

Vasileios (Vasilis) Pavlopoulos

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University of Alabama in Huntsville
College of Business
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EDUCATION

Ph.D. in Business Administration, Operations and Management Science Washington State University, Carson College of Business, Pullman, WA, USA.	July 2023
M.S. in Business Administration Washington State University, Carson College of Business, Pullman, WA, USA.	May 2022
M.S. in Applied Statistics Washington State University, Carson College of Business, Pullman, WA, USA.	May 2020
M.S. in Electrical and Computer Engineering (6-year joint degree; 300 ECTS) Polytechnic University of Patras, Patras, Greece.	April 2017
B.S. in Electrical and Computer Engineering (6-year joint degree; 300 ECTS) Polytechnic University of Patras, Patras, Greece.	April 2017

RESEARCH

Research Interests

Change-Point Analysis, Multivariate Analysis, Time Series, Statistical Methodologies, Queueing Theory, Supply Chain, Data Analysis, Business Analysis, Regression.

Refereed Journal Articles

Fotopoulos, St., Kaul A., **Pavlopoulos, V.**, St., Jandhyala, V. K., “Adaptive Parametric Change Point Inference under Covariance Structure Changes.” *The Statistical Papers*.

Under Review Journal Articles

Can E., Mark W.N., **Pavlopoulos V.**, “The Effects of Sports Betting on Casino Gambling and Lottery”, under review at *Southern Economic Journal*.

Pham H., Bhatt P., **Pavlopoulos V.**, Tan Y., Patnayakuni R., “A Comparative Study of Convolutional Neural Networks and Vision Transformers for Agricultural Image Classification”, under review at *Knowledge-Based Systems*.

Pham H., **Pavlopoulos V.**, Patnayakuni R., “The Hidden Keywords: An Algorithmic Approach to Uncovering the Value of Negative Keywords in Search Advertising”, under review at *Decision Sciences Journal*.

Pham H., Tan Y., Singh T., **Pavlopoulos V.**, Patnayakuni R., “A Multi-Head Attention-Like Feature Selection Approach for Tabular Data”, under review at *Knowledge-Based Systems*.

Working Paper

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

Pavlopoulos V., Pham H., Bhatt P., Tan Y., Patnayakuni R., “deep: An R Package for Multiple Change Point Analysis of Multivariate Data for Changes in the Covariance Structure.” (Target at the Journal of Statistical Software)

Can E., Mark W.N., **Pavlopoulos V.**, “The Effects of Online Casino Gambling on Onsite Casino Gambling: Evidence from the United States.” (Target at the Southern Economics Journal)

Pavlopoulos V., Vishnevskaya A., “Detection and Estimation of Behavioral Changes towards Immigration Over Time within Supranational Organizations.” (DSI 2023 Conference, Target at Communications in Statistics: Theory and Methods)

Pavlopoulos V., Fotopoulos St., “Parametric Change Point Estimation for Portfolios of Multivariate Stock Market Time Series Data.” (Target at the Journal of Computational Statistics & Data Analysis)

Singh T., **Pavlopoulos V.**, Bhatt P., “Decoding Sentiments: Measuring Human Interpretations of AI-Generated Content in Digital Contexts.” (Target at ACM Transactions on Computer-Human Interaction)

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

Pavlopoulos V., “Change Point Estimation, an Evaluation Tool for Computational Detection Algorithms.” (Target at the Statistical Papers, presenting in INFORMS 2023)

PRESENTATIONS

INFORMS Annual Meeting

- 2023 INFORS Annual Meeting: Presentation of “Changes Change Point Estimation, an Evaluation Tool for Computational Detection Algorithms”. Inform's Annual Meeting, October 15-18, 2023, Phoenix, Arizona.

Decision Sciences Institute Annual Conference

- 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.
- 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.

Invited Talks

1. Invited research presentation to Washington State University, Department of Mathematics and Statistics, October 10, 2023.

Presentations

Topic: Change point analysis

1. “Forecasting heterogeneous 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

Business Analytics, Business Statistics, Applied Probability, Applied Statistics and Statistical Theory, Systems Analysis, Design, Statistical Computing.

Courses Taught at the University of Alabama in Huntsville

Independent Instructor:

- **MSC 469/569 – Visualization for Leadership:**
2023 Fall (Course Evaluation: 4.74)
Course Description: Advanced Data Visualization using R, Python and Tableau, Data Manipulation, Business Analytics.
- **IS 210 – Introduction to Computer Programming in Business:**
2023 Fall (Course Evaluation: 4.71)
2023 Fall (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 2024 (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): Enrollment: 114; Course Evaluation: 4.4/5

Summer 2021: Enrollment: 18; Course Evaluation: 4.8/5.0.

Summer 2020: Enrollment: 21; Course Evaluation: 4.4/5.0.

Summer 2019: Enrollment: NA; 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 & VOLUNTEERING EXPERIENCE

Business Analyst:

Lite-Check LLC., May 2022- August 2022, Spokane, WA, United States

Responsibilities: Define business processes; Perform regular data audits; Understand and explain the industry trends and competitors' business strategies; Work with the CEO and VPs to analyze, discuss, and design custom business models; Data analysis and modeling; Work with customers.

SERVICES

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).

Reviewer:

Invited to review for Decision Sciences Journal of Innovative Education, May 2024.

Published Professional 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.

Conference Track Chair:

Track Chair for 53rd Annual Conference of Northeast Decision Sciences Institute (NEDSI), April 2024, Cambridge, Massachusetts, United States

Conference Session Chair:

Session Chair for Annual Conference of Decision Sciences Institute (DSI) mini-tracks, November 2022, Houston, Texas, United States

GRANT

UofM Next Generation Supply Chain Technologies and Innovation Challenge Grant, \$15,000, University of Memphis 2022-2023· 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. [\$15000].

Community of Research Scholars (CORS) Grant, \$2,500, funded by University of Memphis 2023-2024

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-Present)

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

LANGUAGES

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

PROFESSIONAL MEMBERSHIP

Decision Sciences Institute, INFORMS