

## Arun Kumar Kuchibhotla

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CONTACT INFORMATION	4601 Chester Avenue, Philadelphia, PA – 19143 Email: <a href="mailto:arunku@wharton.upenn.edu">arunku@wharton.upenn.edu</a> Website: <a href="https://arun-kuchibhotla.github.io/">https://arun-kuchibhotla.github.io/</a>
RESEARCH INTERESTS	Post-selection Inference, Replicability Crisis, Large Sample Theory, Robust Statistics, Non/semi-parametric Statistics, Concentration Inequalities, Statistical Computing.
EDUCATION	Fifth Year Graduate Student, (Advisors: Lawrence D. Brown, Andreas Buja) <b>The Wharton School</b> , University of Pennsylvania, Philadelphia, USA.  <b>Indian Statistical Institute</b> , Kolkata. M. Stat. (Hons), <ul style="list-style-type: none"><li>• Specialization: <i>Mathematical Statistics and Probability</i>.</li><li>• Completed in: 2015.</li><li>• First class with Distinction. Scored 88%.</li></ul> B. Stat. (Hons), <ul style="list-style-type: none"><li>• Major Subject: <i>Statistics</i></li><li>• Completed in: 2013.</li><li>• First class with Distinction. Scored 80.5%.</li></ul>
JOURNAL PUBLICATIONS	<ol style="list-style-type: none"><li>1. <b>Kuchibhotla A. K.</b>, Brown L. D., Buja A., Cai, J., George E.I., Zhao L.H. (2019) “Valid Post-selection Inference in Model-free Linear Regression.” <a href="#">arXiv:1806.04119</a>. Accepted at <i>Annals of Statistics</i>.</li><li>2. Bellec P., and <b>Kuchibhotla A. K.</b>, (2019) “First order expansion of convex regularized estimators” <i>Advances in Neural Information Processing Systems 33</i>, To appear. <a href="#">arXiv:1910.05480</a>.</li><li>3. Buja A., <b>Kuchibhotla A. K.</b>, Berk R., George E. I., Tchetgen Tchetgen E., Zhao L. H. (2019) “Models as Approximations — Rejoinder” <i>Statistical Science</i>, To appear.</li><li>4. Buja A., Brown L. D., <b>Kuchibhotla A. K.</b>, Berk R., George E. I., Zhao L. H. (2019) “Models as Approximations — Part II: A General Theory of Model-Robust Regression” <a href="#">arXiv:1612.03257</a>. <i>Statistical Science</i>, To appear (with discussion).</li><li>5. Berk R., Buja A., Brown L. D., George E. I., <b>Kuchibhotla A. K.</b>, Su W. J., Zhao L. H., (2018) “Assumption Lean Regression” <i>The American Statistician</i>, To appear.</li><li>6. <b>Kuchibhotla A. K.</b>, Mukherjee S. and Basu A. (2017) “Statistical inference based on bridge divergences.” <i>Annals of the Institute of Statistical Mathematics</i>, 71 (3), 627-656.</li><li>7. <b>Kuchibhotla A. K.</b> and Basu A. (2017) “On The Asymptotics of Minimum Disparity Estimation.” <i>TEST: An Official Journal of the Spanish Society of Statistics and Operations Research</i>, 22.</li><li>8. <b>Kuchibhotla A. K.</b> and Basu A. (2015) “A General Set Up for Minimum Disparity Estimation.” <i>Statistics and Probability Letters</i>, Vol. 96, 68-74, 2015.</li></ol>

PREPRINTS/  
SUBMISSIONS

9. **Kuchibhotla A. K.**, Ramdas A. K. (2019) “Nested conformal prediction and the generalized jackknife+” [arXiv:1910.10562](#).
10. **Kuchibhotla A. K.**, Brown L. D., Buja A. and Cai, J. (2019) “All of Linear Regression” [arXiv:1910.06386](#).
11. **Kuchibhotla A. K.** and Patra R. K. (2019) “On Least Squares Estimation under Heteroscedastic and Heavy-Tailed Errors.” [arXiv:1909.02088](#). Submitted.
12. **Kuchibhotla A. K.** (2018) “Deterministic Inequalities for Smooth M-estimators.” [arXiv:1809.05172](#).
13. **Kuchibhotla A. K.**, Banerjee D., Mukherjee S. (2019) “High-dimensional CLT: Improvements, Non-uniform Extensions and Large Deviations” [arXiv:1806.06153](#). Revision submitted to Bernoulli.
14. **Kuchibhotla A. K.**, Brown L. D., Buja A. (2018) “Model-free Study of Ordinary Least Squares Linear Regression.” [arXiv:1809.10538](#).
15. Chakraborty A. and **Kuchibhotla A. K.** (2018) “Tail Bounds for Canonical U-Statistics and U-Processes with Unbounded Kernels.”
16. **Kuchibhotla A. K.**, Chakraborty A. (2018) “Moving Beyond Sub-Gaussianity in High-Dimensional Statistics: Applications in Covariance Estimation and Linear Regression.” [arXiv:1804.02605](#). Submitted.
17. **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](#). Minor Revision Econometric Theory. Invited paper for Festschrift on the occasion of Benedikt Poetscher’s 65th birthday.
18. **Kuchibhotla A. K.**, Patra R. K., Sen B. (2017) “Least Squares Estimation in a Single Index Model with Convex Lipschitz link” [arXiv:1708.00145](#). Submitted.
19. **Kuchibhotla A. K.** and Patra R. K. (2016) “Efficient Estimation in Single Index Models through Smoothing splines” [arXiv:1612.00068](#). Minor Revision submitted to Bernoulli.

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 about 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).
- Special topics session at [World Statistics Congress 2015](#), Rio de Janeiro, Brazil.
- 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

- Student travel award, Wharton Doctoral Programs, George James Term Fund 2019.
- Got second prize in [Jan Tinbergen](#) competition for young statisticians from developing countries.
- Awarded [Kishore Vaigyanik Protsahan Yojana](#) scholarship since April 2011.
- Inspire Scholar since April 2011. (From Department of Science and Technology, India)

#### PROGRAMMING AND SCRIPTING

- C – Basic Programming,
- R – Proficient,
- $\text{\LaTeX}$ – Proficient.