

## EDUCATION

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1. **Ph.D. Electrical and Computer Engineering** 2020-  
*University of California Santa Cruz, California, USA*
  - Pursuing research in various aspects of microgrids including optimization & control, data privacy, and reinforcement learning applications.
  - Received highly selective UCSC Chancellor's fellowship for first year of study.
  - Expect to finish master's level coursework in Fall'21. Broadly my courses cover optimization (convex, numerical), control (linear systems, feedback control, optimal control), power systems (grid modeling, power markets), information theory, and machine learning.
  - GPA: 3.92/4
2. **B.E. Electrical and Electronics Engineering & M.Sc. Mathematics** 2014-2019  
*BITS Pilani Goa Campus, Goa, India*
  - Graduated with a dual degree, B.E. in EEE and an M.Sc in Mathematics.
  - Spent last year of studies at Department of Electrical Engineering, Indian Institute of Science (IISc) for thesis.
  - CGPA - 7.03/10

## WORK EXPERIENCE

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1. **Project Associate** Mar 2020-Aug 2020  
*Indian Institute of Science, Bengaluru, India*
  - Worked as a part of the [Control & Network Systems Group](#).
  - Investigated control algorithms for networked control systems with unreliable communications. I found theoretical bounds on performance, and tested the theoretical results on a small testbed involving mp3pi robots.
  - Research led to publication of first-author article in IET Control Theory and Applications.
2. **Research Intern** Jan 2019 - Feb 2020  
*Indian Institute of Science, Bengaluru, India*
  - Worked as a part of the [Control & Network Systems Group](#).
  - On the theoretical side, I explored the control theoretic problem of event-triggered control in linear systems with unreliable communications. On the applied side, I implemented a multi-scale search algorithm on a drone with downward pointing camera.
  - Research led to publication of first-author article in Indian Control Conference 2019.
3. **Research Intern** Jan 2019 - Dec 2019  
*Pixxel, Bengaluru, India*
  - Part-time research intern at space startup [Pixxel](#).
  - Simulated orbits of upcoming Pixxel satellites on NASA GMAT and AGI STK software.

## PUBLICATIONS

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1. "Differentially Private Load Restoration for Microgrids with Distributed Energy Storage", **S. Bose** and Y. Zhang, *Submitted to IEEE ISGT 2022 NA*, [PDF](#).
2. "Load Restoration in Islanded Microgrids: Formulation and Solution Strategies", **S. Bose** and Y. Zhang, *Pre-publication*, [PDF](#).
  - Pre-publication manuscript received INFORMS Energy, Natural Resources and the Environment (ENRE) 2021 early-career best paper award.
3. "Event-Triggered Second-Moment Stabilisation under Action-Dependent Markov Packet Drops", **S. Bose** and P. Tallapragada, *IET Control Theory & Applications Vol. 15 No.7*, [Link](#).
4. "Event-Triggered Second Moment Stabilization under Markov Packet Drops", **S. Bose** and P. Tallapragada, *Fifth Indian Control Conference, 2019*, [Link](#).
5. "Numerical Solution for a System of Fractional Differential Equations with Applications in Fluid Dynamics and Chemical Engineering", B. Prakash, A. Setia and **S. Bose**, *International Journal of Chemical Reactor Engineering*, [Link](#).

## SKILLS

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| 1. <i>Programming languages</i>                 | Python, Matlab, C, Shell, Assembly, $\text{\LaTeX}$ |
| 2. <i>Power Systems software &amp; packages</i> | OpenDSS, MATPOWER (Matlab)                          |
| 3. <i>Optimization software &amp; packages</i>  | CVX (Matlab), AMPL                                  |