

## Arun Kumar Kuchibhotla

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CONTACT INFORMATION      4601 Chester Avenue,      +1 267 693 3354  
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RESEARCH INTERESTS      Post-selection Inference, Large Sample Theory, Robust Statistics, Non/semi-parametric Statistics, Concentration Inequalities.

EDUCATION      Fifth Year Graduate Student, (Advisors: Lawrence D. Brown, Andreas Buja)  
The Wharton School,  
University of Pennsylvania, Philadelphia, USA.

[Indian Statistical Institute](#), Kolkata.

M. Stat. (Hons),

- Specialization: *Mathematical Statistics and Probability*.
- Completed in: 2015.
- First class with Distinction. Scored 88%.

B. Stat. (Hons),

- Major Subject: *Statistics*
- Completed in: 2013.
- First class with Distinction. Scored 80.5%.

- JOURNAL PUBLICATIONS
1. **Kuchibhotla A. K.** and Basu A. (2015) “A General Set Up for Minimum Disparity Estimation.” *Statistics and Probability Letters*, Vol. 96, 68-74, 2015.
  2. **Kuchibhotla A. K.** and Basu A. (2017) “On The Asymptotics of Minimum Disparity Estimation.” *TEST: An Official Journal of the Spanish Society of Statistics and Operations Research*, 22.
  3. **Kuchibhotla A. K.**, Mukherjee S. and Basu A. (2017) “Statistical inference based on bridge divergences.” *Annals of the Institute of Statistical Mathematics*, 71 (3), 627-656.
  4. Berk R., Buja A., Brown L. D., George E. I., **Kuchibhotla A. K.**, Su W. J., Zhao L. H., (2018) “Assumption Lean Regression” *The American Statistician*, To appear.
  5. Buja A., Brown L. D., **Kuchibhotla A. K.**, Berk R., George E. I., Zhao L. H. (2019) “Models as Approximations — Part II: A General Theory of Model-Robust Regression” [arXiv:1612.03257](https://arxiv.org/abs/1612.03257). *Statistical Science*, To appear (with discussion).
  6. Bellec P., and **Kuchibhotla A. K.**, (2019) “First order expansion of convex regularized estimators” *Advances in Neural Information Processing Systems 33*, To appear.

- PREPRINTS
1. **Kuchibhotla A. K.** and Parta R. K. (2016) “Efficient Estimation in Single Index Models through Smoothing splines” [arXiv:1612.00068](https://arxiv.org/abs/1612.00068). Revision submitted to Bernoulli.
  2. **Kuchibhotla A. K.**, Patra R. K., Sen B. (2017) “Least Squares Estimation in a Single Index Model with Convex Lipschitz link” [arXiv:1708.00145](https://arxiv.org/abs/1708.00145). Submitted to JASA.

3. **Kuchibhotla A. K.**, Brown L. D., Buja A., George E.I., Zhao L.H. (2017) “Valid Post-selection Inference in Assumption-lean Linear Regression.” [arXiv:1806.04119](#). Revision submitted to Annals of Statistics.
4. **Kuchibhotla A. K.**, Brown L. D., Buja A., George E.I., Zhao L.H. (2018) “A Model Free Perspective for Linear Regression: Uniform-in-model Bounds for Post Selection Inference.” [arXiv:1802.05801](#). Submitted to Econometric Theory. Invited paper for Festschrift on the occasion of Benedikt Poetschers 65th birthday.
5. **Kuchibhotla A. K.**, Chakraborty A. (2018) “Moving Beyond Sub-Gaussianity in High-Dimensional Statistics: Applications in Covariance Estimation and Linear Regression.” *arXiv preprint arXiv:1804.02605*.
6. Chakraborty A. and **Kuchibhotla A. K.** (2018) “Tail Bounds for Canonical U-Statistics and U-Processes with Unbounded Kernels.”
7. **Kuchibhotla A. K.**, Brown L. D., Buja A. (2018) “Model-free Study of Ordinary Least Squares Linear Regression.” [arxiv:1809.10538](#).
8. Banerjee D., **Kuchibhotla A. K.**, Mukherjee S. (2019) “High-dimensional CLT: Improvements, Non-uniform Extensions and Large Deviations” [arXiv:1806.06153](#). Revision submitted to Bernoulli.
9. **Kuchibhotla A. K.** (2018) “Deterministic Inequalities for Smooth M-estimators.” [arxiv:1809.05172](#).
10. **Kuchibhotla A. K.** and Patra R. K. (2019) “On Least Squares Estimation under Heteroscedastic and Heavy-Tailed Errors.” [arXiv:1909.02088](#).

#### TEACHING

- STAT991 – Topics in Linear Models (Fall 2017)  
— Taught half a course jointly with Lawrence D. Brown. Part of creating the course structure and lecture notes.
- STAT111 – Introductory Statistics (Summer 2018)  
— Created syllabus, course material and lectured five times a week to a class of 25 undergraduate students from various disciplines and backgrounds.

#### PRESENTATIONS

- Invited talk at [MCP 2019](#), National Taiwan University.
- Invited talk at [WHOA-PSI-4](#), 2019.
- Invited talk at [JSM 2019](#), Denver.
- Invited talk at [ICSA 2019](#), Nankai University.
- Invited talk at young researchers session, [Lawrence D Brown memorial workshop](#).
- Shared a talk with Andreas Buja at [WHOA-PSI-3](#), 2018.
- Invited talk at “[Workshop Model Selection](#), Regularization, and Inference” 2018 (Represented Larry Brown).
- Shared a talk with Andreas Buja at [SLDSC 2018](#).
- Invited talk at [WHOA-PSI-2](#), 2017 (Represented Larry Brown).
- Contributed session presentation at [ICORS 2015](#), Kolkata, India.
- Contributed session presentation at [ICORS 2014](#), Halle, Germany.
- Two seminars in Theoretical Statistics and Mathematics Unit, ISI, Kolkata on August 7 and 13, 2012 based on my project under Dr. Patankar.
- A department seminar in ISI, Chennai on July 3, 2013.

#### ACADEMIC ACHIEVEMENTS

- Got second prize in [Jan Tinbergen](#) competition for young statisticians from developing countries.  
<https://isi-web.org/index.php/activities/awards/isi-awards/tinbergen-award>

- Awarded Kishore Vaigyanik Protsahan Yojana scholarship since April 2011. (From Indian Institute of Science)
- Inspire Scholar since April 2011. (From Department of Science and Technology, India)

#### PROGRAMMING AND SCRIPTING

- C – Basic Programming,
- R – Proficient,
- Sage – Basic Programming,
- L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> – Proficient