

Stephen M. Buckley: Publications

Books

1. *Codaigh agus córais dhinimiciúla réadacha*, Logic Press, June 2006; ISBN 0-9544269-5-9.
2. *Fractals and real dynamical systems*, Logic Press, June 2006; ISBN 0-9544269-6-7.
3. *Harmonic analysis on weighted spaces*, Dissertation, Univ. of Chicago, 1990.

Published/accepted research papers

4. with D. MacHale, *Variations on a theme—rings satisfying $x^3 = x$ are commutative*, Amer. Math. Monthly, to appear.
5. with K. Falk, *Rough $CAT(0)$ spaces*, Bull. Math. Soc. Sci. Math. Roumanie **55 (103)** (2012), 3–33.
6. with S.L. Kokkendorff, *The spherical boundary and volume growth*, ISRN Geometry **2012**, Art. ID 484312, 13pp., 2012.
7. with A. Diatta and A. Stanoyevitch, *Distinguishing properties of weak slice conditions II*, Int. J. Pure Appl. Math. **71** (2011), 83–98.
8. *Nonpositive curvature and complex analysis*, Contemp. Math. **525** (2010), 43–83.
9. with J. MacDougall and D.J. Wraith, *Ptolemaic simplicial complexes*, Math. Proc. Cambridge Phil. Soc. **149** (2010), 93–104.
10. with K. Falk and D.J. Wraith, *Ptolemaic spaces and $CAT(0)$* , Glasgow Math. J. **51** (2009), 301–314.
11. with S.L. Kokkendorff, *Comparing the Floyd and ideal boundaries of a metric space*, Trans. Amer. Math. Soc. **361** (2009), 715–734.
12. with S.L. Kokkendorff, *Detours and Gromov hyperbolicity*, Int. J. Pure Appl. Math. **47** (2008), 313–323.
13. with D. Vukotić, *Univalent interpolation in Besov spaces and superposition into Bergman spaces*, Potential Anal. **29** (2008), 1–16.
14. with S.L. Kokkendorff, *Warped products and conformal boundaries of $CAT(0)$ spaces*, J. Geom. Anal. **18** (2008), 704–719.
15. with D. Herron and X. Xie, *Metric space inversions, quasihyperbolic distance, and uniform spaces*, Indiana U. Math. J. **57** (2008), 837–890.
16. with D. Herron, *Uniform spaces and weak slice spaces*, Conform. Geom. Dyn. **11** (2007), 191–206.
17. with D. Herron, *Uniform domains and capacity*, Israel J. Math. **158** (2007), 129–157.
18. with D. Vukotić, *Superposition operators and the order and type of entire functions*, Contemp. Math. **393** (2006), 51–58.
19. with P. Koskela, *Ends of metric measure spaces and Sobolev inequalities*, Math. Z., **252** (2006), 275–285.
20. with J. Björn and S. Keith, *Admissible measures in one dimension*, Proc. Amer. Math. Soc., **134** (2006), 703–705.
21. with Z. Balogh, *Sphericalization and flattening*, Conform. Geom. Dyn. **9** (2005), 76–101.

22. with P. Koskela, *Orlicz-Hardy Inequalities*, Illinois J. Math., **48** (2004), 787–802.
23. *Relative solidity for spaces of holomorphic functions*, Math. Proc. R. Ir. Acad. **104A** (2004), 83–97.
24. *Quasiconformal images of Hölder domains*, Ann. Acad. Sci. Fenn. Math. **29** (2004), 21–42.
25. *Slice conditions and their applications*, Rep. Univ. Jyväskylä Dep. Math. Stat. **92** (2003), 63–76.
26. with Z. Balogh, *Geometric characterizations of Gromov hyperbolicity*, Invent. Math. **153** (2003), 261–301.
27. with A. Stanoyevitch, *Distinguishing properties of weak slice conditions*, Conform. Geom. Dyn. **7** (2003), 49–75.
28. with J.L. Fernández and D. Vukotić, *Superposition operators on Dirichlet type spaces*, Rep. Univ. Jyväskylä Dep. Math. Stat. **83** (2001), 41–61.
29. with A. Stanoyevitch, *Weak slice conditions, product domains, and quasiconformal mappings*, Rev. Mat. Iberoam., **17** (2001), 1–37.
30. with A. Stanoyevitch, *Weak slice conditions and Hölder imbeddings*, J. London Math. Soc., **66** (2001), 690–706.
31. with P. MacManus and B. Hanson, *Doubling for general sets*, Math. Scand. **88** (2001), 229–245.
32. with P. MacManus, *Singular measures and the key of G* , Publ. Matemàtiques **44** (2000), 483–489.
33. *Mixed norms and analytic function spaces*, Proc. Royal Irish Acad. **100A** (2000), 1–9.
34. *Inequalities of John-Nirenberg type in doubling spaces*, J. Anal. Math. **79** (1999), 215–240.
35. with J. O’Shea, *Weighted Trudinger-type inequalities*, Indiana Univ. Math. J. **48** (1999), 85–114.
36. *Is the maximal function of a Lipschitz function continuous?*, Ann. Acad. Sci. Fenn. **24** (1999), 519–528.
37. with M.S. Ramanujan and D. Vukotic, *Bounded and compact multipliers between Bergman and Hardy spaces*, Integr. Equ. Oper. Theory **35** (1999), 1–19.
38. with P. Koskela, *On the Fusion Problem for degenerate elliptic equations II*, Comment. Math. Univ. Carolinae. **40** (1999), 1–6.
39. with P. Koskela and D. Vukotić, *Fractional integration, differentiation, and weighted Bergman spaces*, Math. Proc. Cambridge Phil. Soc. **126** (1999), 369–385.
40. *Strong doubling conditions*, Math. Ineq. Appl. **1** (1998), 533–542.
41. with P. Koskela, *New Poincaré inequalities from old*, Ann. Acad. Sci. Fenn. **23** (1998), 251–260.
42. with P. Koskela, *Criteria for Imbeddings of Sobolev-Poincaré type*, Internat. Math. Res. Not. **18** (1996), 881–901.
43. with P. Koskela and G. Lu, *Boman equals John*, Proc. XVI Rolf Nevanlinna Colloq. (1996), 91–99.

44. *Sequences of reverse Minkowski type*, Proc. Royal Irish Acad. **96A** (1996), 147–157.
45. *Space-filling curves and related functions*, Bull. Irish Math. Soc. **36** (1996), 9–18.
46. with P. Koskela, *Sobolev-Poincaré implies John*, Math. Res. Lett. **2** (1995), 577–594.
47. with P. Koskela and G. Lu, *Subelliptic Poincaré inequalities: the case $p < 1$* , Publ. Matemàtiques **39** (1995), 313–334.
48. *Pointwise multipliers for reverse Hölder spaces II*, Proc. Royal Irish Acad. **95A** (1995), 193–204.
49. with P. Koskela, *Sobolev-Poincaré inequalities for $p < 1$* , Indiana Univ. Math. J. **43** (1994), 221–240.
50. *Pointwise multipliers for reverse Hölder spaces*, Studia Math. **109** (1994), 23–39.
51. *Estimates for operator norms on weighted spaces and reverse Jensen inequalities*, Trans. Amer. Math. Soc. **340** (1993), 253–272.
52. *Summation conditions on weights*, Michigan Math. J. **40** (1993), 153–170.
53. with D. MacHale, *Noncommutative anticommutative rings*, Bull. Irish Math. Soc. **18** (1987), 55–57.
54. with D. MacHale, *Dividing an angle into equal parts*, Math. Gaz. **69** (1985), 9–12.
55. *A note on the ring axioms*, Math. Gaz. **68** (1984), 215–216.

Research preprints

56. with A. O’Farrell, *Wiring switches to lightbulbs*.
57. with R. Hurri-Syrjänen, *Iterated log-scale Orlicz-Hardy inequalities*.
58. with D. MacHale, *Polynomials that force a ring to be commutative II*.
59. with S. Hamza, *Best constants for metric space inversion inequalities*.
60. with D. MacHale, *Centriflers and ring commutativity*.

Research in preparation

61. with K. Falk, *The boundary at infinity of a rough $CAT(0)$ space*.
62. with B. Hanson, *The n -point condition and rough $CAT(0)$* .
63. with D. MacHale, *Z -polynomials and ring commutativity*.
64. with Yu. Zelenyuk, *Polynomial product semigroups and ring commutativity*.
65. with A. O’Farrell, *Wiring switches to lightbulbs II*.

Other Publications

Problem Book Contributions

66. *The Dutch Hillwalking Club and 20+11 other maths problems from Ireland*, Problems 6, 10, 31; Bernd Kreussler (ed.), 2011.
67. *The coins of Harpland and 20+10 other maths problems from Ireland*, Problem 26; Bernd Kreussler (ed.), 2010.
68. *The eccentric postman and 50 other maths problems from Ireland*, Problems 12, 14, 41, 42; Bernd Kreussler (ed.), 2009.

Typeset course notes

69. *MT550: Functional analysis*, NUI Maynooth Mathematics Department Lecture Notes, 2004.
70. *MT480: Partial differential equations*, NUI Maynooth Mathematics Department Lecture Notes, 2003.
71. *Sobolev spaces: a short course*, U. La Laguna short research course, 2000.

Newspaper contributions

72. with B.P. Mahon, *Bonus points for maths*, letter to the Editor, Irish Times, 12 October 2010.
73. with A. O'Shea, *Better maths adds up to a stronger economy*, 1000-word opinion piece, Sunday Business Post, 4 July 2010.

Reviews of papers and books

Except where stated, the following reviews are for *Mathematical Reviews*; note that “MR 2008e:30031” refers to issue 2008e, field 30, review #31.

74. *Existence of extremal Beltrami coefficients with nonconstant modulus*, by Y. Guowu; MR2012a:30116.
75. *The best writing in mathematics 2010*, by M. Pitici, ed.; Irish Mathematical Society Bulletin **67** (2011), 99–101.
76. *On quasiplanes in Euclidean spaces*, by O. Martio, V.M. Miklyukov, and M. Vuorinen; MR 2008e:30031.
77. *Mappings of finite distortion: formation of cusps*, by P. Koskela and J. Takkinen; MR 2008e:30026.
78. *The local homeomorphism property of spatial quasiregular mappings with distortion close to one*, by K. Rajala; MR 2007e:30022.
79. *Hyperbolic and uniform domains in Banach spaces*, by J. Väisälä; MR 2006k:30025.
80. *On Q -homeomorphisms*, by O. Martio, V. Ryazanov, U. Srebro, and E. Yabukov; MR 2006d:30027.
81. *The conformal module of quadrilaterals and of rings*, by R. Kühnau; MR 2006a:30019.
82. *Mappings with finite length distortion*, by O. Martio, V. Ryazanov, U. Srebro, and E. Yabukov; MR 2005i:30030.
83. *Mappings of finite distortion: removable singularities for locally homeomorphic mappings*, by K. Rajala; MR 2005f:30040.
84. *Limits of Teichmüller mappings on trajectories*, by P. Tukia; MR 2005e:30035.
85. $\mu(z)$ -homeomorphisms in the plane, by C. Zhiguo; MR 2005c:30016.
86. *Mappings of finite distortion: sharp Orlicz conditions*, by J. Kauhanen, P. Koskela, J. Maly, J. Onninen, and X. Zhong; MR 2005a:30038.
87. *Univalent σ -harmonic mappings: connections with quasiconformal mappings*, by G. Alessandrini and V. Nesi; MR 2004g:30032.
88. *Sobolev mappings with integrable dilatation and invariance of Green's functions*, by M. Mocanu; MR 2004d:30035.

89. *On conformal dilatation in space*, by C.J. Bishop, V.Y. Gutlyanskiĭ, O. Martio, and M. Vuorinen; MR 2004c:30038.
90. *On pseudospheres that are quasispheres*, by J.L. Lewis and Vogel A.; MR 2003b:30029.
91. *Invariance properties of $L^\phi(\mu)$ -averaging domains under some mappings*, by G. Bao and S. Ding; MR 2002d:30026.
92. *Analytic properties of locally quasisymmetric mappings from Euclidean domains*, by J.T. Tyson; MR 2002b:30025.
93. *A counterexample theorem in quasiconformal mapping theory*, by Y. Shen; MR 2002a:30-035.
94. *A sharp estimate on the norm of the martingale transform*, by J. Wittwer; MR 2001e:42022.
95. *Maximal averages over flat radial hypersurfaces*, by A. Iosevich; MR 2001b:42022.
96. *On the boundedness of multipliers, commutators and the second derivatives of Green's operators on H^1 and BMO*, by D.-C. Chang and S.-Y. Li; MR 2001b:42021.
97. *On X-ray transforms for rigid line complexes and integrals over curves in \mathbf{R}^4* , by A. Greenleaf, A. Seeger, and S. Wainger; MR 2001a:44002.
98. *Bounds on arithmetic projections and applications to the Kakeya conjecture*, by N.H. Katz and T. Tao; MR 2000m:28006.
99. *Maximal functions with mitigating factors in the plane*, by G. Marletta; MR 2000k:42-028.
100. *Convolution with affine arclength measures in the plane*, by D.M. Oberlin; MR 2000c:42016.
101. *Classes of singular integrals along curves and surfaces*, by A. Seeger, S. Wainger, J. Wright, and S. Ziesler; MR 1999m:42029.
102. *A geometric inequality with applications to the Kakeya problem in three dimensions*, by W. Schlag; MR 1999g:42025.
103. *Some estimates for radial Fourier multiplier operators with slowly decaying kernels*, by J. Epperson; MR 1999d:42020.
104. *Paraexponentials, Muckenhoupt weights, and resolvents of paraproducts*, by M.C. Pereyra and L.A. Ward; MR 1999c:42033.
105. *Maximal functions with respect to differential bases measuring mean oscillation*, by A.K. Lerner; MR 1999a:42011.
106. *Carleson conditions for asymptotic weights*, by M.B. Korey; MR 1998h:42019.
107. *Estimates on the operator norm of the fractional maximal function*, by G. Pradolini and O. Salinas; MR 1998f:42017.
108. *Multiparameter operators and sharp weighted inequalities*, by R. Fefferman and J. Pipher; MR 1998b:42027.
109. *Matrix A^p weights via S -functions*, by A. Volberg; MR 1998a:42013.
110. *Singular integral characterization of functions with conditions on the mean oscillation on spaces of homogeneous type*, by R. Crescimbeni; MR 1997c:42026.
111. *Weighted norm estimates for gradients of half-space extensions*, by R. Wheeden and J.M. Wilson; MR 1997c:31010.

- 112. *Norms of Fourier multipliers*, by M. Wong; MR 1996m:42023.
- 113. *Weak type inequality for certain maximal functions on spaces of homogeneous type*, by Y.-J. Yoo and E.-H. Choi; MR 1996i:42016.
- 114. *Fonction maximale forte et intégrale de Marcinkiewicz*, by L. Chevalier; MR 1996g:42009.
- 115. *Two-weight mixed Φ -inequalities for the one-sided maximal function*, by Q. Lai; 1996f:42014.
- 116. *Weighted norm inequalities for general maximal operators and approach regions*, by A. Sánchez-Colomer and J. Soria; 1996e:42023.
- 117. *Weighted Orlicz space integral inequalities for the Hardy-Littlewood maximal operator*, by S. Bloom and R. Kerman; MR 1996a:42019.
- 118. *Idempotents of Fourier multiplier algebra*, by V. Lebedev; MR 1995i:42010.
- 119. *A Fourier inequality with A_p and weak- L^1 weights*, by H. Heinig; MR 1995h:42013.
- 120. *Weighted maximal functions and derivatives of invariant Poisson integrals of potentials*, by P. Ahern and W. Cohn; MR 1995d:42025.
- 121. *A characterization of some weighted norm inequalities for the fractional maximal function*, by R. Wheeden; MR 1994m:42044.
- 122. *Estimates for the Kakeya maximal operator on radial functions in R^n* , by A. Carbery, E. Hernandez, and F. Soria; MR 1994m:42039.
- 123. *Extension theorems for real variable Hardy and Hardy-Sobolev spaces*, by A. Miyachi; MR 1994k:46047.
- 124. *L^2 estimates for some maximal functions*, by H. Gunawan; MR 1994h:42031.
- 125. *Properties of BMO functions whose reciprocals are also BMO*, by R. Johnson and C. Neugebauer; MR 1994g:42030.
- 126. *Weighted Lorentz spaces and the Hardy operator*, by M. Carro and J. Soria; MR 1994f:42025.
- 127. *Moments, masses de Dirac et decomposition de fonctions*, by J. Duoandikoetxea and E. Zuazua; MR 1994a:42046.
- 128. *Weak type estimates for the maximal operators associated to plane curves*, by Q.R. Qiu; MR 1994a:42017.
- 129. *Criterion of L^2 -boundedness for a class of oscillatory integrals*, by Y. Zhang and H.P. Liu; MR 1993e:42030.
- 130. *Wavelets and singular integrals on curves and surfaces*, by G. David; MR 1992k:42021.
- 131. *Singular integrals and rectifiable sets in R^n : Beyond Lipschitz graphs*, by G. David and S. Semmes; MR 1992j:42016.