

ピョートル プストラゴスキ

Piotr Pstrągowski

Curriculum Vitae

Hakubi Center
Kyoto University
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Employment

- 2024-Now **Hakubi Fellow (Associate Professor)**, *Kyoto University*
2020-2024 **Benjamin Peirce Fellow**, *Harvard University*
2022-2023 **Member**, *Institute for Advanced Study*
2019-2020 **Postdoctoral researcher**, *Copenhagen University*

Education

- 2015-2019 **PhD in Mathematics**, *Northwestern University*
2012-2014 **MSc in Mathematics**, *Bonn University*
2008-2012 **BSc in Mathematics, Computer Science**, *University of Warsaw*

Publications

- Quivers and the Adams spectral sequence**, *Joint with Robert Burklund*
To appear in *Advances in Mathematics*
- Perfect even modules and the even filtration**
To appear in the *Journal of European Mathematical Society*
- Dirac Geometry II: Coherent Cohomology**, *Joint with Lars Hesselholt*
Forum of Mathematics, Sigma, vol. 12, Feb. 2024
- The Intrinsic Normal Cone for Artin Stacks**, *Joint with Dhyan Aranha*
Annales de l'Institut Fourier, Volume 74 (2024) no. 1
- Morava K-theory and Filtrations by Powers**, *Joint with Tobias Barthel*
Journal of the Institute of Mathematics of Jussieu, 2023, 1-77
- Dirac Geometry I: Commutative Algebra**, *Joint with Lars Hesselholt*
Peking Mathematical Journal, 2023, 1-76
- Moduli of spaces with prescribed homotopy groups**
Journal of Pure and Applied Algebra, Volume 227, Issue 10, 2023
- Synthetic spectra and the cellular motivic category**
Inventiones mathematicae, 232, 553-681, 2023
- Chromatic Picard groups at large primes**
Proceedings of the American Mathematical Society, 150, 2022

Adams-type maps are not stable under composition, *Joint with Robert Burklund and Ishan Levy*

Proceedings of the American Mathematical Society, Ser. B Vol. 9, 2022

On dualizable objects in monoidal bicategories

Theory and Applications of Categories, Vol. 38, No. 9, 2022

Abstract Goerss-Hopkins theory, *Joint with Paul Vankoughnett*

Advances in Mathematics, Volume 395, 2022

Chromatic homotopy is algebraic when $p > n^2 + n + 1$

Advances in Mathematics, Volume 391, 2021

Preprints

A note on weight filtrations at the characteristic, *Joint with Toni Annala*

arXiv:2502.19626

The monochromatic Hahn-Wilson conjecture, *Joint with David Lee*

arXiv:2410.08029

Spectral weight filtrations, *Joint with Peter Haine*

arXiv:2309.15072

Adams spectral sequences and Franke's algebraicity conjecture, *Joint with Irakli Patchkoria*

arXiv:2110.03669

On dualizable objects in monoidal bicategories, framed surfaces and the Cobordism Hypothesis

arXiv:1411.66919

Teaching

- 2024 **Linear Algebra and Differential Equations**, Instructor
Harvard University
- 2023 **p -adic analytic groups**, Course lead
Harvard University
- 2022 **Linear Algebra and Differential Equations**, Instructor
Harvard University
- 2021 **Combinatorics**, Course lead
Harvard University
- 2021 **Algebraic Topology**, Course lead
Harvard University
- 2021 **Finite Height Chromatic Homotopy Theory**, Course lead
Harvard University
- 2021 **Linear Algebra and Differential Equations**, Instructor
Harvard University
- 2020 **Combinatorics**, Course lead
Harvard University

- 2020 **Algebraic Topology**, Course lead
Copenhagen University
- 2020 ∞ -**categories**, Instructor
Copenhagen University
- 2016-2019 **Various courses**, TA
Northwestern University

Service

- 2024 **Yatsugatake workshop**, Scientific mentor
Yatsugatake, Yamanashi prefecture
- 2024 **BabyTop seminar on the rational chromatic splitting**, Organizer
Massachusetts Institute of Technology
- 2022, 2024 **Graduate admission committee**, Member
Harvard University
- 2022 **eCHT Seminar on synthetic spectra**, Organizer
Electronic Computational Homotopy Theory Community
- 2021 **Qualifying exam committee**, Member
Harvard University
- 2020-2021 **Math Includes Program**, Family mentor
Harvard University
- 2021 **BabyTop seminar on synthetic spectra**, Organizer
Massachusetts Institute of Technology
- 2019-2020 **Topology seminar**, Organizer
Copenhagen University
- 2016, 2017 **Graduate Research Opportunities for Women**, Mentor
Northwestern University

Awards

- 2020-2022 **Certificate for Excellence in Teaching**, (*Three times*)
The Derek Bok Center for Teaching and Learning at Harvard University
- 2012-2014 **MSc Fellowship**, (*Awarded to top 5 international students*)
Bonn International Graduate School

Supervision

- 2023 **Reading program in chromatic homotopy theory**, *Joseph Shnyder*
(Princeton Summer Reading Program)
- 2022 **Galois groups and fundamental groups**, *Senior thesis of Tommy Jaklitsch*
(Harvard, now a PhD student at the University of Virginia)
- 2020 **Ring spectrum of power operations**, *MSc thesis of Julie Rasmussen*
(Copenhagen, now a PhD student at the University of Warwick)

- 2020 **On homotopy colimits**, *BSc thesis of Marius Nielsen*
(Copenhagen, now a PhD student at the University of Trondheim)

Organized conferences

- 2025 **JMM Homotopy Theory Session**, *Seattle, WA*
2020 **Masterclass on Condensed Mathematics**, *Copenhagen University*

Invited conference talks

- 2025 **Motives in Tokyo**, *University of Tokyo*
2024 **Kochi Autumn Workshop**, *Kochi Institute of Technology, Kochi*
2024 **Mid-Atlantic Topology Conference**, *Northeastern University, Boston*
2023 **AMS Sectional Meeting: Homotopy Theory**, *Creighton University, Omaha*
2023 **Homotopy: Fruit of the fertile furrow**, *Newton Institute, Cambridge*
2023 **Motives in Tokyo**, *University of Tokyo*
2023 **Chromatic Homotopy, K-Theory and Functors**, *CIRM, Luminy*
2018 **AMS Sectional Meeting: Homotopy theory**, *University of Michigan*

Contributed conference talks

- 2024 **Telescope conjecture Arbeitsgemeinschaft**, *Oberwolfach*
2023 **Quadrennial homotopy theory workshop**, *Oberwolfach*
2022 **Algebraic structures in Topology**, *San Juan, Puerto Rico*
2019 **Quadrennial homotopy theory workshop**, *Oberwolfach*
2019 **Haramura workshop**, *Haramura, Nagano prefecture*

Seminar talks

- 2025 **MIT**
2025 **University of Chicago**
2025 **Northwestern**
2024 **Tokyo University**
2024 **Westlake University**
2024 **Nagoya University**
2024 **Florida State University**
2024 **University of Cambridge**
2024 **University of British Columbia**
2024 **University of Southern California**
2024 **Wayne State University**
2024 **University of Chicago**
2023 **MIT**

2023 **Columbia University**
2023 **University of Washington**
2022 **University of Pennsylvania**
2022 **University of Maryland**
2022 **Johns Hopkins University**
2022 **University of Duisburg-Essen**
2022 **Copenhagen University**
2022 **University of Nagoya**
2021 **MIT**
2021 **Electronic Computational Homotopy Theory Seminar**
2021 **Northwestern University**
2021 **University of Utrecht**
2020 **University of Münster**
2020 **University of Bonn**
2019 **University of Virginia**
2019 **Stockholm University**
2019 **University of Regensburg**
2018 **University of Notre Dame**
2018 **University of Illinois, Urbana-Champaign**
2018 **University of Southern California**

Language

Polish, *native*

English, *native-like*

Japanese, *advanced* (日本語能力試験 N2)

References

Ben Antieau, *Northwestern University*

Paul Goerss (advisor), *Northwestern University*

Jill Guerra (teaching), *Harvard University*

Jeremy Hahn, *MIT*

Lars Hesselholt, *Copenhagen University / Nagoya University*

Mike Hopkins, *Harvard University*

Jacob Lurie, *Institute for Advanced Study*

Akhil Mathew, *University of Chicago*