

# Piotr Pstrągowski

## Curriculum Vitae

Department of Mathematics  
Harvard University  
1 Oxford St, Cambridge, MA 02138  
✉ pstragowski.piotr@gmail.com

### Employment

- 2020-Now **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*

### Publications

**The Intrinsic Normal Cone for Artin Stacks**, *Joint with Dhyan Aranha*  
To appear in *Annales l'Institut Fourier*

**Morava K-theory and Filtrations by Powers**, *Joint with Tobias Barthel*  
*Journal of the Institute of the Mathematics of Jussieu*, 2023

**Dirac Geometry I: Commutative Algebra**, *Joint with Lars Hesselholt*  
*Peking Mathematical Journal*, 1-76, 2023

**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

**Spectral weight filtrations**, *Joint with Peter Haine*

arXiv:2309.15072

**Quivers and the Adams spectral sequence**, *Joint with Robert Burklund*

arXiv:2305.08231

**Perfect even modules and the even filtration**

arXiv:2304.04685

**Dirac Geometry II: Coherent Cohomology**, *Joint with Lars Hesselholt*

arXiv:2303.13444

**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

- 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 **Course on  $\infty$ -categories**, Instructor  
Copenhagen University
- 2016-2019 **Various courses**, TA  
Northwestern University

---

## Service

- 2022 **eCHT Seminar on synthetic spectra**, Organizer  
Electronic Computational Homotopy Theory Community

- 2021-2022 **Harvard Graduate admission committee**, Member  
Harvard University
- 2020-2021 **Math Includes Program**, Family mentor  
Harvard University
- 2021 **BabyTop seminar**, Organizer  
Massachusetts Institute of Technology
- 2020 **Masterclass on Condensed Mathematics**, Organizer  
Copenhagen University
- 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 Rasmusen*  
(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)

### Invited conference talks

- 2024 **Mid-Atlantic Topology Conference**, *Northeastern University*
- 2023 **Quadrennial homotopy theory workshop**, *Oberwolfach*
- 2023 **AMS Sectional Meeting: Homotopy Theory**, *University of Nebraska, 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*
- 2019 **Quadrennial homotopy theory workshop**, *Oberwolfach*
- 2018 **AMS Sectional Meeting: Homotopy theory**, *University of Michigan*

### Invited seminar talks

- 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 **Massachusetts Institute of Technology**  
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**, *intermediate* (日本語能力試験 N3)

---

## 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*