Cheryl P. Edelmann
Senior Lecturer
University of Dayton

Management Information Systems, Operations & Supply Chain Management, Business Analytics
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Education:　　　**Master of Science in Statistics,** 1994
Miami University
Graduated *cum laude*
Graduate Assistantship
* Honored with Graduate Student Effective Teacher Award, 1994

Bachelor of Science in Mathematics, 1992
University of Dayton
Minors: Computer Science, Religious Studies
Graduated *magna cum laude*
* Recipient of University of Dayton President's Scholarship

Academic Experience:

University of Dayton
　Department of MIS, Operations & Supply Chain Management, and Business Analytics
　　Senior Lecturer　　　August 2021 to Present
　　Lecturer　　　　　　August 2013 – August 2021

- Teach introductory statistics (DSC 210 and DSC 211). Topics covered include probability theory, probability distributions, sampling distributions, one-sample inferential statistics, hypothesis testing for one and two populations, design of experiments/analysis of variance, simple linear regression, and multiple regression.

- Course coordinator for DSC 211 from Fall 2016 through Spring 2023. Course coordinator for DSC 210 from Fall 2016 to present.

- Taught MBA 611 (Statistical Analysis for Business Decisions) in the Summer of 2020 to students in the MBAN (Master of Business Analytics) program. This course is an introduction to descriptive and inferential statistics for MBA students. The overall purpose is for students to develop skills in (1) describing/summarizing sample data sets, (2) using probability distributions, (3) drawing conclusions about the properties of large groups when only sample information is available, and (4) investigating relationships among several properties based on a sample of those properties.

- Demonstrated ability to teach effectively in fully online, hybrid, and in-person modalities.

University of Dayton
  Department of MIS, Operations Management, and Decision Sciences
    Adjunct Faculty   August 2011 to May 2013

- Taught introductory statistics (DSC 210) for Business majors. Topics covered included descriptive statistics, probability theory, probability distributions, sampling distributions, and an introduction to one-sample inferential statistics. This course was taught using Excel as the primary technology for both descriptive and inferential statistics.

  Department of Mathematics
    Adjunct Faculty   August 1999 to December 2011

- Taught introductory statistics (MTH 207). Topics covered included descriptive statistics, probability distributions, sampling distributions, estimation, and hypothesis testing for single population problems.

Edison State Community College
    Adjunct Faculty   January 1996 to May 1996

- Taught a college algebra course with topics including functions, polynomial equations, exponential and logarithmic relationships, systems of equations and inequalities, and conic sections.

Miami University
    Instructor   August 1994 to May 1995

- Taught 12 credit hours in statistics per semester consisting of two sections of STA 368 (Introduction to Statistics for Engineering Students) and one section of STA 261.S (Introduction to Statistics for Social Science Majors).

Professional Experience:

Research   **Air Force Institute of Technology**
Assistant   April 2013 to June 2017

- (August 2013- June 2017) Worked on a project involving the classification accuracy of tests performed in sequence. In order to find the thresholds of each test in the sequence that results in maximum correct classification, data must be evaluated at each possible threshold. There may be efficiencies gained by structuring the sequence of tests into a classification tree. Formulas were derived for correct classification and comparisons made between the sequences and classification trees under various rules. This project also involved simulating large amounts of data to demonstrate the uses and biases of this technique. Using the trees will allow for more efficient estimates and sequence classification tests in order to improve performance and accuracy of the sequence.

- (April 2013 – August 2014) Supported research that involved conducting and developing statistical methods related to the emerging technology for integrated structural health monitoring (ISHM) systems. ISHM is essential for the Air Force to sustain their air vehicles. The ISHM process determines system-level health status based on combined assessments of various subsystem conditions and, if necessary, interacts with the Vehicle Management System (VMS) to perform real-time trajectory and mission re-planning. In order to bring ISHM to fruition, real-time architecting with advanced reasoning needs to be developed.

  This work branched both information fusion decision criteria along with diagnostic and prognostic modeling. Focused on the modeling side, the next generation of regression models was sought to aid the prognostic capability of the ISHM system by accurately predicting current damage status, and essentially given potential environmental constraints, predicting time to structural failure.

Statistical Consultant	**Cheryl P. Edelmann (self-employed)** August 2004 to August 2005 and November 2000 to April 2001

- Completed a statistical analysis for the Dayton Power and Light Company to determine optimal line clearance efforts necessary to maintain strong system reliability. This project involved using regression analysis as well as time series modeling to predict future number of outages based on current line clearance operations and weather-related factors. In 2004-2005, provided updates to the estimates using the most recent data available.

Business Analyst	**Dayton Power & Light Company** May 1996 to March 1999

- Developed Visual Basic code in Microsoft Access to implement a new system to process outage data using various algorithms and information sources. Enhanced original program to store dynamic electrical system structure for increased accuracy of reporting. This tool has saved company employees countless hours of research which would have been necessary to compile and report the information.

- Created and maintained several large databases in Microsoft Access including outage data for the entire company. These databases included advanced custom queries designed to meet specific data processing needs.

- Provided statistical support to various departments by performing data analysis and furnishing recommendations for process improvements. This included developing Dayton Power and Light's procedure for using statistically appropriate sample sizes in an annual gas meter testing program.

- Used statistical methods to predict equipment failures using historical data.

| **Statistical** | **Procter and Gamble**, Cincinnati, Ohio |
| **Consultant** | June 1995 to August 1995 |

- Developed a SAS program to globally standardize the statistical analysis of stability studies for new and marketed drug entities.

Service Activities:

Common Academic Program (CAP) Committee (August 2021 to present)
Marianist Educational Associate (May 2019 to present)
Undergraduate Curriculum and Assurance of Learning Committee (August 2018 to May 2022)
Vocation Implementation Team – First Year Integration (November 2018 to present)
Advisory Board for the University Professor of Faith and Culture (August 2017 to present)
Member, Department Faculty Search Committee (December 2023 to present)
Member, Department Faculty Search Committee (August 2021 to December 2021)
Member, SBA Lecturer Promotion Policy Committee (February 2019 to May 2019)
Catholic and Marianist Identity Committee (August 2014 to August 2018)

Chair: Catholic and Marianist Identity Committee (September 2016 to August 2018)

SBA Faculty Representative:
TAGS (Teaching A Global Student community) committee (Oct. 2013 to August 2018)

Faculty Brother: Delta Sigma Pi Professional Business Fraternity (April 2017 to present)

Conference Presentations: (presented by lead author)

Schubert Kabban, C. M., Lin, B., Bhuiyan, Md. Y., Edelmann, C. P., and Giurgiutiu, V., "Sensitivity analysis of uncertainty evaluation in the design of Structural Health Monitoring Systems," *International Workshop on Structural Health Monitoring (IWSHM)* 2017, Stanford, CA, 12-14 September 2017.

King, A.S., Schubert, C.M., Edelmann, C.P., Derriso, M. An Evaluation of Joint Models Using Different Feature Extraction Metrics for Structural Health Monitoring (SHM) of Aircraft. *Interface Conference on Applied Statistics*, Washington D.C., 10-12 Dec 2013.

Professional Memberships: American Statistical Association