

Ian F. Putnam  
Brief Curriculum Vitae

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1. EDUCATION

- B.Sc. (Honours), University of Victoria, 1979.
- Ph.D., University of California, Berkeley, 1985.

2. POSITIONS

- July, 1985 - July, 1987, Lecturer, University of Pennsylvania.
- August, 1987 - July, 1991, Assistant Professor, NSERC University Research Fellow, Dalhousie University.
- July, 1991 - December, 1991, Lecturer, University of Trondheim, Norway.
- July, 1991 - June, 1993, Assistant Professor, University of Victoria.
- July, 1993 - June, 1997, Associate Professor, University of Victoria.
- July, 1997 - present, Professor, University of Victoria.
- July, 2002 - present, Tier I Canada Research Chair, University of Victoria.

### 3. HONOURS

- Israel Halperin Prize in Operator Algebras, 1990.
- André Aisenstadt Prize in Mathematics, Centre de Recherche Mathématique, Université de Montréal, 1992.
- Fellow, Royal Society of Canada, since 1999.
- Fellow, American Mathematical Society, since 2012.

### 4. PUBLICATIONS

#### (a) Refereed Journals

1. I.F. Putnam, K. Schmidt and C. Skau, *C\*-algebras associated with Denjoy homeomorphisms of the circle*, Journal of Operator Theory 16(1986), 99-126.
2. I.F. Putnam, *Strong Morita Equivalence for the Denjoy C\*-algebras*, Canadian Mathematical Bulletin 31(1988), 439-447.
3. I.F. Putnam and M. Rørdam, *The maximum unitary rank of some C\*-algebras*, Mathematica Scandinavica, 63(1988), 297-304.
4. I.F. Putnam, *The C\*-algebras associated with minimal homeomorphisms of the Cantor set*, Pacific Journal of Mathematics 136(1989), 329-353.
5. P.S. Muhly, I.F. Putnam and J. Xia, *Contributions to the K-theory of C\*-algebras of Toeplitz and singular integral operators*, Bulletin of the American Mathematical Society 21 (1989), 47-50.
6. I.F. Putnam, *On the topological stable rank of certain transformation group C\*-algebras*, Ergodic Theory and Dynamical Systems 10(1990), 197-207.

7. I.F. Putnam, *The invertible elements are dense in the irrational rotation  $C^*$ -algebras*, Journal für die reine und angewandte Mathematik 410(1990), 160-166.
8. P.S. Muhly, I.F. Putnam and J. Xia, *On the  $K$ -theory of some  $C^*$ -algebras of Toeplitz and singular integral operators*, Journal of Functional Analysis 110(1992), 161-225.
9. R.H. Herman, I.F. Putnam and C.F. Skau, *Ordered Bratteli diagrams, dimension groups and topological dynamics*, International Journal of Mathematics 6(1992), 827-864.
10. I.F. Putnam,  *$C^*$ -algebras arising from interval exchange transformations*, Journal of Operator Theory 27(1992), 231-250.
11. T. Giordano, I.F. Putnam and C.F. Skau, *Topological orbit equivalence and  $C^*$ -crossed products*, Journal für die reine und angewandte Mathematik 469(1995), 51-111.
12. I.F. Putnam,  *$C^*$ -algebras from Smale spaces*, Canadian Journal of Mathematics 48(1996), 175-195.
13. I.F. Putnam, *An excision theorem for the  $K$ -theory of  $C^*$ -algebras*, Journal of Operator Theory 38(1997), 151-171.
14. J. Kaminker and I.F. Putnam,  *$K$ -theoretic duality for shifts of finite type*, Communications in Mathematical Physics 187(1997), 509-522.
15. J. Anderson and I.F. Putnam, *Topological invariants for substitution tilings and their associated  $C^*$ -algebras*, Ergodic Theory and Dynamical Systems 18(1998), 509-537.
16. I.F. Putnam, *On the  $K$ -theory of  $C^*$ -algebras of principal groupoids*, Rocky Mountain Journal of Mathematics 28(1998), 1483-1518.
17. I.F. Putnam and J. Spielberg, *The structure of  $C^*$ -algebras associated with hyperbolic dynamical systems*, Journal of Functional Analysis 163(1999), 279-299.
18. T. Giordano, I.F. Putnam and C.F. Skau, *Full groups of Cantor minimal systems*, Israel Journal of Mathematics 111(1999), 285-320.

19. I.F. Putnam, *Functoriality of the  $C^*$ -algebras associated with hyperbolic dynamical systems*, Journal of the London Mathematical Society (2) 62 (2000), 873-884.
20. I.F. Putnam, *The ordered  $K$ -theory of  $C^*$ -algebras associated with substitution tilings*, Communications in Mathematical Physics 214(2000), 593-605.
21. T. Giordano, I.F. Putnam and C.F. Skau,  *$K$ -theory and asymptotic index for certain almost one-to-one factors*, Mathematica Scandinavica, 89(2001), 297-319.
22. N.S. Larsen, I.F. Putnam and I. Raeburn, *The two-prime analogue of the Hecke  $C^*$ -algebra of Bost and Connes*, Indiana Journal of Mathematics, 51(2002), 171-186.
23. J. Kaminker and I.F. Putnam, *A proof of the gap-labelling conjecture*, Mich. Math. J., 51(2003), 537-546.
24. T. Giordano, I.F. Putnam and C.F. Skau, *Affable equivalence relations and orbit structure of Cantor minimal systems*, Ergodic Theory and Dynamical Systems, 24(2004), 441-476.
25. I.F. Putnam, *Lifting factor maps to resolving maps*, Israel Journal of Mathematics 146(2005), 253-280.
26. N. Brownlowe, N. Larsen, I.F. Putnam and I. Raeburn, *Subquotients of Hecke  $C^*$ -algebras*, Ergodic Theory and Dynamical Systems 25(2005), 1503-1520.
27. J. Kellendonk and I.F. Putnam, *The Ruelle-Sullivan map for actions of  $\mathbb{R}^n$* , Mathematische Annalen 334 (2006), 693-711.
28. T. Giordano, H. Matui, I.F. Putnam and C.F. Skau, *Orbit equivalence for Cantor minimal  $\mathbb{Z}^2$ -actions*, Journal of the American Mathematical Society, 21 (2008), 863-892.
29. T. Giordano, H. Matui, I.F. Putnam and C.F. Skau, *The absorption theorem for affable equivalence relations*, Ergodic Theory and Dynamical Systems 28 (2008), 1509-1531.

30. T. Giordano, I.F. Putnam and C.F. Skau, *Cocycles for Cantor minimal  $\mathbb{Z}^d$ -systems*, International Journal of Mathematics, 20 (2009), 1107-1135.
31. I.F. Putnam, *Orbit equivalence of Cantor minimal systems: a survey and a new proof*, Expositiones Mathematicae, 28 (2010), 101-131.
32. I.F. Putnam, *Non-commutative methods for the K-theory of  $C^*$ -algebras of aperiodic patterns from cut-and-project systems*, Communications in Mathematical Physics, 294 (2010), 703-729.
33. T. Giordano, H. Matui, I.F. Putnam and C.F. Skau, *Orbit equivalence for Cantor minimal  $\mathbb{Z}^d$ -systems*, Inventiones Mathematicae, 179 (2010), 119-158.
34. A.L. Carey, J. Phillips, I.F. Putnam and A. Rennie, *Families of Type III KMS states on a class of  $C^*$ -algebras containing  $\mathcal{O}_n$  and  $\mathcal{Q}_{\mathbb{N}}$* , Journal of Functional Analysis, 260 (2011), 1637-1681.
35. A.L. Carey, J. Phillips, I.F. Putnam and A. Rennie, *Type III KMS states on a class of  $C^*$ -algebras containing  $\mathcal{O}_n$  and  $\mathcal{Q}_{\mathbb{N}}$  and their modular index*, Fields Institute Proceedings of Conference in Noncommutative Geometry,
36. D.B. Killough and I.F. Putnam, *Bowen measure from heteroclinic points*, Canadian Journal of Mathematics, 64 (2011), 1341-1358.
37. D.B. Killough and I.F. Putnam, *Ring and module structures on dimension groups associated with a shift of finite type*, Ergodic Theory and Dynamical Systems, 32 (2012), 1370-1399.
38. I.F. Putnam, *A homology theory for Smale spaces*, Memoirs of the American Mathematical Society, 232 No. 1094 (2014), 120 pages.
39. D.B. Killough and I.F. Putnam, *Trace asymptotics for  $C^*$ -algebras from Smale spaces*, Proceedings of the American Mathematical Society, 143 (2015), 317-325.
40. A. Julien and I.F. Putnam, *Spectral triples for subshifts*, Journal of Functional Analysis, 270 (2016), 1031-1063

41. J. Kaminker, I.F. Putnam and M.F. Whittaker, *K-theoretic duality for hyperbolic dynamical systems*, Journal für die reine und angewandte Mathematik, 730(2017), 257-288.
42. N. Burke and I.F. Putnam, *Markov partitions and homology for  $\frac{n}{m}$ -solenoids*, Ergodic Theory and Dynamical Systems, 37(2017), 716-738.
43. M. Amini, I.F. Putnam and S. Saeidi Gholikandi, *Homology for one-dimensional solenoids*, Mathematica Scandinavica, 121 (2017), 219-242.
44. M. Amini, I.F. Putnam and S. Saeidi, *Order on the homology groups of Smale spaces*, Pacific Journal of Mathematics, 288(2017), 219-242.
45. R. Deeley, I.F. Putnam and K. R. Strung, *Constructing minimal homeomorphisms of point-like spaces and a dynamical presentation of the Jiang-Su algebra*, Journal für die reine und angewandte Mathematik, 742(2018), 241-261.
46. I.F. Putnam, *Some classifiable groupoid  $C^*$ -algebras with prescribed K-theory*, Mathematische Annalen, 370(2018), 1361-1387.
47. T. Giordano, I.F. Putnam and C.F. Skau,  *$\mathbb{Z}^d$ -odometers and cohomology*, Groups, Geometry, and Dynamics, to appear, 33 pages.

(b) Refereed conference proceedings

1. I.F. Putnam, *A survey of recent K-theoretic invariants for dynamical systems*, in The Dynamics of  $\mathbb{Z}^d$ -actions, M. Pollicott and K. Schmidt, editors, Cambridge University Press, 1996.
2. I.F. Putnam, *A homology theory for Smale spaces: a summary*, in Operator Algebras and Applications, The Abel Symposium 2015, Toke M. Carlsen, Nadia S. Larsen, Sergey Neshveyev and Christian Skau, editors, Springer, 2015.

(d) Books

1. I.F. Putnam, *Cantor Minimal Systems*, University Lecture Series, American Mathematical Society, 2018.

(d) Book chapters

1. J. Kellendonk and I.F. Putnam, *Tilings,  $C^*$ -algebras and  $K$ -theory*, in Directions in Mathematical Quasicrystals, M. Baake and R.V. Moody, editors, CRM Monograph Series, American Mathematical Society, Providence, R.I., 2000.

(e) Other

1. I.F. Putnam, *Topological orbit equivalence*, in Operator Algebras, Mathematical Physics and Low Dimensional Topology, AK Peters, 1993.
2. J. Kaminker, I.F. Putnam and J. Spielberg, *Operator algebras and hyperbolic dynamics*, in Operator Algebras and Quantum Field Theory, S. Doplicher, R. Longo, J.E. Roberts, L. Zsidó, editors, International Press, 1998.

5. ADMINISTRATIVE ACTIVITIES

- Member of the Scientific Committee, Special year in Operator Algebras and their Applications, Fields Institute, 1994-1995.
- Editor, Ergodic Theory and Dynamical Systems, 1996-2000.
- University of Victoria, Site Director for the Pacific Institute for the Mathematical Sciences, 1997-1998, 2008, 2010-2012.

- Member of the Advisory Committee, Centre de Recherches Mathématiques, Université de Montréal 1997-2001.
- Member of the Scientific Review Panel, Pacific Institute for the Mathematical Sciences, 2000-2007.
- Member of the Research Committee, Canadian Mathematical Society, 1999-2001.
- Research Editor, Canadian Mathematical Society Notes, 2001.
- Member, Scientific Advisory Board, Banff International Research Station, 2001- 2002.
- Member, Steering Committee of the Scientific Advisory Board, Banff International Research Station, 2001-2002.
- Member of Grant Selection Committee 336 (Pure and Applied Mathematics A), Natural Sciences and Engineering Research Council Canada, 2001-2004.
- Chair of Grant Selection Committee 336 (Pure and Applied Mathematics A), Natural Sciences and Engineering Research Council Canada, 2004.
- Member, Synge Committee, Royal Society of Canada, Academy III, Mathematical and Physical Sciences Division, 2002- 2005.
- Member, Canada Research Chairs College of Reviewers, 2005-present.
- Acting Chair, Department of Mathematics and Statistics, University of Victoria, 2009.
- University of Victoria Site Director for the Pacific Institute for the Mathematical Sciences, 2008, 2010 - 2012.
- New Fellows Selection Committee of the Mathematical and Physical Sciences Division of the Royal Society of Canada, 2016-2017.
- Executive Editor, Ergodic Theory and Dynamical Systems, 2016-2020.