

Research Interest

- Set Theory

Education

- Ph.D., University of California, Irvine, USA, June 2003
Advisor: Matthew Foreman
Thesis title: *Club Guessing Sequences and Filters*
- Master's degree, Waseda University, Tokyo, Japan, March 1997
- Bachelor's degree, Waseda University, Tokyo, Japan, March 1995

Work Experience

- **Associate Professor** at Miami University, August 2012–present
- **Assistant Professor** at Miami University, August 2006–July 2012
- **Visiting Assistant Professor** at the University of Kansas, August 2003–May 2006

External Research Funding

- NSF grant DMS-0700983, 2007–2010, \$92,863

Internal Research Funding

- October 2020: Summer Research Appointment, \$6,200, funded for Summer 2021.
- October 2010: Summer Research Appointment, \$6,200, funded for Summer 2011.
- October 2006: Summer Research Appointment, \$6,200, funded for Summer 2007.

Refereed publications

- *A variation of the Mardešić Conjecture*, Topology Proceedings 64 (2024), 103–120.
- *The Mardešić conjecture for countably compact spaces*, Topology and Its Applications 335 (2023), Paper No. 108596, 19 pp.
- *Archimedean positively ordered semigroups with maximal elements*, Semigroup Forum 105 (2022), no. 1, 244–264.
- *Finite products of connected nowhere separable linearly ordered spaces*, Topology and Its Applications, 300 (2021), Paper No. 107763, 21 pp.
- *Continuous injections between products of two connected nowhere real linearly ordered spaces*, Topology Proceedings, 50 (2017), 319–333.
- *The comparison of various club guessing principles*, Annals of Pure and Applied Logic, 166 (2015), no. 5, 583–600.

- *The termination of the higher-dimensional tarai functions* (with M. Kikuchi), Information Processing Letters 115 (2015) no. 2, 125–127.
- \mathbb{P}_{\max} *variations for separating club guessing principles* (with P. Larson), Journal of Symbolic Logic 77 (2012), no. 2, 532–544.
- *Some results about (+) proved by iterated forcing* (with P. Larson), Journal of Symbolic Logic 77 (2012), no. 2, 515–531.
- *A sequel to “a space topologized by functions from ω to ω ”* (with A. Iwasa), Topology Proceedings, 38 (2011), 309–312.
- *Club guessing sequences — Natural structures in set theory —* (Japanese), Sugaku 62 (2010), no. 4, 453–478. (English translation by myself appeared in Sugaku Exposition 26 (2013), no. 1, 73–98.)
- *On possible models of CH without locally compact sub-Ostaszewski spaces*, Topology Proceedings, 36 (2010), 37–50.
- *Minimality of non σ -scattered orders* (with J. Moore), Fundamenta Mathematicae, 205 (2009), no.1, 29–44.
- *A non-D-space with large extent*, Topology and Its Applications, 155 (2008), no. 11, 1256–1263.
- *A fine structure construction of a perfectly normal, non-realcompact space*, Topology Proceedings, 30 (2006), no.2, 533–545.
- *The saturation of club guessing ideals*, Annals of Pure and Applied Logic, 142 (2006), no. 1–3, 398–424.
- *A tail club guessing ideal can be saturated without being a restriction of the non-stationary ideal*, Notre Dame Journal of Formal Logic, 46 (2005) no. 3, 327–333.
- *More on perfectly normal, non-realcompact spaces*, Topology and Its Applications 153(9)(2006), 1476–1499
- *α -properness and Axiom A*, Fundamenta Mathematicae, 186 (2005), no. 1, 25–37.
- *Club guessing sequences and filters*, Journal of Symbolic Logic, 70 (2005), no. 4, 1037–1071.
- *A perfectly normal nonrealcompact space consistent with MA_{\aleph_1}* (with Fernando Hernández-Hernández), Topology and Its Applications, 143 (2004), no. 1–3, 175–188.
- *Directive trees and games on posets* (with Yasuo Yoshinobu), Proceedings of the American Mathematical Society, 130 (2002), 1477–1485.

Articles under review

- *Perfectly normal nonrealcompact spaces under the Proper Forcing Axiom*, submitted to Mathematical Logic Quarterly in December 2023.
- *The precipitousness of tail club guessing ideals*, submitted to the Journal of Symbolic Logic in December 2022.

Non-refereed publications

- *The Weak Diamond*, RIMS Kôkyûroku, 2261 (2023), 43–46.
- *Qualitative differences between the real line and nonseparable linearly ordered topological spaces*, RIMS Kôkyûroku, 2198 (2021), 32–40.

Invited talks at professional conferences

- Special Session on Set Theory and Its Applications, Canadian Mathematical Society Winter Meeting in Toronto, December 2022.
- Special Session on Set-Theoretic Topology, American Mathematical Society Fall Southeastern Section Meeting, online, November 2021.
- Special Session on Set-Theoretic Topology, Spring Topology and Dynamics Conference hosted by Murray State University, online, May 2021.
- Special Session on Set Theoretic Topology, American Mathematical Society Fall Southeastern Sectional Meeting, at the University of North Carolina, Greensboro, November 2014.
- Spring Topology and Dynamics Conference at the University of Richmond, March 2014.
- Workshop on ‘Large cardinals and descriptive set theory’ at the Erwin Schroedinger Institute in Vienna, June 2009.
- Special Session on Set-Theoretic Topology, American Mathematical Society Southeastern Sectional Meeting at the University of Alabama Huntsville. October 2008.
- BLAST conference at the University of Denver, August 2008.
- Boise Extravaganza in Set Theory (BEST) at Boise State University, March 2008.
- Special Session on Large Cardinals in Set Theory, American Mathematical Society Central Sectional Meeting at Miami University, March 2007.
- Special Session on Topology and Set Theory, Summer Conference on Topology and Its Applications, at Georgia Southern University, July 2006.
- Mid-Atlantic Mathematical Logic Seminar (MAMLS) in honour of Menachem Magidor’s sixtieth birthday at the University of California, Irvine, February 2006.
- Special Session in Set Theory, Association for Symbolic Logic Annual Meeting at Carnegie Mellon University, May 2004.
- Workshop ‘Singular Cardinal Combinatorics’ at Banff, Canada, May 2004.
- AMS-ASL Special Session in Infinite Combinatorics and Inner Model Theory, Joint Mathematics Meeting at Phoenix, January 2004.

Invited talks at seminars

- Colloquium at the University of Dayton, February 2018.
- Colloquium at the University of Dayton, March 2009.
- Topology Seminar at the University of Pittsburgh, November 2005.
- Mathematical Logic Seminar at Carnegie Mellon University, November 2005.
- Set Theory Seminar at Boise State University, July 2005.
- UCLA Logic Seminar, March 2003.
- Set Theory Seminar at Waseda University, August 2002.
- UCLA Logic Colloquium, April 2002.
- Set Theory Seminar at Waseda University, August 2001.
- Set Theory Seminar at Nagoya University, Fall 1996.
- Symposium on Set Theory and Recursion Theory at Kobe University, December 1996.

Contributed talks at professional conferences

- RIMS Set Theory Workshop, ‘Forcing and Cardinal Arithmetic’, Hybrid at RIMS, Kyoto University, Japan, and on Zoom, October 2022.
- RIMS Set Theory Workshop ‘Set Theory: Reals and Topology’, on Zoom, November 2020.
- Special Session in Large Cardinals in Set Theory, American Mathematical Society Central Sectional Meeting at Miami University, March 2007.
- Joint Mathematics Meeting at San Antonio, January 2006.
- Boise Extravaganza in Set Theory at Boise State University, March 2005.
- Association for Symbolic Logic Annual Meeting at the University of Illinois, Chicago, June 2003.
- Boise Extravaganza in Set Theory at Boise State University, March 2003.
- South Eastern Logic Symposium at the University of Florida, March 2003.

For more information and preprints, please refer to <https://ishiut.github.io>.