

# Vasileios (Vasilis) Pavlopoulos

University of Alabama in Huntsville

College of Business

Management Science Department

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## EDUCATION

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

**Dissertation:** “*Adaptive Parametric Change Point Inference Under Covariance Structure Changes.*”

**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.

- Specialization: Automatic Control Systems
- Thesis: “*Intelligent mathematics for decision support systems: theory and examples in energy and in medicine.*”

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

- Relevant Coursework:  
Intro to Telecommunications, Analogue and Digital Control, Industrial Electronics, Digital Communications, Networks and Circuits, Microwave Technology, Internet and Applications, Fuzzy Cognitive Maps

## RESEARCH

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### Research Interests

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

### Under Review

Fotopoulos, St., **Pavlopoulos, V.**, St., Jandhyala, V. K., “Adaptive Parametric Change Point Inference under Covariance Structure Changes.” 1st round Revise and Resubmit at the Statistical Papers.

### Working Paper

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

**Pavlopoulos, V.**, Vishnevskaya, A., “Detection and Estimation of Behavioral Changes towards Immigration Over Time within Supranational Organizations.” (DSI 2023 Conference)

**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)

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**

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### **Decision Sciences Institute Conference 2022**

- Presentation of “Adaptive Parametric Change Point Inference under Covariance Structure Changes” under the finance. Decision Sciences Institute 53<sup>rd</sup> Annual Conference, November 19-21, 2022, Houston, Texas.

### **Topic: Change point analysis**

1. “Introduction to change-point: Analysis and inference”. Presented at *Washington State University Research Ph.D. Peer Presentations*, Pullman, WA, 2022.
2. “Literature review of Change-point Analysis”. Presented at *Washington State University Research Ph.D. Peer Presentations*, Pullman, WA, 2021.
3. “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.
4. “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

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### Teaching Interests

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

## TEACHING EXPERIENCE

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### INDEPENDENT INSTRUCTOR:

- **MSC 469/569 – Visualization for Leadership** (University of Alabama in Huntsville):  
2023 Fall  
Course Description: Advanced Data Visualization using R, Python and Tableau, Data Manipulation, Business Analytics.
- **IS 210 – Introduction to Computer Programming in Business** (University of Alabama in Huntsville):  
2023 Fall  
Course Description: Basics of Programming with Python: Syntax, variables, data types, and control structures, Data Manipulation, Business Problem-Solving.
- **MGTOP 215 – Business Statistics** (Washington State University):  
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.

### SCHEDULED TO TEACH:

- **MSC 615 – Decision Modelling** (University of Alabama in Huntsville) Spring 2024

### LAB INSTRUCTOR:

- **MGTOP 215 – Business Statistics** (Washington State University):  
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** (Washington State University):  
2021 Fall  
Course Description: Ph.D. level class, queuing theory, supply chain management, optimization.
- **MGTOP 596 – Mathematical Models for Revenue Management** (Washington State University):  
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** (Washington State University):  
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** (Washington State University):  
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** (Washington State University):  
2022 Spring, 2020 Spring, 2019 Fall, 2019 Spring, 2018 Fall, 2018 Spring, 2017 Fall.

## PROFESSIONAL & VOLUNTEERING EXPERIENCE

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### 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.

### 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.

## SERVICES

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### Editorial Board Member:

**OR/MS Tomorrow**, August 2022 – present, United States

OR/MS Tomorrow is the student membership magazine for INFORMS (The Institute for Operations Research and the Management Sciences).

### Session Chair:

Session Chair for DSI mini-tracks, November 2022, Houston, Texas, United States

Finance & Economics: Financial Modelling for Decision Making

## HONORS & AWARDS

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- DSI 2022 Doctoral Consortium, 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)
- Grants: Schroeder Ruth & Fred Scholarship (\$2,500)
- 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**

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- **Programming:**

competent with: R, SAS, LATEX, Python

fluent with: VBA, PLC, LABVIEW, MIPS Assembly, Tableau, MATLAB, SQL Server

## **LANGUAGES**

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

## **PROFESSIONAL MEMBERSHIP**

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Decision Sciences Institute, INFORMS