Livia Betti

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Education

Ph.D. in Computer Science (expected 2024–present)
University of Colorado Boulder

B.S. in Mathematics, *Honors degree, Summa Cum Laude*
University of Rochester, 2019–2023

Fellowships and Funding

National Science Foundation Graduate Research Fellowship, 2025–present

University of Colorado Boulder Chancellor's Fellowship, 2024

Research Positions

Undergraduate Researcher, SMALLS REU, Williams College, 2022

Undergraduate Researcher, Coding Theory REU, Occidental College, 2021

Publications

Betti, L., Sanni, F., Sogoyou, G., Agbagla, T., Molitor, C., Carleton, T., & Rolf, E. (2025). Mapping on a Budget: Optimizing Spatial Data Collection for ML. *arXiv preprint arXiv:2509.03749*. (Accepted)

Ascoli, R., **Betti, L.**, Duke, J.L., Liu, X., Milgrim, W., Miller, S.J., Palsson, E.A., Acosta, F.R., & Iannuzzelli, S.V. (2023). Distinct Angles and Angle Chains in Three Dimensions. *Discrete Mathematics & Theoretical Computer Science, 25* (Combinatorics).

Betti, L., Durmić, I., McDonald, Z., Miller, J.B., & Miller, S.J. (2025). Benfordness of Measurements Resulting from Box Fragmentation. *Journal of Statistical Theory and Practice, 19* (3), 59.

Ascoli, R., **Betti, L.**, Cheigh, J., Iosevich, A., Jeong, R., Liu, X., McDonald, B., Milgrim, W., Miller, S.J., Romero Acosta, F., & Velazquez Iannuzzelli, S. (2025). VC-dimension of hyperplanes over finite fields. *Graphs and Combinatorics, 41* (2), 47.

Ascoli, R., **Betti, L.**, Cheigh, J., Iosevich, A., Jeong, R., Liu, X., McDonald, B., Milgrim, W., Miller, S.J., Acosta, F.R., & Iannuzzelli, S.V. (2024). VC-dimension and distance chains in $\mathbb{F}_q^d$. *Korean Journal of Mathematics, 32* (1), 43–57.

Betti, L., Brown, J., Gaitan, F., Spear, A., & Varlack, J. (2023). Lattices in Real Quadratic Fields and Associated Theta Series Arising from Codes over $\mathbb{F}_4$ and $\mathbb{F}_2 \times \mathbb{F}_2$. *Designs, Codes and Cryptography, 91* (10), 3305–3319.

Presentations

Betti, L. (2025). *Balancing Quantity and Representativeness in Constrained Geospatial Dataset Design.* Machine Learning for Remote Sensing Workshop.

Betti, L. (2023). *VC-dimension of Spherical Hypothesis Classes over $\mathbb{F}_q^d$.* Senior Thesis Presentation, University of Rochester.

Betti, L., McDonald, Z. (2022). *Benfordness of Lower-Dimensional Measurements Resulting from Hyper-Box Fragmentation.* Young Mathematician's Conference.

Betti, L., McDonald, Z. (2022). *Benfordness of Lower-Dimensional Measurements Resulting from Hyper-Box Fragmentation.* UNC Greensboro, Advances in Interdisciplinary Statistics and Combinatorics. Awarded Best Undergraduate Presentation.

Betti, L., Brown, J., Gaitan, F., Spear, A., Varlack, J. (2021). *Lattices in Real Quadratic Fields and Associated Theta Series Arising from Codes over $\mathbb{F}_4$ and $\mathbb{F}_2 \times \mathbb{F}_2$.* Southern California Math REU Conference.

Honors and Awards

Arthur S. Gale Memorial Prize in Mathematics, University of Rochester, 2023

Doris Ermine Smith Award in Mathematics, University of Rochester, 2022

Stoddard Prize in Mathematics, University of Rochester, 2021

University of Rochester Dean's List (all eligible semesters)

National Merit Scholarship, University of Rochester

Teaching Experience

Teacher, Sylvan Learning, 2023

Teaching Assistant, Honors Calculus I and II, 2021–2023

Teaching Assistant, Artificial Intelligence, 2023