

TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Ruchi Dilip Kukde Title: Postdoctoral Scholar and Lecturer

B. Educational Background:

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Thesis/Dissertation</i>
<i>Master of Science</i>	2023	Texas State University	Data Analytics and Information Systems	<i>‘Analysis of Hospital In-patient Stays and Readmissions of Diabetic Patients in the United States’</i>
<i>Doctor of Philosophy</i>	2021	Indian Institute of Technology (IIT) Bhubaneswar, India	Electrical and Computer Sciences	<i>‘Development and Performance Evaluation of Adaptive Algorithms for Distributed Active Noise Control’</i>
<i>Master of Technology</i>	2014	Indian Institute of Technology (IIT) Bhubaneswar, India	Electronics and Communication Engineering	<i>‘Development of Novel Narrowband Active Noise Control System’</i>
<i>Bachelor of Engineering</i>	2011	RTM Nagpur University, India	Electronics Engineering	

C. University Experience:

<i>Experience Type</i>	<i>Title/Rank/Position</i>	<i>Organization/ University</i>	<i>Year</i>
<i>Higher Education</i>	Postdoctoral Scholar and Lecturer	Texas State University	2023 – present
<i>Higher Education</i>	Graduate Research Assistant	Texas State University	2022 – 2023
<i>Higher Education</i>	Assistant Professor	KIIT University, India	2019 – 2021
<i>Higher Education</i>	Teaching Assistant	Indian Institute of Technology (IIT) Bhubaneswar, India	2012 – 2019

D. Other Professional Credentials:

AI in Education: Leveraging ChatGPT for Teaching, Coursera, 2025

Teaching Online @TXState Certification, Office of Distance and Extended Learning, Texas State University, 2023

Family Educational Rights and Privacy Act Training (CITI), Texas State University, 2023

Social and Behavioral Research Training (CITI), Texas State University, 2023

NSF Responsible Conduct of Research Training (CITI), Texas State University, 2023

Tableau Data Analyst Certification Prep, Udemy, 2023

SPSS Statistics Essential Training, LinkedIn Learning, 2023

II. TEACHING

A. Courses Taught:

Texas State University:

OCED 5361 – Human Systems in the Workplace, Spring 2025

CTE 3313N – Problem-Solving and Decision-Making, Fall 2024

OCED 5361 – Human Systems in the Workplace, Spring 2024

CTE 3313N – Problem-Solving and Decision-Making, Fall 2023

KIIT University, India:

EC 2003 – Principles of Signals and Systems

EC 2021– Signals and Networks

EC 3030 – Adaptive Systems and Signal Processing

EC 2004 – Principles of Digital Communication

EC 2098 – Simulation Laboratory

B. Courses Prepared and Curriculum Development:

CTE 3371 – Systems Analysis and Design in Information Technology (New Course Outline Development), October 2024, Texas State University

CTE 3372 – Database Theory and Practices in Information Technology (New Course Outline Development), October 2024, Texas State University

CTE 3375 – Principles of Data Science and Analytics (New Course Outline Development), October 2024, Texas State University

CTE 3376 – Database Theory and Practices in Data Analytics (New Course Outline Development), October 2024, Texas State University

CTE 3377 – Data Visualization (New Course Outline Development), October 2024, Texas State University

CTE 3313N – Problem-Solving and Decision-Making (Course Revision), Summer 2024, Texas State University

EC 3030 – Adaptive Systems and Signal Processing (Course Development), Spring 2021, KIIT University, India

C. Teaching Professional Development Activities Attended:

Workshop/Symposia	AI in Teaching and Learning Symposium, Texas State University	2025
Seminar	Click Here for Success: Strategies for Asynchronous Teaching, Faculty Development, Texas State University	2025
Seminar	Providing Effective Feedback on Graduate Student Writing, Faculty Development, Texas State University	2024
Seminar	AI in Academia, Faculty Development, Texas State University	2024
Seminar	AI in Academia: Responsible AI Considerations, Faculty Development, Texas State University	2024
Seminar	Let's Explore the Relationship Between Copyright and AI, Faculty Development, Texas State University	2024
Seminar	The AI advantage: Engaging Students through Artificial Intelligence Tools, Faculty Development, Texas State University	2024
Seminar	Aldeas for Faculty: Implementing Artificial Intelligence Activities in Classroom, Faculty Development, Texas State University	2023
Seminar	How Humans Learn: Effective and Compassionate Teaching and Learning, Faculty Development, Texas State University	2023

III. SCHOLARLY/CREATIVE

A. Works in Print:

1. Books:

a. Chapters in Books:

Kukde, R. (2025). Changing landscape of problem-solving and decision-making in the workplace. In *Occupation Training for the Future of Work*. *In Press*. Emerald Publishing.

2. Articles:

a. Refereed Journal Articles:

Kukde, R. D., Chakraborty, A., & Shah, J. (August 22, 2024). A systematic review of recent studies on hospital readmissions of patients with diabetes. *Cureus*, 16(8): e67513. <https://doi.org/10.7759/cureus.67513>

Kukde, R. D., Panda, G., & Manikandan, M. S. (2020). Bio-inspired evolutionary computing approach for distributed active noise control problem. *Cognitive Computation and Systems*, 2(2), 57-65. <https://doi.org/10.1049/ccs.2019.0030>

Kukde, R. D., Manikandan, M. S., & Panda, G. (2020). Incremental learning based adaptive filter for non-linear distributed active noise control system. *IEEE Open Journal of Signal Processing*, 1, 1-13. <https://doi.org/10.1109/OJSP.2020.2975768>

Kukde, R. D., Manikandan, M. S., & Panda, G. (2019). Reduced complexity diffusion filtered x least mean square algorithm for distributed active noise cancellation. *Signal, Image and Video Processing*, 13(3), 447-455. <https://doi.org/10.1007/s11760-018-01412-1>

Kukde, R. D., Panda, G., & Manikandan, M. S. (2018). On distributed nonlinear active noise control using diffusion collaborative learning strategy. *IET Signal Processing*, 12, 410-421. <https://doi.org/10.1049/iet-spr.2017.0358>

3. Theses and Dissertations:

Kukde, R. D. (2023). *Analysis of hospital in-patient stays and readmissions of diabetic patients in the United States* [Master's thesis, Texas State University]. Texas State University Digital Library. <https://digital.library.txst.edu/items/aa89582a-c3b9-42eb-ad6e-8f0ca4fe39b1/full>

Kukde, R. D. (2020). *Development and performance evaluation of adaptive algorithms for distributed active noise control* [Doctoral dissertation, Indian Institute of Technology Bhubaneswar]. Indian Institute of Technology Bhubaneswar Library.

Kukde, R. D. (2014). *Development of novel narrowband active noise control system* [Master's thesis, Indian Institute of Technology Bhubaneswar]. Indian Institute of Technology Bhubaneswar Library.

3. Conference Proceedings:

a. Refereed Conference Proceedings:

Kukde, R. D., Hough T. & Ashford-Hanserd, S. (Accepted). NSF CAREER: Effects of community cultural wealth on persistence of Black and Hispanic women in the P-20 computing workforce pipeline in Texas. *Proceedings of the 2025 American Society for Engineering Education (ASEE) Annual Conference & Exposition*, Montreal, Canada.

Kukde, R. D., Chakraborty, A., & Shah, J. (Accepted). Analyzing diabetes-related hospitalizations: Trends and insights from NIS 2016–2019 for health informatics applications. *Proceedings of the 16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025)*, Orlando, FL.

Kukde, R. D., Chakraborty, A., & Shah, J. (Accepted). Data-driven insights into diabetes-related hospital readmissions in the United States: Trends and predictors. *Proceedings of the 16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025)*, Orlando, FL.

Sherron, T., Kukde, R. D., Schumacker, R., & Xie, L. (in press). Analyzing competency in block credit prior learning assessment: Machine learning model comparisons. *Proceedings of the American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Wallace, I., Saha, A. K., Upreti, S., Bhattarai Sharma, K., Hough, T., Kukde, R. D., Ashford-Hanserd, S. & Sullivan, C. (in press). Examining aspects of cultural capital influencing persistence among Hispanic and Black students in computing education. *Proceedings of the American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Sherron, T., Cherrstrom, C. Boden, C., Kukde, R. D. (in press). Constructing educational possibilities with experiential learning and prior learning assessment. *Proceedings of the American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Sherron, T., Cherrstrom, C. Boden, C., Kukde, R. D. (in press). Credentialing workplace learning: Factors impacting prior learning assessment. *Proceedings of the American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Ashford-Hanserd, S., Hough, T., Kukde, R. D., Garza, D., Saha, A. K., & Summers, E. (2024, November). Effects of cultural capital on participation and persistence in K-16 STEM+C education among undergraduate women of color. *Proceedings of*

the 2024 CTE Research & Professional Development Conference, San Antonio, TX.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2018). An incremental distributed active noise control system for impulse noise cancellation. *Proceedings of the NCDAMLS 2018*, Bilaspur, India.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2017). Robust distributed active noise control in presence of secondary path and error sensor disturbances. *Proceedings of the IEEE Region 10 Conference (TENCON)* (pp. 369–374). Malaysia.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2016). Low complexity distributed active noise control using secondary path constraints. *Proceedings of the IEEE Region 10 Conference (TENCON)* (pp. 612–616). Singapore.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2014). Development of a novel narrowband active noise controller in presence of sensor error. *Proceedings of the 2014 International Conference on Advances in Computing, Communications and Informatics (ICACCI)* (pp. 2735–2739). New Delhi.

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

Kukde, R. D., Chakraborty, A., & Shah, J. (Accepted). Analyzing diabetes-related hospitalizations: Trends and insights from NIS 2016–2019 for health informatics applications. [Conference presentation]. *16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025)*, Orlando, FL.

Kukde, R. D., Chakraborty, A., & Shah, J. (Accepted). Data-driven insights into diabetes-related hospital readmissions in the United States: Trends and predictors. [Conference presentation]. *16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025)*, Orlando, FL.

Kukde, R. D., Hough T. & Ashford-Hanserd, S. (Accepted). NSF CAREER: Effects of community cultural wealth on persistence of Black and Hispanic women in the P-20 computing workforce pipeline in Texas. [Poster presentation]. *2025 American Society for Engineering Education (ASEE) Annual Conference & Exposition*, Montreal, Canada.

Sherron, T., Singh, S., Cherrstrom, C. A., Xie, L., Kukde, R. D., King, J. A., Quayson, F., Hyden, B., Gottschall, P., Lopez, O. S., Boden, C. J., & Ashford-Hanserd, S. (2025). Constructing educational possibilities with experiential learning and prior learning assessment. [Conference presentation]. *American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Sherron, T., Cherrstrom, C. A., Singh, S., Quayson, F., King, J. A., Kukde, R. D., Xie, L., Hyden, B., Gottschall, P., Lopez, O. S., Boden, C. J., & Ashford-Hanserd, S. (2025). Credentialing workplace learning: Factors impacting prior learning assessment.

[Conference presentation]. *American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Sherron, T., Kukde, R. D., Schumacker, R., & Xie, L. (2025). Analyzing competency in block credit prior learning assessment: Machine learning model comparisons. [Conference presentation]. *American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Wallace, I., Saha, A. K., Upreti, S., Bhattarai Sharma, K., Hough, T., Kukde, R. D., Ashford-Hanserd, S. & Sullivan, C. (2025). Examining aspects of cultural capital influencing persistence among Hispanic and Black students in computing education. [Conference presentation]. *American Educational Research Association (AERA) 2025 Annual Meeting*, Denver, CO.

Ashford-Hanserd, S., Hough, T., Kukde, R. D., Garza, D., Saha, A. K., & Summers, E. (2024, November). Effects of cultural capital on participation and persistence in K-16 STEM+C education among undergraduate women of color. [Conference presentation]. *2024 CTE Research & Professional Development Conference*, San Antonio, TX.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2017). Robust distributed active noise control in presence of secondary path and error sensor disturbances. [Conference presentation]. *IEEE Region 10 Conference (TENCON)* (pp. 369–374). Malaysia.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2016). Low complexity distributed active noise control using secondary path constraints. [Conference presentation]. *IEEE Region 10 Conference (TENCON)* (pp. 612–616). Singapore.

Kukde, R. D., Manikandan, M. S., & Panda, G. (2014). Development of a novel narrowband active noise controller in presence of sensor error. [Conference presentation]. *2014 International Conference on Advances in Computing, Communications and Informatics (ICACCI)* (pp. 2735–2739). New Delhi.

2. Invited Talks, Lectures, and Presentations:

Ashford-Hanserd, S., Anwansedo, A., Kukde, R., Saha, A. K., Sharma, K. B., Upreti, S., & Wallace, I. (Accepted). *I will continue to persist: Optimizing cultural capital in the computing education and workforce* [Conference session]. *CSTA 2025 Annual Conference*, Cleveland, OH.

Kukde, R. D. (2025, April 16). *Tech Panel*. Invited panelist at the Media and Technology Session, Youth Leadership San Marcos, Texas State University, San Marcos, TX.

Sharma, K. B., Kukde, R. D., Anwansedo A. E., Ashford-Hanserd, S. (2025, March). Factors influencing persistence of undergraduate computing majors at an HSI in Texas. [Poster presentation]. *2025 TXST STEM Conference*, Texas State University, San Marcos, TX.

Upreti S., Kukde, R. D., Anwansedo A. E., Ashford-Hanserd, S. (2025, March). Staying the course: Factors influencing persistence of Biology majors. [Poster presentation]. *2025 TXST STEM Conference*, Texas State University, San Marcos, TX.

- Rosado T., Kukde, R. D., Anwansedo A. E., Ashford-Hanserd, S. (2025, March). An analysis of factors influencing undergraduate students' decision to enroll and persist in STEM majors. [Poster presentation]. *2025 TXST STEM Conference*, Texas State University, San Marcos, TX.
- Kukde, R. D. (2025, January 25). *Panel discussion with successful women in STEM/STEAM*. Invited panelist at the 2025 Power of an Educated Girl STEAM Conference, Georgetown, TX.
- Hough, T. D., Ashford-Hanserd, S. N., Kukde, R. D., Garza, D. R., Summers, E., Saha, A. K. (2025). A qualitative inquiry into the aspects of cultural capital that influence persistence among postsecondary women of color studying computing. [Presentation]. *9th World Conference on Qualitative Research*, Krakow, Poland (online hybrid).
- Upreti, S., Sharma, K. B., Kukde, R. D., Hough, T., & Ashford-Hanserd, S. (2024, October). An analysis of factors influencing Hispanic/Latina(o) students in their decisions to enroll and persist in a computing program at an HSI in Texas. [Poster presentation]. *SACNAS National Diversity in STEM (NDiSTEM) Conference*, San Antonio, TX.
- Kukde, R. D., & Hough, T. (2024, April). Optimizing cultural capital in career and education planning and persistence. [Webinar]. *Shiminly*. <https://shiminly.com/>
- Sharma, K. B., Adhikari, S., & Kukde, R. D. (2024, April). Digital minds: Unveiling student perceptions of artificial intelligence. [Poster presentation]. *TXST Center for Analytics and Data Science Third Analytics Showcase*, Texas State University, San Marcos, TX.
- Kukde, R. D., Hough, T., & Moreno, T. (2024, March). The mentor, the scholar and the postdoc journey: Navigating together. [Poster presentation]. *National Postdoctoral Association 2024 Annual Conference*, Seattle, WA.
- Kukde, R. D., Chakraborty, A., & Shah, J. (2023, October). Analysis of factors and trends of diabetes-related inpatient stays in the United States. [Poster presentation]. *INFORMS Annual Meeting*, Phoenix, AZ.
- Kukde, R. D. (2021, June). Development and performance evaluation of distributed active noise control systems. [Invited talk]. *Online Faculty Development Program: Exploring Self – A New Paradigm in Education*, KIIT Deemed to be University, India.
- Kukde, R. D. (2017, February). Distributed active noise control systems. [Poster presentation]. *National Science Day*, IIT Bhubaneswar, India.

3. Other Works not in Print:

a. Works “submitted” or “under review”:

- Sherron, T., Kukde, R. D. & Xie, L. (Manuscript under Review). *Analyzing competency in block credit prior learning assessment: Machine learning model comparisons*. Submitted to *Multiple Linear Regression: The General Linear Model*.

Moreno, T. D., Carrera, L. S., Ashford-Hanserd, S., & Kukde, R. D. (Manuscript under review). *Influence of community cultural wealth on undergraduate women of color in computing*. Submitted to *Journal of Research in Science Teaching*.

b. Works “in progress”:

Kukde R. D., Shah J., Chakraborty A., Dasaraju M. (Manuscript in Preparation). *Modeling diabetes readmission risk: Addressing bias and the influence of social determinants of health*.

Moreno T. D., Carrera L. S., Kukde R. D., Ashford-Hanserd S. (Manuscript in Preparation). *Influence of community cultural wealth on undergraduate women of color in computing: A quantitative study*.

Ashford-Hanserd S., Kukde R. D., Mouton A. J., Saha A. K., Moreno T. D., Carrera L. S., Hough T. D., Garza D. R., Mackzum P. (Manuscript in Preparation). *Modified community cultural wealth as a catalyst for persistence among women and girls of color in P-16 STEM and computing education: A systematic review*.

Ashford-Hanserd S., Kukde R. D., Rosado T., Upreti S., Roundtree A. (Manuscript in Preparation). *The role of faith-based institutions in broadening STEM participation: An integrative review*.

C. Scholarly / Creative Grants and Contracts:

1. Funded Internal Grants and Contracts:

Ashford-Hanserd, Shetay Nicole (Principal Investigator) & Kukde, Ruchi Dilip (Co-Principal Investigator), Faculty Innovation Accelerator Program (FIAP) IDC Grant, Texas State University, \$1,000. (Awarded: April 2024). Grant.

D. Scholarly / Creative Fellowships, Awards, Honors:

McCoy Fellowship of Distinction, Texas State University, 2023

The Graduate College Scholarship – Business, Texas State University, 2022

Ronald J., Amy B. Lightfoot Endowed Graduate Fellowship, Texas State University, 2022–2023

Dorothy Jewell Leinneweber Graduate Fellowship, Texas State University, 2022–2023

H.C Vivian Memorial Endowment Scholarship, Texas State University, 2022–2023

Research Fellowship, Ministry of Human Resource Development, Government of India, 2012–2019

E. Scholarly / Creative Professional Development Activities Attended:

<i>Activity Type</i>	<i>Title</i>	<i>Year</i>
Conference Attendance	2025 STEM Success Conference, Texas State University	2025
Conference Attendance	2025 TXST STEM Conference, Texas State University	2025
Seminar	Research GPS: Charting Your Course Through Submitting Proposals, Division of Research, Texas State University	2025
Conference Attendance	2025 Power of an Educated Girl STEAM Conference, Georgetown Public Library, TX.	2025
Conference Attendance	ACTER Conference 2024, San Antonio, TX.	2024
Conference Attendance	Black X Conference 2024, Austin, TX.	2024
Conference Attendance	2024 Herstories Conference, Texas State University	2024
Conference Attendance	ACCEYSS Faith and Leadership Summit 2024, State Capitol, TX.	2024
Seminar	Redefining the Qualitative Researcher's Role in Era of AI and Digital Innovations, Texas State University	2024
Seminar	NSF Noyce and National STEM Teacher Corps Informational Webinar	2024
Conference Attendance	2024 TXST STEM Conference, Texas State University	2024
Seminar	Ask the Editor! Secrets to Success in Publishing Journal Articles, Faculty Development, Texas State University	2024
Conference Attendance	2024 Annual National Postdoctoral Association Conference, Seattle, WA.	2024
Seminar	Convening on Building STEM Education Capacity and Impact through HSI's and MSI's: Strategies for Research and Education Funding, Texas State University	2024
Seminar	If You Build It, They Will Come: Best Practices for Designing Research Survey Instruments, Faculty Development, Texas State University	2024
Seminar	The Grant Writer's Guide to the Galaxy: Foundations for Grant Writing, Faculty Development, Texas State University	2024
Seminar	Mastering The Art of Survey Design! Building Blocks for Effective Research, Faculty Development, Texas State University	2024
Conference Attendance	INFORMS 2023 Annual Meeting, Phoenix, AZ.	2023
Seminar	The Practice of Arts-Based Qualitative Research, Texas State University	2023
Workshop/Symposia	You, Me and IDP! Texas State University	2023

IV. SERVICE

A. Institutional

1. University:

Volunteer, Bobcat Day, Texas State University, October 2024

Organizer, Poster Session, 2025 STEM Success Conference, Texas State University, 2025

Poster Judge (volunteer), 2024 TXST STEM Conference, Texas State University, 2024

2. Department/School:

Member, BAAS Program Committee, 2025–present

Member, BAAS (Data Analytics) Program Development, 2024–present

Member, OWLS 50th Anniversary Celebration Committee, 2023–2025

Member, Prior Learning Assessment (PLA), 2023–present

B. Professional:

Reviewer, Signal, Image and Video Processing, Springer, 2024-present

Member, National Postdoctoral Association, 2023–present

Member, INFORMS, 2023–present

C. Community:

Volunteer, ACCEYSS, 2023–present

Volunteer, Dhamma Sukha Vipassana Meditation Center, 2022–present

D. Organization Memberships:

National Postdoctoral Association, 2023–present

INFORMS, 2023–present

Beta Gamma Sigma, Lifetime Member, 2023–present