Alex Kokot

Ph.D. Candidate in Statistics, University of Washington
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EDUCATION

University of Washington, Seattle   Sep 2021–June 2026 (Anticipated)
Ph.D. in Statistics. Advisors: Prof. Marina Meilă and Prof. Alex Luedtke.

University of Notre Dame, Notre Dame, IN   Aug 2017–May 2021
B.S. in Honors Mathematics and *B.A. in Philosophy*

AWARDS AND HONORS

NDSEG Graduate Fellowship, Dept. of Defense   2023–2026
"For demonstrated ability and special aptitude for advanced training in science and engineering."
Selected from >3,000 applicants (<5% acceptance). Award: Tuition + Stipend (>$160,000).

RUA Research Exchange Award, Research University Alliance   2025
"Recognizing evidence of research quality contributing to diversifying the future professoriate."
Funded research visit to **UC San Diego** (Host: Prof. Misha Belkin).

Barry Goldwater Scholarship, Goldwater Scholarship Foundation   2020
"Supporting students with exceptional promise of becoming the next generation of research leaders."
Selected from >5,000 nominees (∼400 awards). Award: $7,500/year.

George Kolettis Award in Mathematics, Univ. of Notre Dame   2021
"For a graduating senior excelling in mathematics and contributing notably to the esprit de corps."
Sole recipient in Notre Dame Mathematics.

Senior G.E. Prize, Honors Mathematics, Univ. of Notre Dame   2021
"Awarded to a senior honors major who excelled in mathematics in the senior year."
5 selected in Notre Dame Honors Mathematics.

Phi Beta Kappa, Early Induction, The Phi Beta Kappa Society   2021
"Recognizing outstanding arts and sciences students at America's leading colleges."
Top 1% of class (Junior Year Induction).

Charles Edison Fellowship, Notre Dame Scientia   2020
"To promote undergraduate research and help students reach their highest potential."
Notre Dame Research Fellowship, 2 student awardees. Award: $2,500.

Notre Dame *Sorin Scholar*, Notre Dame CUSE   2018–2021
"For a cohort of students excelling in scholarly engagement and creative endeavor."
Selected cohort of ∼10 students per class.

PUBLICATIONS

In Preparation

1. **Alex Kokot**, Alex Luedtke, Marina Meilă (2026) *Diffusion Maps are Entropic Self-Transport: Limits and Applications as $\varepsilon \to 0$. To be submitted to SIMODS.*

Submitted

2. Vydhourie Thiyageswaran, **Alex Kokot**, Jennifer Brennan, Marina Meilă, Christina Lee Yu, Maryam Fazel. (2026) *Optimal Design under Interference, Homophily, and Robustness Trade-offs.* Submitted to *JASA*.

3. **Alex Kokot**, Anand Hemmady, Vydhourie Thiyageswaran, Marina Meilă (2026). *Local EGOP for Continuous Index Learning.* arXiv:2601.07061. Submitted to *ICML*.

4. **Alex Kokot**, Alex Luedtke (2025). *Coreset selection for the Sinkhorn divergence and generic smooth divergences.* arXiv:2504.20194. Submitted to *JMLR* (under review).

Peer-Reviewed

5. **Alex Kokot**, Octavian-Vlad Murad, Marina Meilă (2025). *The Noisy Laplacian: A threshold phenomenon for non-linear dimension reduction.* In *Proc. 42nd Int'l Conf. on Machine Learning (ICML 2025).*

6. Jose Agudelo, Brooke Dippold, Ian Klein, **Alex Kokot**, Eric Geiger, Irina Kogan (2024). *Euclidean and affine curve reconstruction. Involve, a Journal of Mathematics.*

7. Lei Zhang, Yu Wang, Mengyu Xu, **Alex M. Kokot**, Jie Qiu, Peter C. Burns (2024). *Hydrothermal synthesis and structure of organically templated layered neptunyl(VI) phosphate $(NpO_2)_3(PO_4)_2(Terpy)$. CrystEngComm.*

8. Hrafn Traustason, Nicola L. Bell, Kiana Caranto, David C. Auld, David T. Lockey, **Alex M. Kokot**, Jennifer E. S. Szymanowski, Leroy Cronin, Peter C. Burns (2020). *Reactivity, Formation, and Solubility of Polyoxometalates Probed by Calorimetry. Journal of the American Chemical Society.*

9. Lei Zhang, Sergey M. Aksenov, **Alex Kokot**, Samuel N. Perry, Travis A. Olds, Peter C. Burns (2020). *Crystal Chemistry and Structural Complexity of Uranium(IV) Sulfates. Inorganic Chemistry.*

10. Kulick, J., Nichols, B., Knight, T., Lu, T., Ortega, C., Siders, S., **Kokot, A.**, Bernstein, G. (2019). *Enabling curved hemispherical arrays with Quilt Packaging interconnect technology.* In *Proc. SPIE 10980.*

11. Jie Qiu, Tyler L. Spano, Mateusz Dembowski, **Alex Kokot**, Jakub E. S. Szymanowski, Peter C. Burns (2017). *Sulfate-Centered Sodium-Icosahedron-Templated Uranyl Peroxide Phosphate Cages. Inorganic Chemistry.*

PRESENTATIONS

Alex Kokot, Alex Luedtke (2026). *Coreset selection for the Sinkhorn divergence and generic smooth divergences.* Talk at *Kantorovich Initiative Spring Retreat*, University of British Columbia. Vancouver, Canada. Scheduled for March 12.

Alex Kokot. (2026). *Local EGOP for Continuous Index Learning.* Invited talk at **UW-Madison** (Host: Prof. Nicolas Garcia Trillos). Scheduled for February 18.

Alex Kokot, Anand Hemmady, Vydhourie Thiyageswaran, Marina Meilă (2026). *Local EGOP for Continuous Index Learning.* Talk at *Information Theory and Applications Workshop (ITA)*, San Diego, CA. Scheduled for February 8.

Alex Kokot, Octavian-Vlad Murad, Marina Meilă (2025). *The Noisy Laplacian: A threshold phenomenon for non-linear dimension reduction.* Poster presentation at *ICML 2025*, Vancouver, Canada.

Dippold, B., Klein, I., Agudelo, J. M., & **Kokot, A.** (2021) *Geometric Methods in Computer Vision.* MAA Student Poster Session on Geometry, *Joint Mathematics Meetings (JMM).*

TEACHING EXPERIENCE

Teaching Assistant, UW Statistics 2021–2022
TA for STAT 390: Probability and Statistics for Engineers.

SERVICE AND OUTREACH

Referee Service: *Journal of Machine Learning Research (JMLR), ICML.*

Outreach & Leadership

- President, Notre Dame Math Club (2020–2021)
- Volunteer, UW Pre-Application Review Service (2021–2022)
- Organizer, UW Statistics Fun Committee (2021–Present)
- Volunteer, UW Math Circle (2021–2022)
- Volunteer, Notre Dame Math Circle (2020–2021)
- Community Service, South Bend Unity Gardens (2021)