

# Isaac Gibbs

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## EMPLOYMENT

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**Postdoctoral Researcher**, Department of Statistics, UC Berkeley.  
Advisor: Ryan Tibshirani.

August 2024 - Present

## EDUCATION

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**Ph.D. in Statistics**, Stanford University.

2019 - 2024

Advisor: Emmanuel Candès.

Thesis Title: Expanded coverage guarantees for conformal inference.

**B.Sc. in Math and Computer Science**, McGill University.

2015 - 2019

Graduated with first class honours.

## PUBLICATIONS

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**Gibbs, I.**, Cherian, J., and Candès, E. (2025). Conformal prediction with conditional guarantees. *Journal of the Royal Statistical Society: Series B*. <https://arxiv.org/abs/2305.12616>

Cherian, J., **Gibbs, I.** and Candès, E. (2024). Large language model validity via enhanced conformal prediction methods. *Advances in Neural Information Processing Systems* <https://arxiv.org/abs/2406.09714>.

**Gibbs, I.** and Candès, E. (2024). Conformal inference for online prediction with arbitrary distribution shifts. *Journal of Machine Learning Research*. <https://jmlr.org/papers/volume25/22-1218/22-1218.pdf>.

**Gibbs, I.** and Candès, E. (2021). Adaptive conformal inference under distribution shift. *Advances in Neural Information Processing Systems* (oral presentation). <https://arxiv.org/abs/2106.00170>.

**Gibbs, I.** and Chen, L. (2020). Asymptotic properties of random Voronoi cells with arbitrary underlying density. *Advances in Applied Probability*, 52(2), 655-680.

**Gibbs I.**, Leavey K., Benton S.J., Grynspan D., Bainbridge S.A., and Cox B.J. (2019). Placental transcriptional and histologic subtypes of normotensive fetal growth restriction are comparable to preeclampsia. *American Journal of Obstetrics and Gynecology*, 220(1):110.e1-110.e21.

## PREPRINTS AND WORK UNDER REVIEW

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**Gibbs, I.** and Candès, E. (2025+). Characterizing the training-conditional coverage of full conformal inference in high dimensions. *arXiv preprint*. <https://arxiv.org/abs/2502.20579>.

## OTHER WORK EXPERIENCE

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**Meta Internship** in the Central Applied Sciences group.

Summer 2022

Developed statistical methods for using A/B test data to identify subsets of the population that showed a strong positive response to the treatment.

## PRESENTATIONS

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**Invited Talks**

- Wayne State University Mathematics Seminar. October 18, 2023  
Talk - Conformal Inference With Conditional Guarantees

### Contributed Presentations

- Joint Statistical Meeting. August 8, 2023  
Talk - Conditional Coverage and Covariate Shift in Conformal Inference.
- Advances in Neural Information Processing Systems 34. December 9, 2021  
Talk - Adaptive Conformal Inference Under Distribution Shift.
- International Federation of Placenta Associations meeting. September 1, 2017  
Talk - Placental subtypes of fetal growth restriction.

### Conference Posters

- ICML 2021 Workshop on Distribution-Free Uncertainty Quantification. July 24, 2021  
Title - Adaptive Conformal Inference Under Distribution Shift.

## AWARDS

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<b>Theodore W. Anderson Theory of Statistics Dissertation Award.</b>	2024
Received for PhD thesis at Stanford University.	
<b>Stanford Statistics Departmental Teaching Assistant Award.</b>	2023
Received for work as a teaching assistant during Ph.D. at Stanford.	
<b>Dr. Feng Qian Convocation Prize.</b>	2019
Awarded to top graduating students in computer science at McGill University.	
<b>NSERC Undergraduate Student Research Award.</b>	2018, 2019
Received separately in 2018 and 2019 at McGill University.	
<b>Sir Edward Beatty Memorial Scholarship and Emily Ross Crawford Scholarship.</b>	2018
For academic performance in B.Sc. at McGill University.	