

# SUDEEP SALGIA

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317 Rhodes Hall, Cornell University, Ithaca, NY, 14850

## EDUCATION

- PhD Electrical and Computer Engineering**, Cornell University, Ithaca, NY, USA (2018-Present)
- Advisor: Prof. [Qing Zhao](#)
  - Jacobs Scholar Fellow • CGPA: 4.18/4.0
- Bachelor of Technology (Hons.)**, Indian Institute of Technology Bombay, India (2014-2018)
- Major in Electrical Engineering and Minor in Computer Science • CGPA: 9.74/10

## RESEARCH INTERESTS

I am passionate about math-intensive problems that contribute to a better understanding of fundamental principles of learning. I like to work on theoretical aspects of Machine Learning, broadly around the fields of Statistical Learning, Stochastic Optimization, non-parametric Bayesian Optimization, Hypothesis Testing, and Active Learning in online setups.

## PEER-REVIEWED PUBLICATIONS

- Stochastic Coordinate Minimization with Progressive Precision for Stochastic Convex Optimization [[Paper](#)]  
**Sudeep Salgia**, Qing Zhao, Sattar Vakili  
ICML 2020
- Stochastic Gradient Descent on a Tree: an Adaptive and Robust Approach to Stochastic Convex Optimization [[Paper](#)]  
Sattar Vakili, **Sudeep Salgia**, Qing Zhao  
Allerton 2019
- On Bandlimited Spatiotemporal Field Sampling with Location and Time Unaware Mobile Sensors [[Paper](#)]  
**Sudeep Salgia**, Animesh Kumar  
ICASSP 2018

## SCHOLASTIC ACHIEVEMENTS AND AWARDS

- Awarded Jacobs Scholar Fellowship at Cornell University (2018)
- Silver Medallist in the Class of 2018 IIT Bombay (2018)
- Secured All India Rank 214 in JEE Advanced 2014 among 150,000 selected candidates. (2014)
- Selected for the final round of Honda YES Scholarship. Amongst top 20 students in India (2017)
- Best Application Award for our project on Sign Language to Text Converter at the Tech & RnD Expo (2015)

## INTERNSHIP AND NOTABLE PROJECTS

- **Sampling and Estimation of Bandlimited fields** (2017-18)  
UG thesis with Prof. [Animesh Kumar](#), IIT Bombay  
*Guarantees on reconstruction error of spatiotemporal fields with samples from unknown locations*
- **Automated Methods for MS Lesion Segmentation** (May'17 - Jul'17)  
Research Intern with Prof. [Yi Wang](#), Weill Cornell Medicine  
*Developed new methods for lesion segmentation on T2 images using analytical methods*
- **Algorithms for Information Restoration in Images** (May'16 - Nov'16)  
Research Project with Prof. [Suyash Awate](#), IIT Bombay  
*Novel image inpainting algorithm that uses global information to restore images while ensuring smoothness*

## RESPONSIBILITIES

- Teaching Assistant: Linear Algebra, Electromagnetism at IIT Bombay (Spring 2018, 2016)
- Member of Graduate team of International Students Union at Cornell University (2018-2019)
- Department Academic Mentor at IIT Bombay (2017-2018)
- Volunteer, Abhyasika (an initiative that runs tutorials for underprivileged children) (2017-2018)
- Manager, Technical Projects at IIT Bombay (2016-2017)

## SKILLS AND COURSEWORK

- **Math**: Measure Theory, Probability, Linear Algebra, Statistical Learning Theory, Convex Optimization
- **EE**: Optimal Control, Stochastic Systems : Estimation and Control, Information Theory, Signal Processing
- **Programming Languages**: MATLAB, Python, C++

## CO-CURRICULAR ACTIVITIES

- Secured sixth position in a global Creative Writing competition in Mood Indigo, cultural fest of IITB (2014)
- Amongst top active contributors at [Math StackExchange](#) (top 11%), previously a moderator at [Brilliant.org](#)
- Hobbies: Painting, sketching, Badminton, Cricket