

Curriculum Vitae

DARWIN J. DAVIS

February 1, 2015

Office Address:

Alfred Lerner College of Business & Economics
University of Delaware
Newark, DE 19716
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EDUCATION

INDIANA UNIVERSITY, Bloomington, Indiana
Ph.D. in Operations Management with minor in Decision Sciences
Graduated June, 1996

UNIVERSITY OF DELAWARE, Newark, Delaware
M.B.A.
Graduated June, 1991

UTAH STATE UNIVERSITY, Logan, Utah
B.A. in Mathematics
Graduated June, 1989

RESEARCH INTERESTS

Quality Control
Constrained Optimization
Dual Resource Constrained Systems
Supply Chain Management
Simulation Modeling

RESEARCH ACTIVITY

Peer-Reviewed Journal Publications:

Saniga, Erwin M., Davis, Darwin J., Faraz, Alireza, McWilliams, Thomas P., and Lucas, James M., "Characteristics of Economically Designed CUSUM and Xbar Control Charts," forthcoming in *Frontiers in Statistical Quality Control*.

Saniga, Erwin M., Lucas, James M., Davis, Darwin J., and McWilliams, Thomas P. (2012). "Economic Control Chart Policies for Monitoring Variables when there are Two Components of Variance," *Frontiers in Statistical Quality Control*, Vol. 10, pp. 85-95.

Saniga, Erwin M., Davis, Darwin J., and Lucas, James M. (2009), "Using Shewhart and CUSUM Control Charts for Diagnosis with Count Data in a Vendor Certification Study," *Journal of Quality Technology*, Vol. 41, No. 3, pp. 217-227.

Davis, Darwin J., Kher, Hemant V., and Wagner, Bret J. (2009), "Influence of Workload Imbalances on the Need for Worker Flexibility," *Computers and Industrial Engineering*, Vol 57, pp. 319-329.

Reprint: The following article appears as a reprint in the *Handbook of Military Industrial Engineering*, Adedeji B. Badiru and Marlin U. Thomas, editors, CRC Press: 2009.

Jaber, Mohamad Y., Kher, Hemant V., and Davis, Darwin J. (2003). "Countering Forgetting Through Training and Deployment," *International Journal of Production Economics*, Vol. 85, No. 1, pp. 33-46.

Lucas, James M., Davis, Darwin J., and Saniga, Erwin M. (2006). "Detecting Improvement with Shewhart Attribute Control Charts When the Lower Control Limit is Zero," *IIE Transactions*, Vol. 38, No. 8, pp. 659-669. ***IIE Transactions Award: 2008 Best Paper in Quality and Reliability Engineering***

Saniga, Erwin M., McWilliams, Thomas P., Davis, Darwin J., and Lucas, James M. (2006). "Economic Control Chart Policies for Monitoring Variables," *International Journal of Productivity and Quality Management*, Vol. 1, Nos. 1/2, pp. 116-138.

Saniga, Erwin M., McWilliams, Thomas P., Davis, Darwin J. and Lucas, James M. (2005). "Economic Advantages of CUSUM Control Charts for Variables," *Frontiers in Statistical Quality Control*, Vol. 8.

Saniga, Erwin M., Davis, Darwin J., and Lucas, James M. (2004). "Statistical Design of Attribute Charts for Monitoring and Continuous Improvement when Count Levels are Low," *Frontiers in Statistical Quality Control*, Vol. 7.

Jaber, Mohamad Y., Kher, Hemant V., and Davis, Darwin J. (2003). "Countering Forgetting Through Training and Deployment," *International Journal of Production Economics*, Vol. 85, No. 1, pp. 33-46.

Wagner, Bret J., Davis, Darwin J., and Kher, Hemant V. (2002). "The Production of Several Items in a Single Facility with Linearly Changing Demand Rates," *Decision Sciences*, Vol. 33, No. 3, pp. 317-346.

Wagner, Bret J. and Davis, Darwin J. (2002). "A Search Heuristic for the Sequence-Dependent Economic Lot Scheduling Problem," *European Journal of Operational Research*, Vol. 141, No. 1, pp. 133-146.

McWilliams, Thomas P., Saniga, Erwin M. and Davis, Darwin J. (2001). "On the Design of Single Sample Acceptance Sampling Plans," *Economic Quality Control*, Vol. 16, No 2, pp. 193-198.

Wagner, Bret J. and Davis, Darwin J. (2001). "Discrete Sequential Search with Group Activities," *Decision Sciences*, Vol. 32, No. 4, pp. 557-573.

McWilliams, Thomas P., Saniga, Erwin M. and Davis, Darwin J. (2001), "Economic-Statistical Design of \bar{X} and R Charts or \bar{X} and S Charts," *Journal of Quality Technology*, Vol. 33, No. 2, pp. 234-241.

Davis, Darwin J. and Mabert, Vincent A. (2000), "Order Dispatching and Labor Assignment in Cellular Manufacturing Systems," *Decision Sciences*, Vol. 31, No. 4, pp. 745-771.

Saniga, Erwin M., Davis, Darwin J. and McWilliams, Thomas P. (1995), "Economic, Statistical and Economic/Statistical Design of Attribute Charts," *Journal of Quality Technology*, Vol. 27, No. 1, pp. 56-73.

Proceedings / Presentations:

Saniga, Erwin M., Davis, Darwin J., Faraz, Alireza, McWilliams, Thomas P., and Lucas, James M. (2013), "Characteristics of Economically Designed CUSUM and Xbar Control Charts," presented at the XIth International Workshop on Intelligent Statistical Quality Control in Sydney, Australia, August 20-23, 2013.

Davis, Darwin J., and Anzilotti, Kert F. (2013), "A Preliminary Investigation of Work Management Policies for Radiology Report Editing." Presented at the Twenty-fourth Annual Conference of the Production & Operations Management Society, Denver, Colorado, May 3–6, 2013.

- Davis, Darwin J., Saniga, Erwin M., McWilliams, Thomas P., and Lucas, James M. (2011), "When to Use a CUSUM for Counts & Design of CUSUMs for Counts," presented at the Fall Technical Conference of the American Statistical Association and the American Society for Quality in Kansas City, Missouri.
- Davis, Darwin J., Saniga, Erwin M., McWilliams, Thomas P., and Lucas, James M. (2011), "When to Use a CUSUM for Counts & Design of CUSUMs for Counts," invited presentation at the *National Quality Month Statistical Symposium: Partnering Quality and Statistics* sponsored by the American Society for Quality and the Engineering Division of Penn State Great Valley on the campus of Penn State Great Valley, Pennsylvania, October 7, 2011.
- Saniga, Erwin M., Lucas, James M., Davis, Darwin J., and McWilliams, Thomas P. (2010), "Economic Control Chart Policies for Monitoring Variables When There Are Two Components of Variance." *Proceedings of the XVIth International Workshop on Intelligent Statistical Quality Control*, Seattle, Washington, August 18-20, 2010, pp. 185-195.
- Lucas, James M., Davis, Darwin J., and Saniga, Erwin M. "Detecting Improvement with Shewhart Attribute Control Charts When the Lower Control Limit is Zero," *IIE Transactions*, 2006, Vol. 38, No. 8, pp. 659-669, invited presentations:
- Institute for Operations Research and The Management Sciences, Washington DC (October 12, 2008) in connection with the *IIE Transactions Award: 2008 Best Paper in Quality and Reliability Engineering* for the paper published in *IIE Transactions*. (Presented by Saniga)
 - IIE Annual Conference and Expo 2008 in Vancouver, British Columbia, Canada (May 18, 2008) in connection with the *IIE Transactions Award: 2008 Best Paper in Quality and Reliability Engineering* for the paper published in *IIE Transactions*. (Presented by Davis)
 - George Washington University Statistics Department Seminar (May 2, 2008). (Presented by Lucas)
- Davis, Darwin J. and Kher, Hemant V. (2007), "Short Life Cycles and Supply Chain Responsiveness." Presented at the Eighteenth Annual Conference of the Production & Operations Management Society May 4 – May 7, 2007, Dallas, TX.
- Davis, Darwin J. and Kher, Hemant V. (2006), "Design for Supply Chain Responsiveness." Presented at the Seventeenth Annual Conference of the Production & Operations Management Society April 28 - May 1, 2006, Boston, MA.
- Saniga, Erwin M., Davis, Darwin J., and Lucas, James M. (2006), "CUSUMS for Count Data and Some Extensions," invited presentation at the Decision Sciences Colloquium Series, Drexel University, Philadelphia, PA, April 10, 2006.

- Saniga, Erwin M., McWilliams, Thomas P., Davis, Darwin J. and Lucas, James M. (2004), "Economic advantages of CUSUM Control Charts for Variables," *Proceedings of the Xth International Workshop on Intelligent Statistical Quality Control*, Polish Academy of Sciences, Warsaw, Poland.
- Saniga, Erwin M., Davis, Darwin J., and Lucas, James M., "Using Shewhart and CUSUM Control Charts for Diagnosis with Count Data in a Vendor Certification Study," invited presentations:
- University of Delaware Department of Business Administration Research Seminar Series (March 29, 2004).
 - Baltimore Section of the American Society for Quality (January 13, 2004).
 - Free University of Berlin, Institute for Statistics and Mathematical Economics Seminar Series (October 30, 2003).
- Saniga, Erwin M., Lucas, James M., Davis, Darwin J. (2002), "A Comparison of Shewhart and CUSUM Methods for Diagnosis in a Vendor Certification Study," presented at the Fall Technical Conference of the American Statistical Association and the American Society for Quality in Philadelphia, Pennsylvania.
- Saniga, Erwin M., Davis, Darwin J., and Lucas, James M. (2001), "Statistical Design of Attribute Charts for Monitoring and Continuous Improvement When Count Levels are Small," *Proceedings of the VIIth International Workshop on Intelligent Statistical Quality Control*, Waterloo, Canada.
- Jaber, Mohamad Y., Kher, Hemant V., and Davis, Darwin J. (2001), "Worker Training in the Presence of Learning and Forgetting," *Proceedings of the 5th International Conference on Industrial Engineering and Production Management*, Quebec, Canada, Vol. 1, pp. 101-111.
- Kher, Hemant V., Davis, Darwin J., and Wagner, Bret J. (2001), "Worker Flexibility and Staffing Levels in the Presence of Workload Imbalances," *DSI Conference Proceedings*.
- Lucas, James M., Davis, Darwin J., and Saniga, Erwin M. (2000), "Detecting Quality Improvement When the Lower Shewhart Control Chart Limit is Negative," presented at the Fall Technical Conference of the American Statistical Association and the American Society for Quality in Minneapolis, Minnesota.
- Wagner, Bret J. and Davis, Darwin J. (1999), "Sequencing Process Diagnostics to Minimize the Expected Problem Detection Time," *International DSI Conference Proceedings*.
- Davis, Darwin J. and Mabert, Vincent A. (1996), "Resource Management in Linked-Cell Manufacturing Systems," *DSI Conference Proceedings*.

Davis, Darwin J. and Mabert, Vincent A. (1994), "Resource Management in Linked-Cell Manufacturing Systems: Preliminary Investigation," presented at the DSI Conference in Honolulu, Hawaii.

Published Teaching Materials:

"Find-It-Fast Files," a case in experimental design for quality improvement, with associated teaching materials, written with Vincent A. Mabert, published in *Cases in Total Quality Management*, Jay H. Heizer and Jay Nathan, editors, South-Western College Publishing: 1998.

AWARDS & GRANTS

IIE Transactions Award: 2008 Best Paper in Quality and Reliability Engineering for Lucas, James M., Davis, Darwin J., and Saniga, Erwin M. (2006). "Detecting Improvement with Shewhart Attribute Control Charts When the Lower Control Limit is Zero," *IIE Transactions*, Vol. 38, No. 8, pp. 659-669.

Listed in *Marquis Who's Who in Finance and Business*:
35th Edition, 2006-2007
36th Edition, 2008-2009

Listed in *Marquis Who's Who in American Education*:
7th Edition, 2006-2007
8th Edition 2007-2008

Listed in *Marquis Who's Who in America*:
59th Edition, 2004
60th Edition, 2006
65th Edition, 2011

Nominated for the "2010 MBA Teaching Award," Spring 2010.

Nominated for the "2008 MBA Teaching Award," Spring 2008.

Nominated for a University "Excellence in Teaching Award," Spring 2005.

General University Research Grant for research on Flextime Schedules in Manufacturing Settings, June 2003 - May 2004.

Teaching Excellence, Honorable Mention, awarded by the EMBA Class of 2003, March 2003.

University of Delaware, Department of Business Administration Summer Research Grant, 2002.

Executive MBA Curriculum Grant for the proposal titled: Using Computer Simulation for Integrating Business Functions in the EMBA Curriculum, Summer 2000.

General University Research Grant for research on Quality Control, June 1998 - May 1999.

University of Delaware Summer Research Grants, 1996 & 1997.

Operations Management Outstanding Doctoral Student Instructor Award, Indiana University School of Business, 1993-94.

ACADEMIC POSITIONS

Associate Professor, UNIVERSITY OF DELAWARE	Sept 2003 – present
Assistant Professor, UNIVERSITY OF DELAWARE	Sept 1996 – Aug 2003
Visiting Assistant Professor, SYRACUSE UNIVERSITY	Aug 1995 – May 1996
Associate Instructor, INDIANA UNIVERSITY	Aug 1991 – Aug 1995

INDUSTRY EXPERIENCE

Printing Industry - Experience in all aspects of offset printing operations 1979 - 1989

WATKINS PRINTING, Providence, Utah; MC PRINTING, Provo, Utah; CASTLE PRESS, Price, Utah

PROFESSIONAL AFFILIATIONS

American Society for Quality
Production & Operations Management Society

SERVICE ACTIVITY HIGHLIGHTS

College and University Service:

Faculty Representative for Gore Lecture Series (2010–present)
College Promotion and Tenure Committee (2003–2004, Fall 2005, Fall 2012–Summer 2014)
MBA Committee (2000–2004, Fall 2005–Spring 2011, Fall 2013–present)
BUAD Appraisal Metric Committee (Ad Hoc), Committee Chair (January 2014–present)
University Committee on Graduate Studies (Fall 2006–Summer 2009)

Other University Graduate Studies-related service:

Reviewer for Permanent Status Program Review - RN to MSN Program (Jan–Feb 2008)
Chairperson, Graduate Judicial Board (Jan 2008)
Department Promotion and Tenure Committee (2003–Present)
Chair of the Department Promotion and Tenure Policy Review Committee (2003–2004)
University Faculty Senate (1997–1998)

Journal Reviewer:

Decision Sciences
IIE Transactions
European Journal of Operational Research
Production & Inventory Management Journal
The Journal of Modelling in Management
Annals of Operations Research
International Journal of Production Economics

Other Service:

Boy Scout Institutional Head for Troop/Crew #610 (2011–present)
Boy Scout Committee Member Troop/Team/Crew #610 (2010–2011)
Science Fair Judge for The Charter School of Wilmington:
 Chemistry Division–2010
 Biochemistry Division–2009
 Plant Science Division–2008
 Behavioral and Social Sciences Division–2007
Cub Scout Pack 360 Chartered Organization Representative (2003–2008)
Cub Scout Den Leader (2002–2003)
Volunteer Auditor for a Newark Area Church (2001–2003)
Team Leader and Examiner for Delaware Quality Award (1998, 1999)
Provided free Business Process Reengineering Consulting to Montell Polyolefins (1997)
Boy Scout Explorer Post Advisor (1997–1999)
Boy Scouts of America Troop #360 Committee Chair (1996–1999)