Vasileios (Vasilis) Pavlopoulos

Assistant Professor in Management Science
University of Alabama in Huntsville
College of Business
Management Science Department
Phone: (256) 824-6598 | Email: vp0052@uah.edu

EDUCATION

Ph.D. in Business Administration, Operations and Management Science   **July 2023**
Washington State University, Carson College of Business, Pullman, WA, USA.

M.S. in Business Administration   **May 2022**
Washington State University, Carson College of Business, Pullman, WA, USA.

M.S. in Applied Statistics   **May 2020**
Washington State University, Carson College of Business, Pullman, WA, USA.

M.S. in Electrical and Computer Engineering (6-year joint degree; 300 ECTS)   **April 2017**
Polytechnic University of Patras, Patras, Greece.

B.S. in Electrical and Computer Engineering (6-year joint degree; 300 ECTS)   **April 2017**
Polytechnic University of Patras, Patras, Greece.

RESEARCH

Research Interests
Artificial Intelligence, Changepoint Analysis, Multivariate Analysis, Time Series, Statistical Methodologies, Machine Learning, Business Analysis, Blockchain Technology.

Refereed Journal Articles

2026
Pham H., Arwade G., Tan Y., Bhatt P., Pavlopoulos V. "Training Data Optimization for Classification via Weighted Dimensional Reduction and Adaptive Stratified Clustering for Balanced and Imbalanced Data". Journal of Classification (pending publication).

Can E., Mark W.N., Pavlopoulos V., "The Effects of Sports Betting on Casino Gambling and Lottery". Southern Economic Journal (pending publication).

2025
Pham H., Pavlopoulos V., Patnayakuni R., "The Hidden Keywords: An Algorithmic Approach to Uncovering the Value of Negative Keywords in Search Advertising". Decision Sciences Journal.

Bhatt, P., Singh, T., Pavlopoulos, V., & Pham, H. (2025). "Decoding Sentiments: Unveiling AI-Generated Content Through Sentiment Analysis and Human Evaluation". Journal of Global Information Management, 33(1).

Tan Y., Orman W., Pavlopoulos V., Hieu Pham, Ravi Patnayakuni. (2025). "Transforming Student Data into Timely Interventions: A Dynamic Bayesian Network Decision Support System". International Journal of Knowledge Management.

Pham H., Bhatt P., Pavlopoulos V., Tan Y., Patnayakuni R. "A Comparative Study of Convolutional Neural Networks and Vision Transformers for Agricultural Image Classification". Journal of Database Management.

2024
Fotopoulos S. B., Kaul A., Pavlopoulos V., & Jandhyala V. K. (2024). "Adaptive parametric change point inference under covariance structure changes". Statistical Papers, 65(5), 2887-2913.

Pham H., Tan Y., Singh T., Pavlopoulos V., & Patnayakuni R. (2024). "A multi-head attention-like feature selection approach for tabular data". Knowledge-Based Systems, 301, 112250.

Published Software
Pavlopoulos V, Pham H, Bhatt P, Tan Y, Patnayakuni R (2024). decp: Complete Change Point Analysis_. R package version 0.1.2, https://CRAN.R-project.org/package=decp.

Under Review
Pavlopoulos V., Killick R., Can E., Pham H., Bhatt P. "Forecasting Seasonal Changepoint Models utilizing Changepoint Uncertainties". Submitted to International Journal of Forecasting, 3rd round of revisions.

Vishnevskaya A., Pavlopoulos V., Borah P., Stott J., "Which Model Feels Better? A Comparison of Computational Approaches to Emotion Detection in Social Media with Imbalanced Data". Submitted to Social Sciences and Humanities Open.

Work in Progress
Pavlopoulos V., "A Statistical Method for Binary Variable Detection via Changepoint and Entropy Analysis." (Target Journal: Journal of Machine Learning Research.)

Pavlopoulos V., Bhatt P., and others, 'Decentralized Health Data: Leveraging Blockchain and NFTs for Secure, Universal Medical Record Access." (Target Journal: Information Systems Research 2025).

Pavlopoulos, V., Fotopoulos, St., "Change Point Estimation, an Evaluation Tool for Detection Algorithms." (Target Journal: Journal of Computational Statistics & Data Analysis).

Fotopoulos, St., Pavlopoulos, V., "Change Point Estimation in the Covariance Structure of Multivariate Time Series Weather Data." (Target Journal: Journal of Computational Statistics & Data Analysis).

Pavlopoulos V., Pham H., Bhatt P., Tan Y., Patnayakuni R., "decp: An R Package for Multiple Change Point Analysis of Multivariate Data for Changes in the Covariance Structure." (Targeted Journal: R-journal).

CONFERENCE LEADERSHIP AND SERVICE

Journal Refereeing:
- Invited to review for International Journal of Knowledge Management, 2026.
- Invited to review for Environmental and Ecological Statistics, 2025.
- Invited to review for European Journal of Operational Research, 2025.
- Invited to review for Decision Sciences Journal of Innovative Education, 2024.
- Invited to review for Journal of Computational and Graphical Statistics, 2024, 2025.

Conference Track Chair:
- Track Co-Chair for "Decision Support Systems (AI, ML, etc.) and Knowledge Management". 54rd Annual Conference of Northeast Decision Sciences Institute (NEDSI), March 2025, Hershey, PA, United States
- Track Chair for "Strategy, Knowledge Management and Organizational Behavior". 53rd Annual

Conference of Northeast Decision Sciences Institute (NEDSI), April 2024, Cambridge, MA, United States

Conference Refereeing:
- Northeast Decision Sciences Institute (NEDSI), 2025.
- Northeast Decision Sciences Institute (NEDSI), 2024.

Conference Committees:
- Member, Best Paper Awards Committee, Northeast Decision Sciences Institute (NEDSI), 2025.

Conference Session Chair:
- Business Issues Session, Northeast Decision Sciences Institute (NEDSI), 2024.

CONFERENCE PRESENTATIONS

Invited Talks
- Invited research presentation, International Workshop on Sequential Methodologies (IWSM 2026), American University, Washington, DC, June 1–4, 2026.
- Invited research presentation to University of California Santa Cruz, Department of Mathematics and Statistics, February 22-23, 2025.
- Invited research presentation to University of Georgia, Department Statistics, October 9-11, 2025.
- Invited research presentation to Washington State University, Department of Mathematics and Statistics, October 10, 2023.

Joint Statistical Meetings
- 2025 Joint Statistical Meetings (JSM)- Invited Topic-Contributed Presentation: "Forecasting Seasonal Changepoint Models Utilizing Changepoint Uncertainties". August 2-7, 2025, Nashville, Tennessee.

INFORMS Annual Meeting
- 2025 INFORMS Annual Meeting- Presentation of "Forecasting seasonal changepoint models utilizing changepoint uncertainties". October 26-29, 2025, Atlanta, Georgia.
- 2024 INFORMS Annual Meeting- Presentation of "Reducing Search Advertisement Spending Through a Two-Stage Term Embedding and Optimization Approach". October 20-23, 2024, Seattle, Washington.
- 2023 INFORMS Annual Meeting- Presentation of "Changes Change Point Estimation, an Evaluation Tool for Computational Detection Algorithms". October 15-18, 2023, Phoenix, Arizona.

Decision Sciences Institute Annual Conference
- 2025 DSI Annual Conference- Presentation of "Forecasting seasonal changepoint models utilizing changepoint uncertainties". Decision Sciences Institute 56th Annual Conference, November 22-24, 2025, Orlando, Florida.
- 2024 DSI Annual Conference- Presentation of "An R Package for Multiple Change Point Analysis of Multivariate Data for Changes in the Covariance Structure". Decision Sciences Institute 55th Annual Conference, November 23-25, 2024, Phoenix, Arizona.
- 2024 DSI Annual Conference- Presentation of "Decoding Sentiments: Measuring Human Interpretations of AI-Generated Content in Digital Contexts". Decision Sciences Institute 55th Annual Conference, November 23-25, 2024, Phoenix, Arizona.
- 2023 DSI Annual Conference: Presentation of "Detection and Estimation of Behavioral Changes towards Immigration Over Time within Supranational Organizations" under Organizational Behavior and Human Resource Management. Decision Sciences Institute 54th Annual Conference, November 18-20, 2023, Atlanta, Georgia.
- 2022 DSI Annual Conference: Presentation of "Adaptive Parametric Change Point Inference under Covariance Structure Changes" under the finance. Decision Sciences Institute 53rd Annual Conference, November 19-

21, 2022, Houston, Texas.

Northeast Decision Sciences Institute (NEDSI)
- 2024 NEDSI Regional Conference- Presentation of "The Effects of Sports Betting on Casino Gambling and Lottery". Presented at the Northeast DSI Regional Conference, April 4-6, 2024, Boston- Cambridge, Massachusetts.

Southeast Decision Sciences Institute (SEDSI)
- 2024 SEDSI Regional Conference- Presentation of "Enhancing Statistical Comprehension and Data Communication through Data Visualization for Business Students". Data, Analytics and Statistics Instruction (DASI) session at the Southeast DSI Regional Conference, February 21-23, 2024, Charleston, South Carolina.

Presentations in Seminar Series
Topic: Change point analysis
1. "Forecasting heterogenous data sets using a mixture of change point analysis and GARCH models. Presented at *University of Alabama in Huntsville, Faculty Research Lunch*, Spring 2024.
2. "Change point estimation and its applicability as an evaluation tool for computational algorithms." Presented at *University of Alabama in Huntsville, FARG series,* Fall 2023.
3. "Introduction to change-point: Analysis and inference". Presented at *Washington State University Research Ph.D. Peer Presentations*, Pullman, WA, 2022.
4. "Literature review of Change point Analysis". Presented at *Washington State University Research Ph.D. Peer Presentations*, Pullman, WA, 2021.
5. "Adaptive Detection of Multiple Change points in Asset Price Volatility (Lavielle and Teyssiere. 2007). Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2019.
6. "Use of Cumulative Sums of Squares for Retrospective Detection of Changes of Variances (Inclan et Tiao. 1994). Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2018.

Topic: Inventory models
1. "Incorporating quantity discounts and their inventory impacts into the centralized purchasing decision, Munson et al. 2009)". Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2019.
2. "Competition and market segmentation of the call center service supply chain (Yu et al. 2015)". Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2018.
3. "A mathematical programming model for global plant location problems: Analysis and insights, (Kouvelis et al. 2003)". Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2018.
4. "Coordinating a three-level supply chain with quantity discounts (Munson et al. 2000)". Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2017.

Topic: Queueing theory
1. "Revenue Maximization in Two-Station Tandem Queueing Systems (Wang et al. 2020). Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2021.
2. "Optimal pricing for tandem queues with finite buffers (Wang et al. 2019). Presented at *Washington State University Research Seminar Series*, Pullman, WA, 2021.

TEACHING

Teaching Interests
Artificial Intelligence, Prompt Engineering, Business Analytics, Business Statistics, Applied Probability, Applied Statistics and Statistical Theory, Systems Analysis, Design, Statistical Computing, Optimization, Logistic Management.

Courses Taught at the University of Alabama in Huntsville.
  Independent Instructor:
  - *MSC 469/569 – Visualization for Leadership***:**
    2023 Fall, Setup: In person (Course Evaluation: 4.74)
    Course Description: Advanced Data Visualization using R, Python and Tableau, Data Manipulation, Business Analytics.
  - *MSC 510 – Logistics Management***:**
    2024 Fall Setup: Online asynchronous (Course Evaluation: 3.73)
    Course Description: An analysis of transportation and logistical services to include customer service, distribution operations, purchasing, order processing, facility design and operations, carrier selection, vehicle routing, and transportation costs.
  - *IS 210 – Introduction to Computer Programming in Business***:**
    2025 Spring, Setup: In person (Course Evaluation: 4.84)
    2024 Fall, Setup: In person (Course Evaluation: 4.46)
    2023 Spring, Setup: In person (Course Evaluation: 4.71)
    2023 Fall, Setup: In person (Course Evaluation: 4.63)
    Course Description: Basics of Programming with Python: Syntax, variables, data types, and control structures, Data Manipulation, Business Problem-Solving.
  - *MSC 615 – Decision Modelling*
    Spring 2025, Setup: In person (Course Evaluation: 4.27)
    Spring 2024, Setup: In person (Course Evaluation: 4.52)

Courses Taught at Washington State University
  Independent Instructor:
  - *MGTOP 215 – Business Statistics***:**
    Course Description: Data visualization and descriptive statistical measures, basic probability concepts, probability distribution, estimation, simple statistical inference, and linear regression as applied to business and economics.
    Fall 2022 (full semester) Setup: In person (Course Evaluation: 4.4)
    Summer 2021, Setup: In person (Course Evaluation: 4.8)
    Summer 2020, Setup: In person (Course Evaluation: 4.4).
    Summer 2019, Setup: In person (Course Evaluation: NA)

  Lab Instructor:
  - *MGTOP 215 – Business Statistics***:**
    2023 Spring, 2022 Spring, 2020 Spring, 2019 Fall, 2019 Spring, 2018 Fall, 2018 Spring, 2017 Fall.
    Taught three weekly two-hour statistics labs using statistical software for data analysis and inference.

  Teaching Assistant:
  - *MGTOP 596 – Doctoral Topics***:**
    2021 Fall
    Course Description: Ph.D. level class, queuing theory, supply chain management, optimization.
  - *MGTOP 596 – Mathematical Models for Revenue Management***:**
    2022 Fall
    Course Description: Ph.D. level class, Mathematical Models for Revenue Management is a 3-credit course for doctoral students in Operations and Management Science at WSU. It involves math review of probability and convex analysis, the Poisson process, discrete choice models, nonlinear optimization, dynamic programming, and presentations of RM-related papers by students.
  - *MGTOP 516 – Time Series Analysis***:**
    2022 Fall
    Course Description: Ph.D. level class, ARCH-GARCH models, statistical programming with SAS and R, covariance structure models, moving average, autocorrelation, data diagnostics analysis.
  - *MGTOP 519 – Applied Multivariate Analysis***:**

2021 Fall
Course Description: Graduate level class, multivariate data organization, matrix algebra, geometry, multivariate distributions, sampling distributions, diagnostics, transformations, principal components, factor models, classification, clustering, and data mining.

- *MGTOP 215 – Business Statistics*:
2022 Spring, 2020 Spring, 2019 Fall, 2019 Spring, 2018 Fall, 2018 Spring, 2017 Fall.

PROFESSIONAL & VOLUNTEER EXPERIENCE

Business Analyst:
- Business Analyst (Volunteer), Blue Summit Supplies, 2024 – Current, Huntsville, AL, United States.
- Business Analyst, Lite-Check LLC**.,** May 2022- August 2022, Spokane, WA, United States.

EDITORIAL AND PROFESSIONAL ACTIVITIES

Editorial Board Member:
OR/MS Tomorrow, August 2022 – 2024, United States
OR/MS Tomorrow is the student membership magazine for INFORMS (The Institute for Operations Research and the Management Sciences).

Published Articles:
Pavlopoulos V., Vishnevskaya A. "Going through the Last Semester and Procrastination". Published in ORMS TOMORROW, May 2023 Issue.
Pavlopoulos V., Vahdat K., Pérez-Guzmán S. "What Nobody Likes to Discuss, But We Are All Starting to Care About: Mental Health in Graduate School". Published in ORMS TOMORROW, November 2022 Issue.

GRANTS

- OVPR&ED's New Faculty Research award, $10,000, funded by University of Alabama in Huntsville from the OVPRED Internal Research and Development Awards, 2024-2025.
- UofM Next Generation Supply Chain Technologies and Innovation Challenge Grant, $15,000, University of Memphis, 2024-2025.
Yafang Li (PI), Huigang Liang (Co-PI), Vasileios Pavlopoulos (Co-PI): Enhancing Machine Learning in Supply Chain Demand Forecasting Through Change Point Analysis, May 2024 - Dec 2025, University of Memphis.
- Community of Research Scholars (CORS) Grant, $2500: AI-Driven Innovation in Software Design: Empowering Developers with Advanced Tools, Dec 2024 - August 2025, University of Memphis.
Yafang Li (PI), Pavankumar Mulgund (Co-PI), Punya Chatterjee (Co-PI), Han Yu (Co-PI), Vasileios Pavlopoulos (Co-PI).
- Community of Research Scholars (CORS) Grant, $2,500: The Future of Software Design Work: Empowering Software Designers for a Seamless Transition from 2D to the Metaverse funded by University of Memphis, 2023-2024.
Yafang Li (PI), Pavankumar Mulgund (Co-PI), Han Yu (Co-PI), Vasileios Pavlopoulos (Co-PI).
- Schroeder Ruth & Fred Scholarship, $2,500, funded by Carson College of Business, 2018-2019.

HONORS & AWARDS

DSI 2023 Early Career Faculty Development Consortium Fellow, University of Alabama in Huntsville
DSI 2022 Doctoral Consortium Fellow, WSU
Graduate Assistant Fellowship, WSU (2017)
Department Doctoral Students Research Fellowship, WSU
GPSA Travel & Registration Grants, WSU (2017-2022)
Carson College First Year Summer Research Support, WSU (2018)
Greek National Judo Tournament (4 titles)
Past member of the Greek national team in Judo: 3rd placement in Balkan tournament (4/2016).
High School Degree 19.92/20 (cumulative for the last three years), (9/2004 - 2/2010).
First Student Award for the last three years of high school (9/2007 - 5/2010)
Diploma of a Skipper (11/2016)
Sorbonne B2 French Language Certificate

COMPUTING SKILLS

Programming:
competent with: R, SAS, LATEX, Python, Tableau
fluent with: VBA, PLC, LABVIEW, MIPS Assembly, MATLAB, SQL Server, Solidity

LANGUAGES

English (fluent), Greek (native), French (basic)

PROFESSIONAL MEMBERSHIP

Decision Sciences Institute, INFORMS