

# Karthik Babu Nattamai Kannan

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## Employment and Affiliations

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Southern Methodist University, Cox School of Business – ITOM	
Assistant Professor of IT and Operations Management	8/2019-current
Faculty Affiliate, Center for Scientific Computation (CRC)	8/2019-current
Faculty Affiliate, Data Science Institute (DSI)	8/2023-current
Donna Wilhelm Research Fellow - SMU DataArts	11/2019-05/23
Maneframe III planning committee, CRC	4/2022-6/2022
Instructor of IT and Operations Management	8/2018-7/2019
National Telecommunications and Information Administration (NTIA)	
Merit Reviewer	10/2021-3/2022
Georgia Institute of Technology, Scheller College of Business – ITM	
Graduate Research Assistant	8/2012-8/2018
Tata Consultancy Services	6/2002-12/2011
Consulting: Telecom companies in the USA, The Home Depot, Johnson and Johnson, GE, Citigroup	

## Refereed Journal Publications

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1. **[Data caps] Can Improvements to Mobile Internet Service Help Address Digital Inequality? An Empirical Analysis of Educational and Overall Data Consumption-** with Eric Overby and Sri Narasimhan
  - Accepted at *Management Science* (April 2024)
  - SSRN link: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4173558](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4173558)
  - Presentations: UT-Dallas, City University of Hong Kong\*, George Mason University, University of Houston, Clemson University, Iowa State University, IDEaS Short Talks at GT\*, Conference on the Digital Economy (ISB)\*, Conference on Information Systems and Technology, Statistical Challenges in Electronic Commerce Research\*.

## Papers under review/revision

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1. **[Online Learning] The Impact of Online Learning on Digital and Non-Digital Supplemental Learning Products: A Comparative Empirical Analysis** with Wayne Taylor
  - SSRN link: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4173547](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4173547)
  - Revising for resubmission to *Management Science*
  - Presentations:
    - i. AMCIS 2024 Salt Lake City, Utah August 15-17 (scheduled).
    - ii. 2024 AMA Marketing and Public Policy Conference\*, Washington, D.C., June 6-8, 2024 (scheduled).
    - iii. Conference on Artificial Intelligence, Machine Learning, and Business Analytics in December 2023.
    - iv. MISQ Author development workshop in June 2023.
    - v. 2022 Marketing Science annual conference.
2. **[COVID Recovery] Managing Supply and Demand for the Performing Arts in the Post-pandemic New Normal (solo-authored paper)**

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\* Presented by co-authors.

- SSRN link: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3970201](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3970201)
- Revising for resubmission to *Journal of Marketing*
- Grants:
  - Received a grant of \$5,000 from Marketing Science Institute (MSI) in December 2021.
  - Data collection is supported by a special grant from the National Endowment for the Arts (NEA) to help performing arts organizations recover after the COVID-19 crisis.
- Media coverage and presentations:
  - 2023 POMS Annual Conference. Invited presentation at SMU Data Science Institute (March 2022), Auburn University (October 2021)
  - Webinar addressed to ~200 practitioners from arts organizations planned for Feb 2022
  - SMU DataArts Blogs (~2500 page views as of Dec 2023)
    - <https://www.culturaldata.org/pages/attendance-prediction/>
    - <https://culturaldata.org/pages/attendance-prediction-june2022/>
    - <https://culturaldata.org/pages/attendance-prediction-spring2022/>
- 3. **[Infrastructure Access] Leveraging Public Facilities to Improve Access to Performing Arts Facilities: An Empirical Analysis-** with Sri Narasimhan
  - SSRN link: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4335917](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4335917)
  - Revising for resubmission to *Journal of Marketing*
  - Presentations: COX ITOM brown bag seminar in May 2023, Marketing Science DSI conference @ SMU, March 2023; 2022 INFORMS annual conference. Scheduled for 2023 POMS Annual Conference.

## Working papers

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1. **[DDD] Data-Driven Decision Making in US Non-Profit Sector: A quasi-experimental analysis (solo-authored paper)**
  - Preparing to submit to *Information Systems Research*.
  - Presentations: Bloomberg Foundation (2023), POMS 2022.
2. **[Digital Programming] Does Digital Programming in the Performing Arts Industry Improve Audience Diversity?** - with Young-Woong Park, Zannie Voss, and Glenn Voss:
  - Status: Revising based on the feedback received from MISQ.

## Research Interests

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Economics of digitization and AI in education and cultural sectors  
 AI and the future of work  
 Location analytics: Retail site selection and market optimization.

## Education

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Scheller College of Business, Georgia Institute of Technology	Atlanta, GA
Ph.D. in Information Technology Management	August 2018
College of Engineering, Guindy - Anna University	Chennai, India
Bachelor of Engineering, Mechanical Engineering	1998-2002

## Methodologies

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Econometrics, natural and field experiments  
 Machine/Deep Learning and AI

## Conferences, Workshops, and Invited Presentations

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AMCIS 2024 Salt Lake City, Utah (scheduled).	August 2024
2024 AMA Marketing and Public Policy Conference, Washington, D.C (scheduled).	June 2024
IT Teaching Excellence Workshop (scheduled)	May 2024
BizAI Conference, UT Dallas	March 2024
AI, ML, and BI conference, Fox School of Business	December 2023
MISQ Reviewer development workshop	November 2023
MISQ Author development workshop	June 2023
Marketing Science DEI conference, SMU	March 2023
INFORMS Annual Conference	October 2022
Marketing Science Conference	June 2022
Production and Operations Management Conference, Virtual	April 2022
SMU Data Science Institute, university-wide seminar	March 2022
SMU Research Computing Day	March 2022
Workshop on Information Systems and Economics (WISE), Austin, TX	December 2021
ICIS Junior Faculty Consortium, Austin, TX	December 2021
Auburn University (invited seminar)	October 2021
Workshop on Information Systems and Economics (WISE), Virtual	December 2020
INFORMS Annual Meeting, Virtual	November 2020
University of Texas, Dallas (invited seminar)	February 2020
City University of Hong Kong, Hong Kong	June 2019
Conference on the Digital Economy, Indian School of Business, India	December 2018
IDEaS Short Talks and Networking Social, Georgia Tech, Atlanta	December 2018
Workshop on Information Systems and Economics (WISE), SFO, CA	December 2018
Conference on Information Systems and Technology (CIST), Phoenix, AZ	October 2018
Statistical Challenges in Electronic Commerce Research, Rotterdam School of Business, George Mason University, Fairfax, VA	June 2018
C. T. Bauer College of Business, University of Houston, Houston, TX	January 2018
College of Business, Clemson University, Clemson, SC	January 2018
Cox School of Business, Southern Methodist University, Dallas, Texas	January 2018
Ivy College of Business, Iowa State University, Iowa	October 2018
Conference on Information Systems and Technology (CIST), Houston, TX	October 2017
INFORMS Annual Meeting, Houston, TX	October 2017
Workshop on Quantitative Marketing and Structural Econometrics, St. Louis, MO	July 2017
Deep Learning Workshop, Atlanta, GA	April 2017
Diversity and Inclusion Workshop, Atlanta, GA	March 2017
Workshop on Information Systems and Economics (WISE), Dublin, Ireland	December 2016
Conference on Information Systems and Technology (CIST), Nashville, TN	November 2016
INFORMS Annual Meeting, Nashville, TN	November 2016
Production and Operations Management Conference, Orlando, FL	May 2016
Winter Conference on Business Intelligence, Snowbird, Utah	March 2016
NBER workshop on Digitization, Stanford, CA	March 2016

ISMS Marketing Science, Baltimore, MD	July 2015
NBER workshop on Digitization, Stanford, CA	March 2015
Northwestern-Duke Causal Inference Workshop, Chicago, IL	July 2014
INFORMS Annual Meeting, San Francisco	November 2014
Winter Conference on Business Intelligence, Snowbird, Utah	March 2014

## Teaching

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Instructor of record

- SMU
  - ITOM6265 – Database Design and Application Development (~100 students in 3-4 sections)
  - ITOM6214 – Advanced Decision Modeling (~40 students in 1-2 section)
- Georgia Tech
  - Business Analytics - developed and taught this new undergraduate course.
    - Fall 2014, 2015
    - Spring 2017, 2018

Teaching Assistant at Georgia Tech

- Summer 2018 – Head TA for GT Online MS Analytics course 'Data Analytics for Business' for about 500 students.
- Business Intelligence, Business Analytics, Business Programming, Introduction to MIS

## Awards and Honors

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- Nominated by students for the "Honoring Our Professors' Excellence" award in April 2023.
- C. Jackson Grayson Endowed Faculty Innovation Award (2021). This was given by Cox School of Business to recognize excellence in teaching.
- Donna Wilhelm Research Fellow - SMU DataArts from 2019-2023. This fellowship was awarded to study the impact of digitization and AI/ML in the U.S. cultural sector.
- ICIS Junior faculty consortium, Austin, TX.
- Received a grant of \$5,000 from Marketing Science Institute (MSI) in December 2021.
- Served as occupation expert for Occupational Information Network (O\*NET), U.S. Department of Labor (2021).
- Served as grant reviewer for President Joe Biden's broadband infrastructure development plan. As part of this process, I utilize my expertise in how internet connectivity impacts social and economic inequality to evaluate grant proposals for the National Telecommunications and Information Administration's (NTIA) different broadband connectivity programs: Tribal Broadband Connectivity Program and Connecting Minority Communities (CMC) Pilot Program. These programs aim to provide cost-effective, high-speed internet services to rural areas and underserved communities.
- Scholarship to attend Esri's Leadership Workshop on Location Analytics in Business (2018).
- President/Dean's Fellowship at Georgia Tech (2012).
- Served as a judge for the American Society for Quality's International Team Excellence Award, Charlotte, NC (2009).
- American Society for Quality (ASQ) certified Six Sigma Black Belt (2005).
- Certified Reliability Professional (CRP) awarded by Department of Information Technology, Ministry of Communications and Information Technology, Government of India (2006).
- Sun Certified Java Programmer (2005).

## Service

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- Session chair:
  - 2022 INFORMS Annual conference for a session on advanced location models.
  - 2017 INFORMS Annual conference for a session on social media analytics.
  - 2016 Conference on Information Systems and Technology (CIST).
- Committee:
  - Served on the search committee for the DataArts Research Director (November 2022 – Jan 2023).
  - Served as a committee member representing the Meadows School of Arts for the Data Science Cluster Hire working group (Summer of 2022).
  - Maneframe III planning committee, Center for Scientific Computation (CRC) – 2021-2022.
  - Program committee member for Pre-ICIS SIGBPS 2019 Workshop on Blockchain and Smart Contract.
- Served as an anonymous referee following journals and conferences:
  - Journals: MIS Quarterly, Management Science, Production and Operations Management, Information Systems Research, Journal of Database Management, Electronic Commerce Research.
  - Conferences: Conference on Information Systems and Technology (CIST), International Conference on Information Systems (ICIS).

## Technical Skills

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Statistical packages and tools – Stata, R, SAS, Matlab

Big Data tools – Spark, Hadoop, Hive, Pig

Programming languages – Python, Java, D3, SQL

Operating Systems – Mac OS, Unix, Windows

## Professional Affiliations

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Association of Information Systems (AIS),

Institute for Operations Research and the Management Sciences (INFORMS),

Institute of Electrical and Electronics Engineers (IEEE),

American Association for the Advancement of Science (AAAS).