coefficients of the Jacobi Elliptic Functions”.

23rd May 2000, Mathematics Colloquium, Gregynog, Lecture, “The Taylor Series Coefficients of the Jacobi Elliptic Functions”.

10th April 2001, British Mathematical Colloquium, Glasgow, Topology Splinter Group Talk, “Bases for Cooperations in K -theory”.

29th October 2001, [Transpennine Topology Triangle](#), Sheffield, “Operations in p -local K -theory”.

6th December 2001, Pure Mathematics Seminar, Leicester, “Hopf Algebras of Operations and Cooperations in K -theory”.

11th January 2002, Séminaire de Topologie Algébrique, Paris XIII, “Hopf Algebras of Operations and Cooperations in K -theory”.

31st May 2002, Inter-departmental Seminar, Physical Sciences Planning Group, University of Wales Swansea, “CD Algebra”.

2nd–6th September 2002, Department of Mathematics, Chulalongkorn University, Bangkok, Thailand, series of 10 lectures on “Integer-Valued Polynomials”.

2nd September 2002, Department of Mathematics, Chulalongkorn University, Bangkok, Thailand, “The Taylor Series Coefficients of the Jacobi Elliptic Functions”.

4th September 2002, Department of Mathematics, Chulalongkorn University, Bangkok, Thailand, “The Universal Bernoulli Numbers”.

4th September 2002, Department of Mathematics, Chulalongkorn University, Bangkok, Thailand, “Formal Group Laws in Algebraic Topology”.

6th September 2002, Department of Mathematics, Chulalongkorn University, Bangkok, Thailand, “CD Algebra”.

6th October 2002, Wales Maths Week talk to lower-sixth form pupils, “CD Mathematics”.

17th October 2002, University of Wales Video Seminar, “Hopf Algebras of Operations and Cooperations in K -theory”.

20th January 2003, [Transpennine Topology Triangle](#), Manchester, “An Introduction to K -theory” (two lectures).

4th April 2003, Special Session Talk, American Mathematical Society Sectional Meeting, Bloomington, Indiana, “The Algebra of Stable Operations in p -local K -theory”.

14th June 2003, Mathematical Association, South-West Wales Branch, “CD Algebra”.

17th January 2005, University of Kent, Departmental Seminar, “Counting Abelian Groups”.

6th December 2005, [Transpennine Topology Triangle](#), Manchester, “Enumerating Abelian Groups”.

20th November 2006, Topology Seminar, University of Aberdeen, “Enumerating Abelian Groups”.

15th October 2007, Topology Seminar, University of Manchester, “Algebras, coalgebras, duals and completions — some topological examples”.

27th February 2008, Algebra and Geometry Seminar, University of Bristol, “Enumerating Abelian Groups”.

8th December 2008, Topology Seminar, University of Manchester, “On Abel Formal Group Laws”.

16th November 2009, Algebra Seminar, Dalhousie University, Halifax, Nova Scotia, Canada, “Counting Abelian Groups”.

24th June 2010, Kryptos Society, “The Mathematics of Tides”.

27th September 2010, Topology Seminar, University of Manchester, “(Algebraic) Duality in Algebraic Topology”.

1st December 2010, Troisième Rencontre Internationale sur les Polynômes Valeurs Entières, CIRM, Luminy, “Integer-valued Operators”.

7th March 2011, Geometry and Topology Seminar, University of Glasgow, “Integer-valued Operators”.

OTHER CONFERENCES ATTENDED

1st–3rd July 1975, Algebraic Topology, Oxford.

18th–22nd June 1979, Algebraic Topology, Siegen, W. Germany.

2nd–6th July 1979, Low-dimensional Topology, Bangor.

8th–14th July 1979, Meeting on Diffeomorphisms and Foliations, Warwick.

14th–16th September 1979, British Society for the History of Mathematics, Geometry and Physical Theory.

30th June – 2nd July 1981, Fourth Topology Symposium, Edinburgh.

1st–7th August 1982, Algebraic Topology, Aarhus, Denmark.

2nd–8th April 1986, Algebraic Topology, Barcelona, Spain.

28th July – 1st August 1986, Algebraic Topology, Arcata, California, U. S. A.

2nd–10th April 1987, Workshop on Cyclic Homology and K -theory, Warwick.

6th–12th September 1987, Homotopy Theory Workshop, Oberwolfach, W. Germany.

30th October – 2nd November 1989, Homotopy Theory Workshop, M. S. R. I., Berkeley, California, U. S. A.

27th–28th September 1991, Symposium on Arithmetic in honour of Brian Birch, Oxford.

6th–10th April 1992, British Mathematical Colloquium, Strathclyde.

11th–18th July 1992, Edinburgh Mathematical Society St Andrews Colloquium.

16th–17th September 1992, British Topology Meeting, Q. M. W., London.

28th May 1993, Spitalfields Day Lectures, Isaac Newton Institute, Cambridge.

22nd–23rd September 1993, British Topology Meeting, Sheffield.

17th December 1993, One-day Homotopy Theory Meeting, Oxford.

28th–31st March 1994, British Mathematical Colloquium, Cardiff.

21st–22nd September 1994, British Topology Meeting, Southampton.

30th November – 3rd December 1994, Conference of the Future of Mathematical Communication, M. S. R. I., Berkeley, California, U. S. A.

11th February 1995, British Society for the History of Mathematics Meeting on “Arthur Cayley 1821–1895”, Oxford.

17th–18th February 1995, London Mathematical Society Meeting on “Computers in Mathematics”, Warwick.

12th–14th June 1995, [Transpennine Topology Triangle](#) and 1995 Adams Memorial Lectures, Manchester.

2nd October 1995, [Transpennine Topology Triangle](#), Sheffield.

12th February 1996, [Transpennine Topology Triangle](#), Manchester.

24th–30th March 1996, Workshop on Curves and Computation, International Centre for Mathematical Sciences, Edinburgh.

3rd–4th June 1996, [Transpennine Topology Triangle](#), Sheffield.

9th December 1996, [Transpennine Topology Triangle](#), Sheffield.

24th January 1997, [Transpennine Topology Triangle](#), Leicester.

10th March 1997, [Transpennine Topology Triangle](#), Manchester.

30th May–1st June 1997, Sheffield Homotopy Theory Meeting, Sheffield.

6th December 1997, G. H. Hardy Commemoration, Oxford.

27th January 1998, [Transpennine Topology Triangle](#), Sheffield.

14th–16th April 1998, British Topology Meeting, Aberdeen.

26th–27th November 1998, Colloque “Topologie Algébrique et K -théorie”, Paris.

6th–8th April 1999, British Topology Meeting, Swansea (organiser).

4th February 2000, [Transpennine Topology Triangle](#), Sheffield.

25th February 2000, Meeting in Honour of the 75th Birthday of Professor Sir Christopher Zeeman FRS, Warwick.

15th–17th April 2000, British Topology Meeting, Sheffield.

17th–20th April 2000, British Mathematical Colloquium, Leeds.

15th May 2000, [Transpennine Topology Triangle](#), Manchester.

19th–20th May 2000, Hilbert’s Problems: Past and Future, Oxford.

20th–22nd September 2000, [Transpennine Topology Triangle](#), Leicester.

8th–9th April 2001, British Topology Meeting, Edinburgh.

30th May 2001, [Transpennine Topology Triangle](#), Leicester.

22nd–23rd June 2001, New Developments in K -theory, Oxford.

17th–21st September 2001, Algebra and Topology Week, Leicester.

1st March 2002, [Transpennine Topology Triangle](#), Leicester.

5th–6th April 2002, British Topology Meeting, Leicester.

7th–11th April 2002, British Mathematical Colloquium / British Applied Mathematical Colloquium, Warwick.

24th–29th June 2002, Topology, Geometry and Quantum Field Theory, Oxford.

30th September–4th October 2002, [Workshop on \$K\$ -theory and Arithmetic](#), Isaac Newton Institute, Cambridge.

28th October 2002, [Transpennine Topology Triangle](#), Leicester.

15th November 2002, Séminaire de K -théorie, 30th anniversary meeting, Institut Henri Poincaré, Paris.

20th–22nd November 2002, Modern Homotopy Theory, Paris XIII.

24th–25th November 2002, London Mathematical Society Regional Meeting, Gregynog.

8th–20th December 2002, Euroworkshop on [Elliptic Cohomology and Higher Chromatic Phenomena](#), Isaac Newton Institute, Cambridge.

8th–10th September 2003, British Topology Meeting, Manchester.

20th October 2003, [Transpennine Topology Triangle](#), Manchester.

13th–14th September 2004, British Topology Meeting, Glasgow.

23rd November 2004, [Transpennine Topology Triangle](#), Sheffield.

5th–7th April 2005, British Mathematical Colloquium / British Applied Mathematical Colloquium, Liverpool.

12th April 2005, [Transpennine Topology Triangle](#), Sheffield.

12th–14th September 2005, British Topology Meeting, Bristol.

11th–14th January 2006, Homotopy Miniconference, Sheffield.

3rd–7th April 2006, Number Theory and Polynomials, Bristol.

10th–13th April 2006, British Mathematical Colloquium, Newcastle.

11th–13th September 2006, British Topology Meeting, Gregynog.

15th–16th September 2006, Conference in Honour of Bryan Birch’s 75th Birthday, Bristol.

29th–30th September 2006, Heilbronn Annual Conference, Bristol.

28th November 2006, [Transpennine Topology Triangle](#), Sheffield.

10th–13th March 2007, Complex cobordism in homotopy theory: its impact and prospects, Johns Hopkins.

16th–19th April 2007, British Mathematical Colloquium, Swansea.

10th–12th September 2007, British Topology Meeting, Sheffield.

21st–22nd September 2007, Heilbronn Annual Conference, Bristol.

10th–11th November 2007, SAGE Days 6, Bristol.

7th–11th July 2008, Algebraic Topological Methods in Computer Science (ATMCS) III, Paris.

18th–24th August 2008, Third Arolla Conference on Algebraic Topology, Arolla, Switzerland.

19th–20th September 2008, Heilbronn Annual Conference, Bristol.

3rd November 2008, [Transpennine Topology Triangle](#), Leicester.

10th–12th December 2008, Workshop on Triangulated Categories, Swansea.

11th–12th September 2009, Heilbronn Annual Conference, Bristol.

6th–9th April 2010, British Mathematical Colloquium, Edinburgh.

6th–8th September 2010, British Topology Meeting, Oxford.

16th–17th September 2010, Heilbronn Annual Conference, Bristol.

26th November 2010, Workshop on Stable Homotopy, Algebra and Number Theory in my honour, Swansea.

18th–21st April 2011, British Mathematical Colloquium, Leicester.

3rd–6th May 2011, Workshop on Multiple Zeta Values, Modular Forms and Elliptic Motives, Bristol.

8th–9th September 2011, Heilbronn Annual Conference, Bristol.

17th–19th December 2011, Algorithms in Number Theory and FLINT (Sage Days 35), Warwick.

20th–21st April 2012, Conference to Celebrate the 70th Birthday of Elmer Rees, Bristol.

1st–3rd October 2012, Workshop on L-functions of curves, Bristol.

26th–28th April 2013, British Mathematical Colloquium, Sheffield.

8th October 2013, BCS-FACS Evening Seminar, De Morgan House, London.

29th October 2013, Mathematics Research Beyond the Blackboard, LMS Computer Science Colloquium, De Morgan House, London.

17th July 2014, [Transpennine Topology Triangle](#), Sheffield.

22nd October 2014, BCS-FACS Evening Seminar, De Morgan House, London.

British Mathematical Colloquium most years since 1970. British Topology Meeting nearly every year since its establishment in 1985. Details are given only for recent years.

POSTGRADUATE STUDENTS SUPERVISED

R. Bismuth	1975–76	Ph.D.	left without completing degree.
S. Ghullam	1974–77	Ph.D.	wrote paper [Proc. Amer. Math. Soc. 68 (1978), 111–116, MR 58:22378 .], died before completing thesis.
R. Chan	1984–85	M.Sc.	(supervised jointly with W. A. Evans, Electrical Engineering), joint paper [11] published, returned to Hong Kong without completing.
G. Evans	1990–93	Ph.D.	Thesis entitled “On the K -homology of the classifying spaces of the unitary groups”, submitted September 1993, Ph.D. awarded December 1993 (SERC funded).
R. Evans	1990–93	Ph.D.	Thesis entitled “The integer power form of the Lagrange inversion formula”, submitted September 1993, Ph.D. awarded January 1994 (SERC funded).
J. Attfield	1991–93	M.Phil.	Thesis entitled “Rational series and Hankel matrices over monoids”, submitted April 1994, resubmitted May 1995, M.Phil. awarded June 1995.
S. Pianskool	1995–2000	Ph.D.	Thesis entitled “Multiplicative properties of Steinberg’s basis”, submitted June 2000, Ph.D. awarded August 2000.
C. S. Jones	1997–2001	Ph.D.	Thesis entitled “Generalisations of the Kummer congruences”, submitted December 2001, Ph.D. awarded May 2002 (EPSRC funded).