CURRICULUM VITAE

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Personal Information

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Education

B.S. in Mathematics, University of Tokyo, March 1997
Ph.D. in Mathematics, Texas A&M University, May 2001
(Advisers: Prof. G. Pisier and Prof. W.B. Johnson)

Academic Appointments

2000–04 Assistant Professor at Department of Mathematical Sciences, University of Tokyo
2004–11 Associate Professor at Department of Mathematical Sciences, University of Tokyo
2004–07 Associate Professor at Department of Mathematics, University of California, Los Angeles
2011–13 Associate Professor at Research Institute for Mathematical Sciences, Kyoto University
2013– Professor at Research Institute for Mathematical Sciences, Kyoto University

Distinctions

International Congress of Mathematicians Invited Speaker
(Operator Algebras and Functional Analysis Section), Madrid, 2006
Spring Prize (Mathematical Society of Japan), 2009
JSPS Prize (Japan Society for the Promotion of Science), 2010
Awards for Science and Technology (MEXT, Japan), 2021.

Editorial Boards

Groups, Geometry, and Dynamics
Publications of the Research Institute for Mathematical Sciences

Publications

Books.

1. N. P. Brown and N. Ozawa; C*-algebras and finite-dimensional approximations. *Graduate Studies in Mathematics, 88. American Mathematical Society*, 2008, 509 pp.

Papers.

1. N. Ozawa; Amenable actions and exactness for discrete groups. *C. R. Acad. Sci. Paris Ser. I Math.*, **330** (2000), 691–695. doi:10.1016/S0764-4442(00)00248-2
2. N. Ozawa; On the set of finite dimensional subspaces of preduals of von Neumann algebras. *C. R. Acad. Sci. Paris Ser. I Math.*, **331** (2000), 309–312. doi:10.1016/S0764-4442(00)00248-2
3. N. Ozawa; On the lifting property for the universal C^*-algebras operator spaces. *J. Op. Theory*, **46** (2001), 579–591.
4. N. Ozawa; A non-extendable bounded linear may between C^*-algebras. *Proc. Edinburgh Math. Soc.*, **44** (2001), 241–248. doi:10.1017/S0013091599000978
5. N. Ozawa, E. G. Effros, and Z.-J. Ruan; On injectivity and nuclearity for operator spaces. *Duke Math. J.*, **110** (2001), 489–521. doi:10.1215/S0012-7094-01-11032-6
6. N. Ozawa; Almost completely isometric embeddings between preduals of von Neumann algebras. *J. Funct. Anal.*, **186** (2001), 329–341. doi:10.1006/jfan.2001.3796
7. N. Ozawa and P.-W. Ng; A characterization of completely 1-complemented subspaces of non-commutative L^1-spaces. *Pacific J. Math.*, **205** (2002), 171–195. doi:10.2140/pjm.2002.205.171
8. M. Junge, N. Ozawa, and Z.-J. Ruan; On $\mathcal{OL}_\infty$ structure of nuclear C^*-algebras. *Math. Ann.*, **325** (2003), 449–483. doi:10.1007/s00208-002-0384-7
9. N. Ozawa, A. Kishimoto, and S. Sakai; Homogeneity of the pure state space of a separable C^*-algebra. *Canad. Math. Bull.*, **46** (2003), 365–372. doi:10.4153/CMB-2003-038-3
10. N. Ozawa; An application of expanders to $\mathbf{B}(\ell_2) \otimes \mathbf{B}(\ell_2)$. *J. Funct. Anal.*, **198** (2003), 499–510. doi:10.1016/S0022-1236(02)00107-6
11. N. Ozawa; Homotopy invariance of AF-embeddability. *Geom. Funct. Anal.*, **13** (2003), 216–222. doi:10.1007/s000390300005
12. N. Ozawa; There is no separable universal II_1-factor. *Proc. Amer. Math. Soc.*, **132** (2004), 487–490. doi:10.1090/S0002-9939-03-07127-2
13. N. Ozawa; Solid von Neumann algebras. *Acta Math.*, **192** (2004), 111–117. doi:10.1007/BF02441087
14. N. Ozawa and S. Popa; Some prime factorization results for type II_1 factors. *Invent. Math.*, **156** (2004), 223–234. doi:10.1007/s00222-003-0338-z
15. N. Ozawa; About the QWEP conjecture. *Internat. J. Math.*, **15** (2004), 501–530. doi:10.1142/S0129167X040
16. N. Ozawa; A note on non-amenability of $\mathbf{B}(\ell_p)$. *Internat. J. Math.*, **15** (2004), 557–565. doi:10.1142/S0129167X04002430
17. N. Ozawa and M. A. Rieffel; Hyperbolic C^*-algebras and free-product C^*-algebras as compact quantum metric spaces. *Canad. J. Math.*, **57** (2005), 1056–1079. doi:10.4153/CJM-2005-040-0
18. N. Ozawa; A Kurosh type theorem for type II_1 factors. *Int. Math. Res. Not.*, Volume **2006**, Article ID97560. doi:10.1155/IMRN/2006/97560

19. N. Ozawa; Weakly exact von Neumann algebras. *J. Math. Soc. Japan*, **59** (2007), 985–991. doi:10.1215/21562261-1550985
20. N. Ozawa; Boundary amenability of relatively hyperbolic groups. *Topology Appl.*, **153** (2006), 2624–2630. doi:10.1112/blms/bdl003
21. N. Ozawa; Amenable Actions And Applications. *International Congress of Mathematicians*, Vol. II, 1563–1580, Eur. Math. Soc., Zürich, 2006. doi:10.4171/022-2/74
22. N. Ozawa; Boundaries of reduced free group C*-algebras. *Bull. London Math. Soc.*, **39** (2007), 35–38. doi:10.1112/blms/bdl003
23. N. Ozawa; Weak amenability of hyperbolic groups. *Groups Geom. Dyn.*, **2** (2008), 271–280. doi:10.4171/GGD/40
24. N. Ozawa; An example of a solid von Neumann algebra. *Hokkaido Math. J.*, **38** (2009), 557–561. doi:10.14492/hokmj/1258553976
25. N. Ozawa and S. Popa; On a class of II_1 factors with at most one Cartan subalgebra. *Ann. of Math. (2)*, **172** (2010), 713–749. doi:10.4007/annals.2010.172.713
26. N. Ozawa and S. Popa; On a class of II_1 factors with at most one Cartan subalgebra II. *Amer. J. Math.*, **132** (2010), 841–866. doi:10.1353/ajm.0.0121
27. N. Ozawa; A comment on free group factors. *Banach Center Publ.*, **89** (2010), 241–245. doi:10.4064/bc89-0-16
28. N. Monod and N. Ozawa; The Dixmier problem, lamplighters and Burnside groups. *J. Funct. Anal.*, **258** (2010), 255–259. doi:10.1016/j.jfa.2009.06.029
29. N. Ozawa; Quasi-homomorphism rigidity with noncommutative targets. *J. Reine Angew. Math.*, **655** (2011), 89–104. doi:10.1515/crelle.2011.034
30. N. Ozawa; Examples of groups which are not weakly amenable. *Kyoto J. Math.*, **52** (2012), 333–344. doi:10.1215/21562261-1550985
31. N. Ozawa; Metric spaces with subexponential asymptotic dimension growth. *Internat. J. Algebra Comput.*, **22** (2012), 1250011. doi:10.1142/S0218196711006777
32. N. Monod, N. Ozawa, and A. Thom; Is an irng singly generated as an ideal? *Internat. J. Algebra Comput.*, **22** (2012), 1250036. doi:10.1142/S0218196712500361
33. M. Burger, N. Ozawa, and A. Thom; On Ulam stability. *Israel J. Math.*, **193** (2013), 109–129. doi:10.1007/s11856-012-0050-z
34. N. Ozawa; A remark on contractible Banach algebras. *Kyushu J. Math.*, **67** (2013), 51–53. doi:10.2206/kyushujm.67.51
35. W. B. Johnson, N. Ozawa, and G. Schechtman; A quantitative version of the commutator theorem for zero trace matrices. *Proc. Nat. Acad. Sci.*, **110** (2013), 19251–19255. doi:10.1073/pnas.1202411109
36. N. Ozawa; Tsirelson's problem and asymptotically commuting unitary matrices. *J. Math. Phys.*, **54** (2013), 032202. doi:10.1063/1.4795391
37. N. Ozawa; About the Connes Embedding Conjecture. *Jpn. J. Math.*, **8** (2013), 147–183. doi:10.1007/s11537-013-1280-5
38. N. Ozawa; Dixmier approximation and symmetric amenability for C*-algebras. *J. Math. Sci. Univ. Tokyo*, **20** (2013), 349–374.

39. G. Godefroy and N. Ozawa; Free Banach spaces and the approximation properties. *Proc. Amer. Math. Soc.*, **142** (2014), 1681–1687. doi:10.1090/S0002-9939-2014-11933-2

40. Y. Choi, N. Ozawa, and I. Farah; A nonseparable amenable operator algebra which is not isomorphic to a C*-algebra. *Forum Math. Sigma*, **2** (2014), e2. doi:10.1017/fms.2013.6

41. M. Mimura, N. Ozawa, H. Sako, and Y. Suzuki; Group approximation in Cayley topology and coarse geometry, Part III: Geometric property (T). *Algebr. Geom. Topol.*, **15** (2015) 1067–1091. doi:10.2140/agt.2015.15.1067

42. N. Ozawa, M. Rørdam, and Y. Sato; Elementary amenable groups are quasidiagonal. *Geom. Funct. Anal.*, **25** (2015), 307–316. doi:10.1007/s00039-015-0315-x

43. D. Blecher and N. Ozawa; Real positivity and approximate identities in Banach algebras. *Pacific J. Math.*, **277** (2015), 1–59. doi:10.2140/pjm.2015.277.1

44. N. Ozawa; A remark on amenable von Neumann subalgebras in a tracial free product. *Proc. Japan Acad. Ser. A Math. Sci.*, **91** (2015), 104. doi:10.3792/pjaa.91.104

45. N. Ozawa; Noncommutative real algebraic geometry of Kazhdan's property (T). *J. Inst. Math. Jussieu*, **15** (2016), 85–90. doi:10.1017/S1474748014000309

46. N. Ozawa and G. Pisier; A continuum of C*-norms on $B(H) \otimes B(H)$ and related tensor products. *Glasg. Math. J.*, **58** (2016), 433–443. doi:10.1017/S0017089515000257

47. N. Ozawa; A remark on fullness of some group measure space von Neumann algebras. *Compos. Math.*, **152** (2016), 2493–2502. doi:10.1112/S0010437X16007727

48. R. Okayasu, N. Ozawa, and R. Tomatsu; Haagerup approximation property via bimodules. *Math. Scand.*, **121** (2017), 75–91. doi:10.7146/math.scand.a-25970

49. E. Breuillard, M. Kalantar, M. Kennedy, and N. Ozawa; C*-simplicity and the unique trace property for discrete groups. *Publ. Math. Inst. Hautes Études Sci.*, **126** (2017), 35–71. doi:10.1007/s10240-017-0091-2

50. N. Ozawa; A functional analysis proof of Gromov's polynomial growth theorem. *Ann. Sci. Éc. Norm. Supér. (4)*, **51** (2018), 549–556. doi:10.24033/asens.2360

51. A. Erschler and N. Ozawa; Finite-dimensional representations constructed from random walks. *Comment. Math. Helv.*, **93** (2018), 555–586. doi:10.4171/CMH/444

52. M. De Chiffre, N. Ozawa, and A. Thom; Operator algebraic approach to inverse and stability theorems for amenable groups. *Mathematika*, **65** (2019), 98–118. doi:10.1112/S0025579318000335

53. M. Anoussis, N. Ozawa, and I. G. Todorov; Norms of vector functionals. *Proc. Amer. Math. Soc.*, **147** (2019), 2057–2068. doi:10.1090/proc/14383

54. M. Kaluba, P. Nowak, and N. Ozawa; $\mathrm{Aut}(F_5)$ has property (T). *Math. Ann.*, **375** (2019), 1169–1191. doi:10.1007/s00208-019-01874-9

55. M. Mori and N. Ozawa; Mankiewicz's theorem and the Mazur–Ulam property for C*-algebras. *Studia Math.*, **250** (2020), 265–281. doi:10.4064/sm180727-14-11

56. J. Bannon, A. Marrakchi, and N. Ozawa; Full factors and co-amenable inclusions. *Comm. Math. Phys.*, **378** (2020), 1107–1121. doi:10.1007/s00220-020-03816-y

57. N. Ozawa; An entropic proof of cutoff on Ramanujan graphs. *Electron. Commun. Probab.*, **25** (2020), paper no. 77. 8 pp. doi:10.1214/20-ECP358

58. N. Ozawa and Y. Suzuki; On characterizations of amenable C*-dynamical systems and new examples. *Selecta Math. (N.S.)*, **27** (2021), Article number: 92. 29pp. doi:10.1007/s00029-021-00699-2

59. N. Ozawa; A substitute for Kazhdan's property (T) for universal nonlattices. *Anal. PDE*, **17** (2024), 2541–2560. doi:10.2140/apde.2024.17.2541

60. H. Ando, Y. Miyamoto, and N. Ozawa; Proof of the Paszkiewicz's conjecture about a product of positive contractions. *Positivity*, **29** (2025), Article number 5. 14pp. doi:10.1007/s11117-024-01102-y

61. N. Ozawa; Amenability for unitary groups of simple monotracial C*-algebras. *Münster J. Math.*, to appear.

62. N. Ozawa; Embeddings of matrix algebras into uniform Roe algebras and quasi-local algebras. *J. Eur. Math. Soc. (JEMS)*, online first. doi:10.4171/JEMS/1672

63. N. Ozawa; Contractibility of the automorphism group of a von Neumann algebra. *Tohoku Math. J. (2)*, to appear.

Selected Recent Talks

- Full factors and co-amenable inclusions. *C*-Algebras*, MFO, August 2019.
- An entropic proof of cutoff on Ramanujan graphs. *Wales MPPM Seminar*, October 2020.
- Kazhdan's property (T) and semidefinite programming. *Colloquim*, Princeton University, February 2021.
- Amenability for C*-dynamical systems. *Operator algebras and Group Dynamics*, CIRM, May 2022.
- A substitute for Kazhdan's property (T) for universal non-lattices. *C*-algebras*, MFO, August 2022.
- Kazhdan's property (T) for $\mathrm{Aut}(F_n)$ and $\mathrm{EL}_n(R)$. *PRIMA Congress 2022* (plenary), December 2022.
- Amenability for unitary groups of C*-algebras. *C*-Algebras: Tensor Products, Approximation & Classification* (Kirchberg Memorial), WWU Münster, July 2023.
- Embeddings of matrix algebras into uniform Roe algebras and quasi-local algebras. *Group Operator Algebras: Classification, Structure and Rigidity*, BIRS, September 2024.
- Contractibility of the automorphism group of a von Neumann algebra. *C*-algebras*, MFO, August 2025.