Anamitra Pal

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Google Scholar: https://scholar.google.com/citations?user=aFXKr6YAAAAJ&hl=en

LinkedIn: https://www.linkedin.com/in/anamitrapal/

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EDUCATION

PhD, Electrical Engineering (May'14), Virginia Tech, USA. **(CGPA: 4.00/4.00)**

- **Title:** PMU-based applications for improved monitoring and protection of power systems
- **Advisor:** Dr. James S. Thorp (Email: jsthorp@vt.edu)

M.S., Electrical Engineering (Feb'12), Virginia Tech, USA. **(CGPA: 4.00/4.00)**

- **Title:** Coordinated Control of Inter-area Oscillations using SMA and LMI
- **Advisor:** Dr. James S. Thorp (Email: jsthorp@vt.edu)

B. E., Electrical & Electronics Engineering (May'08), Birla Institute of Technology (BIT) Mesra, India. **(CGPA: 8.57/10.00)**

- Awarded **Gold Medal** for achieving highest GPA in Electrical Engineering

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ACADEMIC EXPERIENCE

Assistant Professor, School of Electrical, Computer, and Energy Engineering, Arizona State University, Tempe, Arizona. (Aug' 16 – Present)

- Data analytics using time-synchronized measurements
- Artificial intelligence (AI)-applications in power systems
- Critical infrastructure resilience
- Facilitate increased penetration of renewable energy in the smart grid
- Teach junior-level (Energy Systems and Power Electronics), senior-level (Power System Analysis), and graduate-level (Power Transmission & Distribution, Wide-area measurement system (WAMS)-based Applications in Power Systems) courses

Applied Electrical and Computer Scientist, Network Dynamics and Simulation Science Laboratory (NDSSL), Virginia Bioinformatics Institute (VBI), Virginia Tech. (Jul'14 – Jul' 16)

- Modeled dynamic behavior of power system in response to catastrophic events
- Designed efficient and accurate energy demand model for modern cities based on a synthetic population database

Instructor, Bradley Department of Electrical and Computer Engineering, Virginia Tech. (Jan'14 – May'14)

- Taught Electrical Theory to 120+ students from Non-Electrical Majors

Graduate Research Assistant, Bradley Department of Electrical and Computer Engineering, Virginia Tech. (Jan'11 – May'12, Jan'13 – May'14)

- **Research Area:**
    o PMU-based Applications in Power Systems

- **Research Projects:**
  - Damping Low Frequency Oscillations in the WECC (funded by California Energy Commission's Public Interest Energy Research Program – Jan'11 to Oct'11)
  - Dynamic Power System State Estimator using Synchrophasor Measurements (funded by Lockheed Martin Corporation – Nov'11 to May'12)
  - Synchrophasor Data Conditioning and Validation (funded by Lawrence Berkeley National Laboratory – Jan'13 to May'14)

Graduate Teaching Assistant, Bradley Department of Electrical and Computer Engineering, Virginia Tech. (Aug'10 – Dec'10, Aug'12 – Dec'12)

- Validated experiments and graded students in Open Engineering Lab (Lab-in-a-box)

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INDUSTRIAL EXPERIENCE

Summer Intern, **Electric Power Group, LLC**, Pasadena, California. (May'13 – Aug'13)

- Created model files for PGDA/RTDMS 2012 testing and training
- Performed base-line studies (Analyzed causes of Outliers in two ISOs)

Summer Intern, **Electric Power Group, LLC**, Pasadena, California. (May'12 – Aug'12)

- Computed phasor alarm limits for SCE System
- Performed code-testing for RTDMS 2012 (Modemeter & Oscillation Detection modules)

Manager (Electrical T&D), Tata Steel Ltd., Jamshedpur, India. (Jul'08 – Jun'10)

- Operationalized Transmission Security Management – a software developed by GE
- Performed contingency analysis for 6.8 MTPA Tata Steel Power System

Summer Intern, **Tata Steel Ltd.**, Jamshedpur, India. (May'07 – Jul'07)

- Studied back-up protection of a thermal power plant so as to improve its reliability

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FUNDED PROPOSALS

- As PI/Co-PI (in reverse chronological order):
  - "Identifying Worst-Case Scenarios from a Reliability Planning Perspective in Presence of Utility-Scale Storage" (**Salt River Project**); Role: **PI**; Share: 100% of USD 59,950; 09/2022 – 08/2023.
  - "CAREER: Time-Synchronized Estimation in Power Systems: Unique Challenges and Innovative Solutions" (**U.S. National Science Foundation**); Role: **PI**; Share: 100% of USD 500,000; 02/2022 – 01/2027.
  - "ASCENT: Sensor-enabled Wildfire Awareness and Risk Management (WARM) for Electric Power Infrastructure" (**U.S. National Science Foundation**); Role: **PI**; Share: 40% initially, later changed to 70%, of USD 1.5M; 09/2021 – 08/2025.
  - "Synthetic Scenario Generation Considering Different Correlations" (**Salt River Project**); Role: **PI**; Share: 100% of USD 59,950; 09/2021 – 08/2022.
  - "Artificial Intelligence (AI) for Robust Integration of AMI and Synchrophasor Data to Significantly Boost Solar Adoption" (**U.S. Department of Energy –**

- **Solar Energy Technologies Office (SETO)**)); Role: **Co-PI**; Share: 25% of USD 750,000; 07/2021 – 06/2024.
- o "Data-Driven, Real-Time State Estimator Using Machine Learning for Transmission Systems" (**Electric Power Research Institute**); Role: **PI**; Share: 100% of USD 210,000; 10/2020 – 12/2022.
- o "Error Characterization of Synchrophasor Data using Rigorous Statistical Testing" (A Research Experiences for Undergraduates (REU) Supplement to HDR I-DIRSE: OAC: Collaborative Research: High-dimensional Spatio-temporal Data Science for a Resilient Power Grid: Towards Real-time Integration of Synchrophasor Data) (**U.S. National Science Foundation**); Role: **Co-PI**; Share: 100% of USD 16,000; 09/2019 – 08/2021.
- o "Collaborative Research: High-dimensional Spatio-temporal Data Science for a Resilient Power Grid: Towards Real-time Integration of Synchrophasor Data" (**U.S. National Science Foundation**); Role: **Co-PI**; Share: 20% of USD 1.3M; 09/2019 – 08/2023.
- o "Identification of Utility-Scale Renewable Penetration Threshold for SRP in a Dynamic Setting" (**Salt River Project**); Role: **PI**; Share: 100% of USD 57,200; 09/2019 – 08/2020.
- o "A Systematic Approach to using Power Systems Signatures for Uniquely Identifying Failing Assets" (**Salt River Project**); Role: **PI**; Share: 100% of USD 57,200; 09/2019 – 08/2020.
- o "Sensor Enabled Modeling of Future Distribution Systems with Distributed Energy Resources" (**U.S. Department of Energy – Advanced Research Projects Agency-Energy (ARPA-E)**); Role: **Co-PI**; Share: 18% of USD 3.1M; 08/2019 – 02/2023.
- o "Machine Learning Approaches for Real-time Integration of Synchrophasor Data" (**Power Systems Engineering Research Center**); Role: **Co-PI**; Share: USD 50,000 of USD 200,000; 07/2019 – 08/2021.
- o "Harnessing the Power of Artificial Intelligence (AI) for Transmission & Distribution Operations" (**Power Systems Engineering Research Center**); Role: **Co-PI**; Share: USD 70,000 of USD 220,000; 07/2019 – 08/2021.
- o "Three-phase Line Parameter Estimation for the Bulk Power System of SRP using PMUs" (**Salt River Project**); Role: **PI**; Share: 100% of USD 57,200; 09/2018 – 08/2019.
- o "Identifying Unique Power System Signatures for Determining Vulnerability of Critical Power System Assets" (**Salt River Project**); Role: **PI**; Share: 100% of USD 57,200; 09/2018 – 08/2019.
- o "Designing a Robust Voltage Support System (VSS) for SRP Transmission System" (**Salt River Project**); Role: **PI**; Share: 100% of USD 57,200; 09/2018 – 08/2019.

- o "PMU-based Online Monitoring of Critical Power System Assets" (**Salt River Project**); Role: **PI**; Share: 100% of USD 52,800; 09/2017 – 08/2018.
  - o "Development of a Precise Line Impedance Estimation Tool for Transmission Lines Using Synchrophasor Measurements" (**Salt River Project**); Role: **PI**; Share: 100% of USD 52,800; 09/2017 – 08/2018.
  - o "Relevant Transmission Reliability Metrics for SRP System" (**Salt River Project**); Role: **PI**; Share: 100% of USD 52,800; 09/2017 – 08/2018.
  - o "Synchrophasor-Data Analytics for a More Resilient Electric Power System" (**Power Systems Engineering Research Center**); Role: **PI**; Share: USD 80,000 of USD 220,000; 07/2017 – 08/2019.
  - o "Coupled Social and Infrastructure Approaches for Enhancing Solar Energy Adoption" (**U.S. Department of Energy**); Role: **PI**; USD 61,982; 01/2017 – 08/2020.

- As Non-PI/Senior Personnel/Other Personnel:
  - o "Center of Excellence for Energy (COE/E) Program" (U.S. Agency for International Development); Role: Senior Personnel; Share: TBD% of USD amount of project; 11/2021-11/2026. Note: Recognition shares will be determined annually by faculty participant involvement.
  - o "Transformer Predictive Maintenance" (U.S.-Pakistan Centers for Advanced Studies in Energy (USPCAS-E) Program funded by **U.S. Agency for International Development**); USD 58,677; 07/2018-06/2019.
  - o Exchange Scholar Program (U.S.-Pakistan Centers for Advanced Studies in Energy (USPCAS-E) Program funded **U.S. Agency for International Development**); USD 67,501; 07/2018-06/2019.
  - o "SSDIM: Generation of Simulated and Synthetic Data for Interdependent Power and Communication Networks" (**U.S. National Science Foundation**); USD 31,500; 07/2017-10/2018.
  - o "Research on Adaptive Control Strategy for the Power System Connected with Large-scale Renewable Energy Resource" (**Chinese National Science Foundation**)
  - o "Synchrophasor Data Conditioning and Validation" (**U.S. Department of Energy**)

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COURSES TAUGHT
- **Face-to-Face:**
  - o EEE 598 – Wide Area Measurement System (WAMS)-Based Applications in Power Systems (Arizona State University)
  - o EEE 579 – Power Transmission and Distribution (Arizona State University)
  - o EEE 471/591 – Power System Analysis (Arizona State University)
  - o EEE 360 – Energy Systems and Power Electronics (Arizona State University)

- o ECE 3054 – Electrical Theory (Virginia Tech)
- **Online/Hybrid:**
  - o EEE 579 – Power Transmission and Distribution (Arizona State University)
  - o EEE 360 – Energy Systems and Power Electronics (Arizona State University)

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PROFESSIONAL TALKS

- **Power Seminar Series at Iowa State University (ISU):** Delivered an invited webinar on November 15, 2022, titled "Time-synchronized State and Topology Estimation in Distribution Grids using Machine Learning" to researchers at ISU.
- **Birla Institute of Technology (BIT) Mesra under the Faculty Webinars program:** Delivered an invited webinar on October 22, 2022, titled "Time-synchronized State Estimation for Transmission and Distribution Grids using Machine Learning". The webinar was organized by the BIT Mesra Alumni Association-North America (BITMAA-NA).
- **North American Synchro-Phasor Initiative (NASPI):** Invited to give a webinar on August 31, 2022, as part of the NASPI webinar series of 2022. The title of my talk was "Machine Learning Based State Estimation for Transmission and Distribution Grids", and I co-presented it with Evangelos Farantatos of EPRI.
- **IEEE Power & Energy Society (PES) General Meeting 2022:** Invited to give talk in the panel session titled "Model validation of RES and other system components through PMU data: Opportunities, challenges, and practical experiences". The title of my talk was "Challenges Encountered During Network Parameter Estimation Using Field PMU Data".
- **Fox 10 News:** Fox 10 News spoke to me on the risk of rolling blackouts in Arizona in Summer 2022. The interview can be accessed through [here](#).
- **North American Synchro-Phasor Initiative (NASPI):** Invited to deliver a talk remotely at the NASPI session titled "Synchrophasor Projects and Edge Computing Solutions" in Oct' 21. The title of my talk was "Time-Synchronized State Estimation at the Grid Edge".
- **IEEE Power & Energy Society (PES) General Meeting 2021:** Invited to give talk in the panel session titled "Asset Management Reliability & Resilience Decisions in Practice". The title of my talk was "Synchrophasor-Based Assessment of Equipment Health".
- **Electric Power Group (EPG), LLC:** Delivered an invited webinar in Feb' 21, titled "Time-Synchronized State Estimation for Incompletely Observed Distribution Systems".
- **Birla Institute of Technology (BIT) Mesra under the Faculty Webinars program:** Delivered an invited webinar on February 13, 2021, titled "Coordinated Wide-Area Control Design for Damping Low Frequency Oscillations". The webinar was organized by the BIT Mesra Alumni Association-North America (BITMAA-NA).

- **ATAL Faculty Development Program of N.I.T. Calicut:** Invited to give a lecture on the "Application of Artificial Intelligence in Power System Operation and Control". My talk was titled "Time-Synchronized State Estimation for Incompletely Observed Distribution Systems" and was delivered remotely on November 9, 2020.
- **Future Energy Forum at the 2ⁿᵈ World Young Scientist Summit:** Invited to give a talk on the theme "Sustainable Power Development amid the World's Energy Transition". My talk was titled "Time-Synchronized State Estimation for Incompletely Observed Distribution Systems" and was delivered remotely on October 17, 2020.
- **IEEE Power & Energy Society (PES) General Meeting 2020:** Invited to give talks in two different panels.
  - In the panel titled "Synchronized Point-on-wave measurements: Technology, Requirements and Applications" sponsored by the PES Working group on Power System Dynamic Measurements, I gave a talk on "A Systematic Approach to Using Power System Signatures for Uniquely Identifying Failing Power Transformers".
  - In the panel titled "Practical Experiences in Grid Reliability and Risk Management" organized by the IEEE Asset Management Working Group, I gave a talk on "Determining Impending Failures of Critical Power System Assets from Synchrophasor Measurements".
- **North American Electric Reliability Corporation (NERC):** Delivered a talk remotely titled "Investigating Roles of Technology-Specific Battery Energy Storage Systems (BESSs) in an Evolving Grid" in Jul' 20.
- **Power Systems Engineering Research Center (PSERC) Webinar:** Invited to give a 1-hour webinar on "Coordinated Wide-Area Polytopic Control Design using Linear Matrix Inequality" on April 21, 2020. [Online]. Available: https://pserc.wisc.edu/webinars.aspx
- **First Solar, Inc:** Delivered a talk titled "Investigating Roles of Technology-Specific Battery Energy Storage Systems (BESSs) in an Evolving Grid" in Oct' 19.
- **Arizona Public Service (APS):** Delivered a talk titled "What can Synchrophasor Technology "Really" Do for Us???" in Aug' 19.
- **International Workshop on Critical Infrastructure Network Security (CINS):** Invited speaker at the 3ʳᵈ International Workshop on CINS held in conjunction with ACM Sigmetrics on June 28, 2019.
- **North American Synchro-Phasor Initiative (NASPI):** Invited to deliver a talk remotely at the NASPI session titled "Big Data Analytics Platforms Architecture Requirements and Analysis Techniques" in Mar' 19. The title of my talk was "Techniques To Support Next-Generation of Synchrophasor Technology Applications".
- **Power Systems Engineering Research Center (PSERC) Summer Workshop:** Delivered a talk titled "What can Synchrophasor Technology "Really" Do for Us???" in Jul' 18.

- **Electric Power Group (EPG), LLC:** Delivered an invited talk in Sep' 17 titled "WAMS-Based Applications in Power Systems".
- **The Atlantic Magazine:** Approached by The Atlantic Magazine to talk about the future prospects of Puerto Rico's electric grid after Hurricane Maria destroyed its built infrastructure. My comments were published on the September 30, 2017 issue of The Atlantic. [Online]. Available: https://www.theatlantic.com/business/archive/2017/09/puerto-rico-hurricane/541641/?utm_source=feed
- **Global Energy Interconnection Research Institute North America (GEIRI NA):** Delivered an invited talk in Nov' 16 titled "WAMS-Based Applications in Power Systems".
- **Birla Institute of Technology & Science (BITS), Goa, India:** Delivered an invited lecture in Oct' 15 on synchrophasor measurement-based applications for damping power system oscillations.
- **New York ISO (NYISO):** Gave a talk at NYISO in Albany in Dec'14 on phasor measurements and the role they play in modern power systems with a special emphasis on state estimation.
- **International Workshop on Synchrophasor Measurements for Smart Grid:** Delivered an invited lecture remotely (via-Skype) to the students of MVGR College of Engineering in Vizianagaram, India in Nov'14.
- **Dominion Virginia Power (DVP):** Presented the results of my research on the synchrophasor data condition and validation project during a demonstration at the DVP office in Richmond, Virginia in Apr'14.
- **North China Electric Power University (NCEPU):** Invited by NCEPU in Beijing for two weeks in Sep'12 under Chinese Universities' Subject Innovation and Expert Invitation Project sponsored by the Chinese Ministry of Education and State Administration of Foreign Experts Affairs to give talks about my research.
- **University of California, Los Angeles (UCLA):** Visited the Smart Grid Energy Research Center (SMERC) at UCLA in Jul'12 to talk about my work done at EPG as well as research done previously at Virginia Tech.
- **North American Synchro-Phasor Initiative (NASPI):** Presented results of my research done at Virginia Tech on Damping Low Frequency Oscillations at the Work Group meeting of NASPI in Feb'12 in Orlando, Florida.

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STUDENTS CURRENT/GRADUATED/MENTORED
- **Current Students**
  - Behrouz Azimian (Ph.D.)
  - Antos C. Varghese (Ph.D.)
  - Dhaval Dalal (Ph.D.)
  - Satyaprajna Sahoo (Ph.D.)

- o Shiva Moshtagh (Ph.D.)
- o Yadunandan Paudel (Ph.D.)
- o Mohammad Golgol (Ph.D.)
- o Hritik Shah (M.S.E.)
- o Yug Shailesh Patel (M.S.E)
- o Ahmed Albutayshi (M.S.E)
- o Venkata Nagarjuna Anudeep Kandrathi (M.S.E)
- **Graduated Students**
  - o Doctoral
    - Reetam Sen Biswas (Ph.D., 2021) – Network Applications Engineer, Hitachi ABB Power Grids, in San Jose, CA (currently working remotely)
    - Pooja Gupta (Ph.D., 2021) – Power Systems Modeling and Controls Engineer, GE Renewables Energy (currently working remotely)
  - o Masters
    - Muhammad Bilal (M.S., 2022) – Machine Learning Engineer, RedBuffer, Islamabad, Pakistan
    - Mohammed Alhazmi (M.S., 2021) – Saudi Arabia
    - Fakhri Saadedeen (M.S., 2021) – Electrical Engineer 1 at Palo Verde Nuclear Generating Station
    - John Patterson (M.S., 2021) – Product Engineer, Hoolest Performance Technologies, Inc. in Phoenix, AZ
    - Harish Chandrasekaran (M.S., 2020) – Engineer Resource Integration, DNV Energy USA Inc., in Austin, TX
    - Hashem A M H S Albhrani (M.S., 2020) – Engineer III (Transmission Engineer), Quanta Technology, in San Francisco Bay Area (Concord, CA) (currently working remotely)
    - Anubhav Nath (M.S., 2019) – Software Development Engineer, Electric Power Group, LLC, in Pasadena, CA
    - Prashanth Kumar Mansani (M.S., 2018) – Power Engineer at ETAP in Irvine, CA
    - Meghna Barkakati (M.S., 2018) – Power Systems Engineer, GHD, Perth, Australia
- **Mentored Students**
  - o Demetra Salls (Associate Electrical Engineer at Northrop Grumman)
  - o Nabila Ahmed (National University of Sciences and Technology, Pakistan)
  - o Tamojit Chakraborty (Power Systems Dynamics Model Writer in Siemens PTI, Schenectady, NY)
  - o Praneeth Varma Mudunuri (Transmission Planning Engineer II at Tucson Electric Power, Tucson, AZ)
  - o Sreetama Das (Associate Power Systems Engineer in Distribution Planning Group at RLC Engineering, Portland, ME)

- o Rajiv Jha (Indian Institute of Technology (IIT), Delhi, India)
- o Taufan Roekman (Arizona State University, USA)
- o Jairo Ramirez Torres (Arizona State University, USA)
- o Fareeha (University of Engineering & Technology (UET), Peshawar, Pakistan)
- o Shazmina Jamil (University of Engineering & Technology (UET), Peshawar, Pakistan)
- o Atif Naveed Khan (National University of Science & Technology (NUST), Islamabad, Pakistan)
- o Muhammad Nadeem (National University of Science & Technology (NUST), Islamabad, Pakistan)
- o Muhammad Zulqarnain Zeb (National University of Science & Technology (NUST), Islamabad, Pakistan)

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PROFESSIONALS MENTORED

- **Current**
  - o Dr. Anwarul Sifat (Arizona State University)
- **Past**
  - o Dr. Babak Jafarpisheh (University of Udine, Dipartimento Politecnico di Ingegneria e Architettura (DPIA); Fall 2019 – Spring 2021)
  - o Dr. Kashif Imran (Visiting Scholar from National University of Science & Technology (NUST), Islamabad, Pakistan; Spring 2019)

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HONORS AND AWARDS

- **2023-2024 Centennial Professorship Award** (Associated Students of ASU): Received this award of USD 10,000 as recognition for your engaged scholarship, leadership, community service, and exemplary student-centered practices at Arizona State University.
- Under my leadership, the Young Professionals (YP) Affinity Group Chapter of the Phoenix Section received the **2021 IEEE Region 6 Outstanding Affinity Group Chapter of the Year Award**
- Co-author of the **Third Best Paper Award** at the 53rd North American Power Symposium (NAPS) in 2021 (my M.S. student was the only other author)
- Elevated to grade of **IEEE Senior Member** in November 2019
- **2019 Outstanding IEEE Young Professional Award** (IEEE Phoenix Section): In recognition "For Outstanding Education and Research Contributions to Critical Infrastructures and Network Security for Electric Power Systems"
- **2018 Young CRITIS Award**: Best young researcher in the field of Critical Infrastructure Protection (CIP)
- Co-author of the **Third Best Paper Award** at the 2017 IEEE Texas Power and Energy Conference (my Ph.D. student was the only other author)
- **Best New Employee of the Year** (Jul'08 – Jun'09), Tata Steel Ltd., Jamshedpur, India

- **Institute Gold Medal**: Awarded for achieving highest CGPA in Electrical Engineering as an undergraduate student
- **Tata Steel Scholar** (Jan'07 – Jun'08): Awarded for consistently getting the highest GPA in Electrical Engineering
- **Sahara Scholarship** (Mar'06): Awarded for maintaining Academic Excellence while continuing to be an active member of the National Cadet Corps (NCC)

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ACCOLADES WON BY MY STUDENTS

- **Shiva Moshtagh** (Ph.D. student): Received the 2023-2024 ASU Iranian American Alumni Academic Scholarship
- **Behrouz Azimian** (Ph.D. student): Received the University Graduate Fellowship for the academic year 2023-2024
- **Behrouz Azimian** (Ph.D. student): Awarded the Joseph A. Barkson Fellowship by the Ira A. Fulton Schools of Engineering for the academic year 2022-2023
- **Fakhri Saadedeen** (M.S. Student): Third Best Paper Award at the 53rd North American Power Symposium (NAPS) in 2021
- **Behrouz Azimian** (Ph.D. student): Awarded the Joseph A. Barkson Fellowship by the Ira A. Fulton Schools of Engineering for the academic year 2021-2022
- **Jairo Ramirez Torres** (UG, worked with me on an NSF REU grant): Recipient of the 2021 IEEE PES Scholarship Plus Initiative
- **Behrouz Azimian** (Ph.D. student): Selected by the IEEE Phoenix Section Awards Committee for the Al Gross award for the year 2021
- **Shiva Moshtagh** (Ph.D. student): Awarded the Fulton Fellowship from the Ira A. Fulton Schools of Engineering for the academic year 2021-2022
- **Behrouz Azimian** (Ph.D. student): Received the Engineering Graduate Fellowship from the Ira A. Fulton Schools of Engineering for the Spring 2021 semester
- **Dhaval Dalal** (Ph.D. student): Received the Engineering Graduate Fellowship from the Ira A. Fulton Schools of Engineering for the Spring 2021 semester
- **Behrouz Azimian** (Ph.D. student): Received the digital portfolio award from the ASU Graduate & Professional Student Association for 2021
- **Demetra Salls** (M.S. student): Received the Graduate College Interdisciplinary Enrichment Fellowship (IEF) for 2021-22
- **Pooja Gupta** (Ph.D.): Received the University Graduate Fellowship for Spring 2021
- **Demetra Salls** (M.S. student): PES Scholar for 2020-21 by the IEEE PES Scholarship Plus Initiative
- **Tasha Reynolds** (UG, did her senior design project with me): Her Senior Design Project Topic helped her win the Entrepreneur & Value Creation Competition for Fall 2020
- **Pooja Gupta** (Ph.D.): Selected by the IEEE Phoenix Section Awards Committee for the Al Gross award for the year 2020

- **Reetam Sen Biswas** (Ph.D.): Received the Engineering Graduate Fellowship from the Ira A. Fulton Schools of Engineering for the Spring 2020 semester
- **Behrouz Azimian** (Ph.D. student): Received the Engineering Graduate Fellowship from the Ira A. Fulton Schools of Engineering for the Spring 2020 semester
- **Behrouz Azimian** (Ph.D. student): Received the University Graduate Fellowship for the academic year 2019-2020
- **John Patterson** (M.S.): Received the Gerald T. Heydt Scholarship in Electric Power Engineering for the year 2019
- **Reetam Sen Biswas** (Ph.D.): Selected by the IEEE Phoenix Section Awards Committee for the Atluri award for the year 2018
- **Meghna Barkakati** (M.S.): Selected by the IEEE Phoenix Section Awards Committee for the Dieter Schroder Student Scholarship for the year 2018
- **Reetam Sen Biswas** (Ph.D.): Third Best Paper Award at the 2017 IEEE Texas Power and Energy Conference
- **Ngoni Mugwisi** (UG, did his senior design project with me): Awarded Rhodes Scholarship in 2017

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SOFTWARE SKILLS
- Power System Simulators
  - Siemens-PSS/E
  - Powertech-DSA Tools
  - GE-PSLF
  - MATPOWER
  - Power System Toolbox (PST)
  - Simulink
- Programming Languages
  - C/C++
  - Python
  - EPCL
- MATLAB
- GUROBI

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SYNERGISTIC ACTIVITIES
- Co-chair for the Paper Forum sessions titled "Power System Operations" and "Analytical Methods for Power Systems #2" at the IEEE PES General Meeting 2022 held in Denver, CO, from July 17-21, 2022.
- Associate Editor for Journal of Modern Power Systems and Clean Energy (2022-current)
- Student Program Chair for the 52nd North American Power Symposium (NAPS) held virtually in April 2021.

- Session Moderator for the 2021 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference North America
- Associate Editor for IEEE Power Engineering Letters (2021-current)
- Associate Editor for IEEE Transactions on Power Systems (2021-current)
- Organized an Industry Panel Session on the topic of "Emerging Challenges in the Modern Electric Grid" at the 2020 IEEE SmartGridComm held virtually in November 2020.
- Organized a Student-Industry-Faculty Interaction (SIFI) Session at the 2020 IEEE SmartGridComm held virtually in November 2020.
- Faculty Advisor for the ASU student organization, Asha for Education (2020-2021).
- Member of NSF Review Panels (2017, 2020, 2022).
- Guest Editor for the Journal of Modern Power Systems and Clean Energy: Special Section on Application of Artificial Intelligence in Modern Power Systems (2020)
- Member of the New Faculty Advisory Council (NFAC) of Arizona State University (2019-2021)
- Volunteer for the TryEngineering Together program of IEEE (an eMentorship program) to inspire and educate the next generation (grades 3 to 5) of engineers, scientists and technical professionals (2019-current).
- Industry Liaison for the IEEE SmartGridComm 2020 (2020 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm)) held virtually in November 2020.
- Co-chair for the Paper Forum session titled "Power System Modeling and Analysis Paper Forum #1" at the IEEE PES General Meeting 2019 held in Atlanta, GA, from August 4-8, 2019.
- IEEE Young Professional Chair of the IEEE Phoenix Section (2019-current).
- Panel member for the session on "Big Data Analytics Platforms Architecture Requirements and Analysis Techniques" at the North American SynchroPhasor Initiative (NASPI) Work Group Meeting on 16 April 2019.
- Session Chair for the session titled "Challenges and solutions to operation of transmission and distribution systems with utility-scale deployment of renewable generation" of the 50th North American Power Symposium (NAPS) held in Fargo, ND, from 9-11 September 2018.
- Technical Program Committee (TPC) member of the ACM SIGMETRICS International Workshop on Critical Infrastructure Network Security (CINS) in 2017, 2018, and 2019.
- TPC member of IEEE SmartGridComm'18 (2018 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm)) held in Aalborg, Denmark, on October 29-31, 2018.
- Organizer of "Computing for Ebola Challenge" at Virginia Tech in October 2014.
- Part of a team led by Ms. Bachendri Pal (first Indian woman to climb Mt. Everest) for a "Two Week Adventure/Survival Expedition" in the Himalayas in May-June 2009.

- Member of Tata Steel Rural Development Society (TSRDS) from 2008-10:
  - Visited rural villages located in vicinity of Jamshedpur, India, to help them become self-reliant (Focus was on providing clean drinking water and cheap electricity)
- Active member of the National Cadet Corps (NCC) from 2004-06.

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MISCELLANEOUS

- Reviewer of high-impact journals and conferences:
  - IEEE Transactions on Power Systems
  - IEEE Transactions on Power Delivery
  - IEEE Transactions on Smart Grid
  - IEEE Transactions on Sustainable Energy
  - IEEE Transactions on Instrumentation & Measurement
  - IEEE Transactions on Industrial Informatics
  - IEEE Systems Journal
  - IEEE Access
  - IEEE Power Engineering Letters
  - IET Generation, Transmission, and Distribution
  - IET Renewable Power Generation
  - IET Science, Measurement, and Technology
  - IET Energy Conversion and Economics
  - Journal of Modern Power Systems and Clean Energy (published in IEEE Xplore)
  - International Journal of Electrical Power and Energy Systems (Elsevier)
  - Electric Power Systems Research (Elsevier)
  - Measurement (Elsevier)
  - Computers & Electrical Engineering (Elsevier)
  - Ain Shams Engineering Journal (Elsevier)
  - Electric Power Components and Systems (Taylor & Francis)
  - Cogent Engineering (Taylor & Francis)
  - International Transactions on Electrical Energy Systems (Wiley)
  - Advanced Theory and Simulations (Wiley)
  - Protection and Control of Modern Power Systems (Springer)
  - Electrical Engineering (Springer)
  - Energies-Open Access Energy Research, Engineering and Policy Journal (MDPI)
  - Sensors-Open Access Journal (MDPI)
  - Sustainability-Open Access Journal (MDPI)
  - Mathematics (MDPI)
  - International Journal of Electrical and Computer Engineering Systems (Faculty of Electrical Engineering, Computer Science and Information Technology, Josip Juraj Strossmayer University of Osijek, Croatia)
  - Mathematical Problems in Engineering (Hindawi)

- o Recent Advances in Electrical & Electronic Engineering (Bentham Science)
- o IEEE Power & Energy Society General Meeting
- o IEEE Power & Energy Society T&D Conference and Exposition
- o IEEE International Conference on Smart Grid Communications (SmartGridComm)
- o IEEE North American Power Symposium (NAPS)
- o International Conference on Intelligent Systems Applications to Power Systems (ISAP)
- o IEEE SusTech
- o Emerging Trends for Smart Grid Automation and Industry (ICETSGAI) (Springer)
- Future Professoriate Certificate (Preparing graduate students to become faculty)
- IEEE Graduate Student Member (2011-2014), IEEE Member (2014-2019), IEEE Senior Member (2019-current)
- Graduate Student Member of Tau Beta Pi (2011-2014), Member (2014 onwards)

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