

DAN ISAKSEN

Professional Record

February 2026

EMAIL: `isaksen.dan@gmail.com`

PRESENT POSITION: Professor, Department of Mathematics, Wayne State University, Detroit, Michigan, USA, 2003–current

EDUCATION

UNDERGRADUATE: University of California, Berkeley, B.A. in Mathematics, 1994

GRADUATE: University of Chicago, Ph.D. in Mathematics, 1999

PREVIOUS FACULTY APPOINTMENTS

- University of Notre Dame, McKenna Visiting Assistant Professor, 2000–2003
- Universität Bielefeld, Wissenschaftlicher Mitarbeiter, 1999–2000

RESEARCH

Homotopy groups of spheres in various contexts, including classical stable, \mathbb{C} -motivic stable, \mathbb{R} -motivic stable, C_2 -equivariant stable, and classical unstable variants; with an emphasis on machine-assisted computation.

SELECTED RESEARCH HONORS AND AWARDS

- Frontiers of Science Award in Mathematics, International Congress of Basic Science, 2024
- Board of Governors Faculty Recognition Award, Wayne State University, 2024
- Fellow of the American Mathematical Society, 2024
- Distinguished Faculty Fellowship, Wayne State University, 2023–2025

SELECTED RESEARCH GRANTS

- Simons Fellow in Mathematics, Simons Foundation, 2025, \$102,346.
- National Science Foundation Research Training Groups in the Mathematical Sciences (RTG) Grant, 2022–2025, \$1,245,779.
- National Science Foundation Research Grant, Stable homotopy groups: Theory and Computation, 2022–2025, \$240,964.

SELECTED PUBLICATIONS

- [1] D. C. Isaksen, G. Wang, and Z. Xu, *Stable homotopy groups of spheres: From dimension 0 to 90*, Publ. Math. Inst. Hautes Études Sci. **137** (2023) 107–243.
- [2] D. C. Isaksen, G. Wang, and Z. Xu, *Stable homotopy groups of spheres and motivic homotopy theory*, Proceedings of the International Congress of Mathematicians **4** (2022) 2768–2790.
- [3] D. C. Isaksen, G. Wang, and Z. Xu, *Stable homotopy groups of spheres*, Proc. Nat. Acad. Sci. USA, October 6, 2020 (40) 24757–24763.
- [4] D. Dugger and D. C. Isaksen, *The Hopf condition for bilinear forms over arbitrary fields*, Annals of Mathematics **165** (2007) 943–964.
- [5] B. J. Guillou and D. C. Isaksen, *C_2 -equivariant stable stems*, Mem. Eur. Math. Soc. (MEMS), to appear.
- [6] R. Burklund, D. C. Isaksen, and Z. Xu, *Classical stable homotopy groups of spheres via \mathbb{F}_2 -synthetic methods*, Peking Math. J., to appear.
- [7] D. C. Isaksen, H. J. Kong, G. Li, Y. Ruan, and H. Zhu, *The \mathbb{C} -motivic Adams-Novikov spectral sequence for topological modular forms*, Adv. Math. **458** (2024).
- [8] E. Belmont, D. C. Isaksen, and H. J. Kong, *\mathbb{R} -motivic v_1 -periodic homotopy*, Pacific J. Math. **330** (2024) 43–84.
- [9] E. Belmont and D. C. Isaksen, *\mathbb{R} -motivic stable stems*, J. Topol. **15** (2022) 1755–1793.
- [10] B. Gheorghe, D. C. Isaksen, A. Krause, and N. Ricka, *\mathbb{C} -motivic modular forms*, J. Eur. Math. Soc. (JEMS) **24** (2022) 3597–3628.
- [11] B. J. Guillou and D. C. Isaksen, *The Bredon-Landweber region in C_2 -equivariant stable homotopy groups*, Doc. Math. **25** (2020) 1865–1880.
- [12] D. C. Isaksen, *Stable stems*, Mem. Amer. Math. Soc. **262** (2019).

SELECTED PRESENTATIONS

- Workshop on Computations in Stable Homotopy Theory, American Institute of Mathematics, 2025
- Workshop on Homotopy Theory, Fields Institute, Toronto, Canada, 2025
- Homotopy theory in honor of Paul Goerss, Northwestern University, 2023
- Motivic, Equivariant, and Non-Commutative Homotopy Theory, mini-course presenter, Institut des Hautes Études Scientifiques, France, 2020 (online)
- Workshop on Equivariant Stable Homotopy Theory and p-adic Hodge Theory, Banff International Research Station, Canada, 2020
- Homotopy Theory in the Ecliptic, Reed College, 2017
- Workshop Topologie, Mathematisches Forschungsinstitut Oberwolfach, Germany, 2016
- Introductory Workshop: Algebraic Topology, Mathematical Sciences Research Institute, Berkeley, 2014

TEACHING

I have taught a wide variety of mathematics courses, including lower division calculus and linear algebra; upper division courses for mathematics majors and minors; and graduate courses in algebra and topology. I have supervised 11 Ph.D. students.

SELECTED SERVICE

EDITORIAL BOARDS

- *Algebraic and Geometric Topology*, 2010–current
- *Homology, Homotopy and Applications*, 2019–current
- Executive Editor, *Homology, Homotopy and Applications*, 2025–current
- *Proceedings of the London Mathematical Society*, 2023–current

AMERICAN MATHEMATICAL SOCIETY

- Member-at-Large, Council of the American Mathematical Society, 2025–2028
- Chair, Central Section Program Committee, American Mathematical Society, 2025–2026
- Member, Committee on Meetings and Conferences, American Mathematical Society, 2025–current

CONFERENCE ORGANIZATION

- Motivic Homotopy Theory: Connections and Applications, SLMath, Berkeley, CA, 2026 (upcoming)
- Machine Computation in Homotopy Theory, ICERM, Providence, RI, 2026 (upcoming)
- American Mathematical Society Special Session on New Voices in Homotopy Theory, Joint Mathematics Meetings, Washington, DC, 2026
- New Horizons for Equivariance in Homotopy Theory, Isaac Newton Institute, Cambridge, UK, 2025

OTHER PROFESSIONALLY RELATED SERVICE

- Founder and Organizer, Electronic Computational Homotopy Theory research community, 2017–current