

Andrew Baker: Publications and Preprints

[12/07/2018]

PHD THESIS

Some Geometric Filtrations on Bordism Groups, (University of Manchester, 1980; supervisor J. N. Ray).

PAPERS

- (1) A. Baker & J. N. Ray, Some infinite families of U -hypersurfaces, *Math. Scand.* **50** (1982), 149–66.
- (2) A. Baker, More homology generators for BSO and BSU , *AMS-CMS Regional Conference Series* **2** (1982), 429–35.
- (3) A. Baker, On weakly almost complex manifolds with vanishing decomposable Chern numbers, *Contemporary Math.* **19** (1983), 1–8.
- (4) A. Baker, A decomposition theorem for certain bipolynomial Hopf algebras, *Bull. Canadian Math. Soc.* **27** (1984), 444–7.
- (5) A. Baker, Husemoller-Witt splittings and actions of the Steenrod algebra, *Proc. Edin. Math. Soc.* **28** (1985), 271–88.
- (6) A. Baker, On the spaces classifying complex vector bundles with given real dimension, *Rocky Mount. J. Math.* **14** (1986), 703–16.
- (7) A. Baker, p -adic continuous functions on rings of integers, *J. Lond. Math. Soc.* **33** (1986), 414–20.
- (8) A. Baker, On formal A -modules and a conjecture of D. Ravenel, *Math. Notes of CRM-IEC, Barcelona* **43** (1986).
- (9) A. Baker, N. Ray & L. Schwartz, Hypersurfaces framées et l'élément β_1 , *Can. Math. Bull.* **30** (1987), 215–22.
- (10) A. Baker, Combinatorial and arithmetic identities based on formal group laws, in 'Algebraic Topology, Barcelona 1986', ed. J. Aguadé & R. Kane, *Lecture Notes in Mathematics* **1298** (1987), 17–34.
- (11) A. Baker, On the detection of some elements in the image of the double transfer using $K(2)$ -theory, *Math. Zeit.* **197** (1988), 439–54.
- (12) A. Baker, D. Carlisle, B. Gray, A. S. Hilditch, N. Ray & R. Wood, On the iterated complex transfer, *Math. Zeit.* **199** (1988), 191–207.
- (13) A. Baker, Some families of operations in Morava K -theory, *Amer. J. of Math.* **111** (1989), 95–109.
- (14) A. Baker & U. Würgler, Liftings of formal group laws and the Artinian completion of $v_n^{-1}BP$, *Proc. Camb. Phil. Soc.* **106** (1989), 511–30.
- (15) A. Baker, Elliptic cohomology, p -adic modular forms and Atkin's operator U_p , *Contemp. Math.* **96** (1989), 33–38.
- (16) A. Baker, On the homotopy type of the spectrum representing elliptic cohomology, *Proc. Amer. Math. Soc.* **107** (1989), 537–48.
- (17) A. Baker & F. Clarke, N. Ray & L. Schwartz, On the Kummer congruences and the stable homotopy of BU , *Trans. Amer. Math. Soc.* **316** (1989), 385–432.
- (18) A. Baker, Hecke operators as operations in elliptic cohomology, *J. Pure and Applied Alg.* **63** (1990), 1–11.
- (19) A. Baker, Exotic multiplications on Morava K -theories and their liftings, *Astérisque* **191** (1990), 35–43.

- (20) A. Baker, A_∞ structures on some spectra related to Morava K -theory, *Quart. J. Math. Oxf.* (2), **42** (1991), 403–419.
- (21) A. Baker & U. Würigler, Bockstein operations in Morava K -theory, *Forum Math.* **3** (1991), 543–60.
- (22) A. Baker, Some chromatic phenomena in the homotopy of MSp , in ‘Adams Memorial Symposium on Algebraic Topology, Vol. 2’, Ed. N. Ray & G. Walker, London Mathematical Society Lecture Note Series **175** (1992), 263–280.
- (23) A. Baker, Elliptic genera of level N and elliptic cohomology, *Jour. Lond. Math. Soc.* **49** (1994), 581–93.
- (24) A. Baker & J. R. Hunton, Continuous Morava K -theory and the geometry of the I_n -adic tower, *Math. Scand.* **75** (1994), 67–81.
- (25) A. Baker, Operations and cooperations in elliptic cohomology, Part I: Generalized modular forms and the cooperation algebra, *New York J. Math.* **1** (1995), 39–74.
- (26) A. Baker, A version of the Landweber filtration theorem for v_n -periodic Hopf algebroids, *Osaka J. Math.* **32** (1995), 689–99.
- (27) A. Baker, Hecke algebras acting on elliptic cohomology, *Contemp. Math.* **220** (1998), 17–26.
- (28) A. Baker, Vertex operators in algebraic topology, in ‘The Monster and Lie Algebras: Proceedings of a Special Research Quarter at The Ohio State University, May 1996’, edited by J. Ferrer & K. Harada, de Gruyter (1998), 1–16.
- (29) A. Baker, Hecke operations and the Adams E_2 -term based on elliptic cohomology, *Can. Math. Bulletin.* **42** (1999), 129–138.
- (30) A. Baker, A supersingular congruence for modular forms, *Acta Arithmetica* **86** (1998), 91–100.
- (31) A. Baker, Right eigenvalues for quaternionic matrices: a topological approach, *Linear Algebra and its Applications* **286** (1999), 303–9.
- (32) A. Baker, On the cohomology of some Hopf algebroids and Hattori-Stong theorems, *Homology, Homotopy and Applications* **2** (2000), 29–40.
- (33) A. Baker & C. Özel, Complex cobordism of Hilbert manifolds with some applications to flag varieties of loop groups, in *Geometry and Topology: Århus*, *Contemp. Math.* **258** (2000), 1–19.
- (34) A. Baker, I_n -local Johnson-Wilson spectra and their Hopf algebroids, *Documenta Math.* **5** (2000), 351–364.
- (35) A. Baker & A. Lazarev, On the Adams Spectral Sequence for R -modules, *Algebraic & Geometric Topology* **1** (2001), 173–99.
- (36) A. Baker, On the Adams E_2 -term for elliptic cohomology, in *Proceedings of the 1999 Boulder Conference*, *Contemp. Math.* **271** (2001), 1–15.
- (37) A. Baker & H. Tamanoi, Invariants for finite dimensional groups in vertex operator algebras associated to basic representations of affine algebras, *CRM Proceedings and Lecture Notes* **30** (2001), 1–13.
- (38) A. Baker & A. Jeanneret, Brave new Hopf algebroids and extensions of MU -algebras, *Homology, Homotopy and Applications* **4** (2002) 163–173.
- (39) A. J. Baker & J. P. May, Minimal atomic complexes, *Topology* **43** (2004) 645–665.
- (40) A. Baker & A. Lazarev, Topological Hochschild cohomology and generalized Morita equivalence, *Algebraic & Geometric Topology* **4** (2004), 623–645.
- (41) A. Baker & B. Richter, On the Γ -cohomology of rings of numerical polynomials and E_∞ structures on K -theory, *Commentarii Math. Helv.* **80** (2005), 691–723.

- (42) A. Baker & B. Richter, Invertible modules for commutative \mathbb{S} -algebras with residue fields, *manuscripta math* **118** (2005), 99–119.
- (43) A. Baker & B. Richter, Realizability of algebraic Galois extensions by strictly commutative ring spectra, *Trans. Amer. Math. Soc.* **359** (2007), 827–857.
- (44) A. Baker & B. Richter, Uniqueness of E_∞ structures for connective covers, *Proc. Amer. Math. Soc.* **136** (2008), 707–714; [math.AT/0506422](#).
- (45) A. Baker & B. Richter, Quasisymmetric functions from a topological point of view, *Math. Scand.* **103** (2008), 208–242; [math.AT/0605743](#).
- (46) A. Baker & B. Richter, On the cooperation algebra of the connective Adams summand, *Tbilisi Math. Jour.* **1** (2008), 33–70.
- (47) A. Baker, H. Gilmour & P. Reinhard, Topological André-Quillen homology for cellular commutative S -algebras, *Abhand. Math. Sem. Univ. Hamburg* **78** (2008), 27–50; [arXiv:0708.2041](#).
- (48) A. Baker & B. Richter, Galois extensions of Lubin-Tate spectra, *Homology, Homotopy and Applications* **10** (2008), 27–43; <http://intlpress.com/HHA/v10/n3/>.
- (49) A. Baker, L -complete Hopf algebroids and their comodules, *Contemp. Math.* **504** (2009), 1–22; [arXiv:0901.1471](#).
- (50) A. Baker & B. Richter, Galois theory and Lubin-Tate cochains on classifying spaces, *Central European Journal of Mathematics* **9**(5) (2011), 1074–1087, [doi:10.2478/s11533-011-0058-3](#);
preprint version: Some properties of Lubin-Tate cohomology for classifying spaces of finite groups, [arxiv:1005.1662](#).
- (51) A. Baker, B. Richter & M. Szymik, Brauer groups for commutative S -algebras, *Journal of Pure and Applied Algebra* **216** (2012), 2361–2376,
<http://dx.doi.org/10.1016/j.jbbr.2011.03.031>, preprint [arXiv:1005.5370](#).
- (52) A. Baker, On the cohomology of loop spaces for some Thom spaces, *New York J. Math.* **18** (2012), 59–74. [arXiv:1105.0692](#).
- (53) A. Baker & B. Richter, Some properties of the Thom spectrum over loop suspension of complex projective space, *Contemp. Math.* **617** (2014), 1–12. [arXiv:1207.4947](#).
- (54) A. Baker, BP : Close encounters of the E_∞ kind, *Journal of Homotopy and Related Structures* **92** (2014), 257–282, [doi:10.1007/s40062-013-0051-6](#); preprint [arXiv:1204.4878](#).
- (55) A. Baker, Power operations and coactions in highly commutative homology theories, *Publ. Res. Inst. Math. Sci. of Kyoto University* **51** (2015), 237–272; preprint [arXiv:1309.2323](#).
- (56) A. Baker, \mathcal{E}_∞ ring spectra and elements of Hopf invariant 1, *Boletín de la Sociedad Matemática Mexicana* **23** (2017), 195–231. [arXiv:1503.05902](#).
- (57) A. Baker, Characteristics for E_∞ ring spectra, *Contemporary Mathematics* **708** (2018), 1–17. [arXiv:1405.3695](#).
- (58) A. Baker, Iterated doubles of the Joker and their realisability, *Homology, Homotopy and Applications* **20** (2018), 341–360.
<http://dx.doi.org/10.4310/HHA.2018.v20.n2.a17> ; preprint version [arXiv:1710.02974](#).

PREPRINTS & SUBMITTED PAPERS

- (1) A. Baker, Twisted Hecke algebras, Glasgow University Mathematics Department preprint 93/28.
- (2) A. Baker & J. Morava, MSp localised away from 2 and odd formal group laws, Glasgow University Mathematics Department preprint 93/55; [arXiv:1403.2596](#).

- (3) A. Baker, Some calculations with Milnor hypersurfaces and an application to Ginzburg's symplectic bordism ring, Glasgow University Mathematics Department preprint 94/54.
- (4) A. Baker, Differential equations in divided power algebras, recurrence relations and formal groups, Glasgow University Mathematics Department preprint 95/19.
- (5) A. Baker, Isogenies of supersingular elliptic curves over finite fields and operations in elliptic cohomology, Glasgow University Mathematics Department preprint 98/39, arXiv:0712.2052.
- (6) A. Baker, Profinite groupoids and their cohomology, Glasgow University Mathematics Department preprint 99/33.
- (7) A. Baker & C. B. Thomas, Classifying spaces, Virasoro equivariant bundles, elliptic cohomology and Moonshine, Glasgow University Mathematics Department preprint 99/39.
- (8) A. Baker, Brave new Hopf algebroids and the Adams spectral sequence for R -modules, Glasgow University Mathematics Department preprint 00/12.
- (9) A. Baker, On the homology of regular quotients, arXiv:1305.2216.
- (10) A. Baker & A. Jeanneret, Brave new Bockstein operations, Glasgow University Mathematics Department preprint 03/18.
- (11) A. Baker, Frobenius Green functors. arXiv:1208.1746.
- (12) A. Baker, Calculating with topological André-Quillen theory, I: Homotopical properties of universal derivations and free commutative S -algebras. arXiv:1208.1868.
- (13) A. Baker, Power operations in K -theory completed at a prime (submitted to Pac. J. Math.). arXiv:1406.5620.

BOOKS

- (1) A. Baker & R. J. Plymen (editors), p -adic Methods and their Applications, Oxford University Press (1992).
- (2) A. Baker, Matrix Groups: An Introduction to Lie Group Theory, Springer-Verlag (2002).
- (3) A. Baker & B. Richter (editors), Structured Ring Spectra, Cambridge University Press (2004).
- (4) A. Baker & B. Richter (editors), New topological contexts for Galois theory and algebraic geometry (BIRS 2008), Geometry & Topology Monographs vol. **16**, Geometry & Topology Publications, Mathematical Sciences Publishers (2009).