James Hanson

CONTACT INFORMATION

University of Maryland, College Park
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EMPLOYMENT

University of Maryland, College Park

Novikov Postdoctoral Fellow, Fall 2021 to present

I was offered a postdoctoral position at the ANR Project AGRUME for Spring 2021 working with Tomás Ibarlucía at the Université de Paris, but the pandemic prevented me from officially accepting the position. Instead, I worked remotely with Ibarlucía on a related research project.

EDUCATION

University of Wisconsin–Madison

PhD in Mathematics, December 2020
MA in Physics, December 2016

University of Minnesota, Twin Cities

BSc in Mathematics and Physics, May 2012

PUBLICATIONS

1. J. HANSON, T. IBARLUCÍA, *Approximate isomorphism of randomization pairs.* arxiv.org/abs/2202.04151. Accepted at Confluentes Mathematici, pending revisions.
2. G. CONANT, K. GANNON, J. HANSON, *Keisler measures in the wild.* arxiv.org/abs/2103.09137. Accepted at Model Theory, pending revisions.
3. J. HANSON, *Metric spaces are universal for bi-interpretation with metric structures.* arxiv.org/abs/2103.14957. Accepted at the Annals of Pure and Applied Logic.
4. G. CONANT, J. HANSON, *Separation for isometric group actions and hyperimaginary independence.* Fundamenta Mathematicae 259 (2022), 97-109, doi.org/10.4064/fm167-2-2022.
5. J. HANSON, *Analog reducibility.* Journal of Logic and Computation, 2021, exab036, doi.org/10.1093/logcom/exab036.
6. W. COTTRELL, J. HANSON, A. HASHIMOTO, A. LOVERIDGE, AND D. PETTENGILL, *Intersecting D3-D3′ brane system at finite temperature.* Phys. Rev. D, 95, 044022 (2017).
7. W. COTTRELL, J. HANSON, AND A. HASHIMOTO, *Dynamics of $\mathcal{N} = 4$ supersymmetric field theories in 2 + 1 dimensions and their gravity dual.* J. High Energ. Phys. 2016, 12.

PUBLICATIONS (PREPRINTS)

1. J. HANSON, *Bounded ultraimaginary independence and its total Morley sequences.* arxiv.org/abs/2201.03631. Submitted.
2. J. HANSON, *Topometric characterization of type spaces in continuous logic.* arxiv.org/abs/2106.13261. Submitted.
3. J. HANSON, *Strongly Minimal Sets and Categoricity in Continuous Logic.* arxiv.org/abs/2011.00610. Submitted.

4. J. Hanson, *Approximate Isomorphism of Metric Structures.* arxiv.org/abs/2011.00588. Submitted.
5. J. Hanson, *Approximate Categoricity in Continuous Logic.* arxiv.org/abs/2011.00589. Submitted.
6. J. Hanson, *Indiscernible Subspaces and Minimal Wide Types.* arxiv.org/abs/2004.03062. Preprint.

Talks

Bounded ultraimaginary independence
- UCLA Logic Colloquium. (May 2022)
- University of Maryland Logic Seminar. (February 2022)

An introduction to continuous logic
- VCU Analysis, Logic and Physics Seminar. (April 2022)

Generic stability and randomizations
- Joint Mathematics Meetings. (April 2022)

Definable sets in continuous logic
- University of Maryland Logic Seminar. (September 2021)

A gentle introduction to continuous logic
- University of Maryland Logic Seminar. (September 2021)

A Versatile Counterexample for Invariant Types and Keisler Measures outside NIP
- Notre Dame Model Theory Seminar (Digital). (March 2021)
- Séminaire de Logique Lyon-Paris (Digital). (March 2021)

Joint work with Gabriel Conant and Kyle Gannon.

Strongly Minimal Sets in Continuous Logic (regarding essential continuity)
- Online Logic Seminar (Digital). (August 2021)

Definability and Categoricity in Continuous Logic
- UW Logic Seminal (Digital), University of Wisconsin-Madison. (April 2020)

Skolemization in Continuous Logic
- UW Logic Seminar, University of Wisconsin-Madison. (November 2019)

Strongly Minimal Sets in Continuous Logic (regarding categoricity)
- Logic Seminar, University of Illinois at Chicago. (October 2019)
- AMS Sectional Meeting, Special Session on Model Theory, University of Wisconsin-Madison. (September 2019)
- Graduate Student Conference in Logic XX, University of Illinois at Chicago. (April 2019)
- UCI Logic and Set Theory Seminar, University of California, Irvine. (April 2019)
- UW Logic Seminar, University of Wisconsin-Madison. (February 2019)

Separable and inseparable Gromov-Hausdorff categoricity in continuous logic
- Association for Symbolic Logic North American Annual Meeting, Western Illinois University. (May 2018)
- Graduate Student Conference in Logic XIX, University of Wisconsin-Madison. (April 2018)

Encoding metric structures as metric spaces

- UW Logic Seminar, University of Wisconsin-Madison. (February 2018)

Awards

University of Wisconsin-Madison, Department of Mathematics

- *Excellence in Mathematical Research Award*, October 2019.
- *Physical Sciences Award*, October 2018.

University of Wisconsin-Madison, Department of Physics

- *Van Vleck Fellowship for Teaching Assistants*, September 2012.
- *David L. Huber Fellowship*, September 2012.
- *Firminhac Fellowship*, September 2012.

University of Minnesota

- *Professor Hans H. Dalaker Scholarship for Undergraduate Mathematics*, April 2011.
- *Presidential Scholarship*, August 2008.
- *Maroon and Gold Leadership Award*, August 2008.
- *National Merit Scholarship*, August 2008.
- *Undergraduate Research Scholarship*, August 2008.

Organizational Experience

I run the University of Maryland, College Park, Logic Seminar and have done so since Fall 2021.

I helped organize the 19th Graduate Student Conference in Logic which was held at the University of Wisconsin-Madison in April 2018.

Outreach

I participated the University of Wisconsin-Madison Math Department Directed Reading Program.

I volunteered for the University of Wisconsin-Madison Math Circle.

I volunteer for the Skype a Scientist program.