Alexander Youcis

Curriculum Vitae

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🖸 *https://alex-youcis.github.io/*

Positions held

2025-present	**Postdoctoral fellow**, *University of Toronto*.
2023-2025	**Postdoctoral fellow**, *National University of Singapore*.
2021-2023	**JSPS Fellow**, *University of Tokyo*.
2019-2021	**Postdoc**, *Institute of Mathematics of the Polish Academy of Sciences*.

Education

2013–2019	**PhD**, *University of California, Berkeley (advised by Sug Woo Shin)*.
2013	**Bachelor's degree**, *University of Maryland, College Park*.

Research interests

Arithmetic geometry, representation theory, and local/global methods used in the Langlands program. In particular: Shimura varieties, moduli spaces of local Shutkas, p-adic Hodge theory, p-adic geometry, p-adic representation theory and endoscopic methods.

Published papers

P. Daniels and A. Youcis. *Canonical Integral Models of Shimura Varieties of Abelian Type* . **Forum of Mathematics, Sigma (2025)**. DOI: 10.1017/fms.2025.27

K. Česnavičius, and A. Youcis. *The analytic topology suffices for the B_{dR}^{+}-Grassmannian* (to appear in p-**adic Hodge Theory (2022 Simons Symposium)**). https://arxiv.org/abs/2303.11710

P. Achinger, M. Lara and A. Youcis. *Variants of the de Jong fundamental group* (To appear in **American Journal of Mathematics**). https://arxiv.org/abs/2203.11750.

A. Bertoloni Meli, N. Imai and A. Youcis. *The Jacobson–Morozov Morphism for Langlands Parameters in the Relative Setting*. **International Mathematics Research Notices (2023)**, DOI: https://doi.org/10.1093/imrn/rnad217

A. Bertoloni Meli and A. Youcis. *An approach to the characterization of the local Langlands correspondence*. **Represent. Theory 27 (2023)**, 415–430.

P. Achinger, M. Lara, and A. Youcis. *Geometric arcs and fundamental groups of rigid spaces*. **J. Reine Angew. Math. 799 (2023), 57–107**. MR4595307

P. Achinger, M. Lara, and A. Youcis. *Specialization for the pro-étale fundamental group*. **Compos. Math. 158 (2022)**, no. 8, 1713–1745. MR4490930

E. Beazley, M. Nichols, M. Park, X. Shi, and A. Youcis. *Bijective projections on parabolic quotients of affine Weyl groups*, **Journal of Algebraic Combinatorics (2014)**, DOI: 10.1007/s10801-014-0559-9

Preprints

Abhinandan A. Youcis. *An integral analogue of Fontaine's crystalline functor.* https://arxiv.org/abs/2507.17631

N. Imai, H. Kato, and A. Youcis. *An integral analogue of Fontaine's crystalline functor.* https://arxiv.org/abs/2504.16282

P. Achinger and A. Youcis *Beauville—Laszlo gluing of Algebraic spaces.* https://arxiv.org/abs/2410.20500

N. Imai, H. Kato, and A. Youcis. *A Tannakian Framework for Prismatic F-crystals.* https://arxiv.org/abs/2406.08259

N. Imai, H. Kato, and A. Youcis. *The Prismatic Realization Functor for Shimura Varieties of Abelian Type.* https://arxiv.org/abs/2310.08472

A. Bertoloni Meli and A. Youcis,*The Scholze-Shin conjecture for Unramified Unitary Groups I: The No Endoscopy Case*, `https://alex-youcis.github.io/ScholzeShinIMPAN.pdf`

Youcis, Alexander Frank The Langlands-Kottwitz Method and Deformation Spaces of p-Divisible Groups of Abelian Type. Thesis (Ph.D.)–University of California, Berkeley. 2019. 192 pp. ISBN: 978-1085-79410-7, ProQuest LLC

Awards and fellowships

2022   Long term JSPS fellowship

2021   Short term JSPS fellowship

2018   Berkeley RTG Grant Fellowship

2017   Berkeley RTG Grant Fellowship

Professional activities

2014-2017   Co-founded and administered the Berkeley Directed Reading Program (a program to pair undergraduate and graduate students for independent study)

2014-2017   Mentor in the Berkeley Directed Reading Program

Refereeing and quick opinions (Forum of Mathematics Pi, Duke Mathematics Journal, International Mathematics Research Notices, Algebra and Number Theory)

Selected talks

2025   Special lecture series | Morningside Center of Mathematics | Lecture series (4 talks): *Some recent advances on the p-adic geometry of Shimura varieties*

2025   Pitt Number Theory Seminar| University of Pittsburgh | Lecture series (2 talks): *Introduction to prismatic cohomology and applications to classical questions*

2024   Haruzo Hida 70th Birthday Conference | TIFR | *Serre–Tate theory for Shimura varieties of abelian type*

2024   MSU Number Theory Seminar | Michigan State University | *Serre–Tate theory for Shimura varieties of abelian type*

2024   Pitt Number Theory Seminar | University of Pittsburgh | *Serre–Tate theory for Shimura varieties of abelian type*

2024   Tokyo Institute of Technology Number Theory Seminar | Tokyo Institute of Technology | *Serre–Tate theory for Shimura varieties of abelian type*

2024   Tohoku University Number Theory Seminar | Tohoku University | *Serre–Tate theory for Shimura varieties of abelian type*

2024   Oberseminar Arithmetische Geometrie und Darstellungstheorie |Max Planck Institute | *Some recent advances on the p-adic Hodge theory of integral models of Shimura varieties*

2024   Boston College Number Theory Seminar | *Some recent advances on the p-adic Hodge theory of integral models of Shimura varieties*

2023   Conference on Arithmetic and Cohomology of Algerbraic Varieties, Hanoi | *A prismatic characterization of integral canonical models of Shimura varieties of abelian type*

2023   University of Maryland, Lie Groups and Representation Theory Seminar | *A prismatic realization functor for Shimura varieties of abelian type*

2022   University of Michigan | *A prismatic realization functor for Shimura varieties of abelian type*

2022   POSTECH | *A prismatic realization functor for Shimura varieties of abelian type*

2021   University of Tokyo number theory seminar | *Geometric coverings of rigid spaces*

2021   University of Alberta arithmetic geometry seminar | *Geometric coverings of rigid spaces*

2021   RAMpAGe seminar | *Geometric coverings of rigid spaces*

2020   CARTOON conference | *An approach to characterizing the local Langlands correspondence over p-adic fields*

2019   University of Cambridge | *The Scholze–Shin conjecture for unramified unitary groups*

2019   University of Warsaw | *The Scholze–Shin conjecture for unramified unitary groups*

2018   University of Maryland | *The Langlands–Kottwitz–Scholze method for Shimura varieties of abelian type*

2018   University of Minnesota | *The Langlands–Kottwitz-Scholze method for Shimura varieties of abelian type*

2018   Stanford University | *The Langlands–Kottwitz-Scholze method for Shimura varieties of abelian type*

2018   University of Tokyo | *The Langlands–Kottwitz–Scholze method for Shimura varieties of abelian type*

Teaching Experience

Summer 2018	Instructor of record for number theory (Math 115), University of California, Berkeley
Summer 2017	Instructor of record for number theory (Math 115), University of California, Berkeley
2013–2019	Graduate Student Instructor, University of California, Berkeley