



Curriculum Vitae

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BIOGRAPHY

Dr. Mathaisel is Professor of Management Science in the Department of Mathematics and Science at Babson College, Wellesley, Massachusetts. He was a Research Scientist at MIT, and he was also the founder and President of a computer software firm that developed high end user analytics and computer systems for scheduling and resource allocation.

He has undertaken assignments for NASA, the U.S. Air Force, U.S. Department of Transportation (Office of the Secretary), Federal Aviation Administration, Pratt & Whitney Aircraft, Flying Tiger Line, Pan American World Airways, Hughes Air West, Olympic Airways, Federal Express, Iberia Airlines, Northwest Airlines, USAir, Continental, Garuda Indonesia, Trans World Airlines, and other institutions. This experience included business analytics, enterprise sustainability, the application Lean manufacturing to sustainability, decision support systems, maintenance and logistics, scheduling, fleet and route planning, and transport systems analysis and engineering.

Dr. Mathaisel received his Bachelor of Science degree in Mechanical Engineering from Northeastern University and his Master of Science degree in Systems Engineering and Operations Research from the University of California, Irvine. He holds the Doctor of Philosophy degree in Aeronautics & Astronautics from the Massachusetts Institute of Technology.

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1 TEACHING RECORD

1.1 BABSON COLLEGE

1.1.1 UNDERGRADUATE COURSES

MIS1000	Introduction to Information Systems	1984-1995
MIS2630	Problem Solving & Software Design	1989-1995
QTM1010	Quantitative Methods for Business Analytics	2013-Present
QTM1101	Honors Calculus	1992-1993
QTM1300	Calculus (Quantitative Methods with Calculus)	1984-2009
QTM1301	Applications of Calculus and Discrete Mathematics	2005-2009
QTM1310	Probability & Statistics	1984-2008
QTM2000	Case Studies in Business Analytics	2016-Present
QTM2300	Honors Applied Calculus II	2009-2012
QTM2420	Applied Quantitative Modeling	1997-2012
QTM2421	Honors Applied Quantitative Modeling	2005-2007
QTM2620	Quantitative Methods (Introduction to Operations Research)	1995
QTM2623	Programming with R for Business Analytics	2017-Present
QTM3520	Management Science	1991
SCN2110	Physics	1996 – 1997

1.1.2 GRADUATE COURSES

QTM7010	Quantitative Foundations of Decision Support Systems	1984-1985
QTM7520	Operations Research	1991
QTM7540	Business Forecasting with Predictive Analytics	2016
MBA Mod 3	Decision Support Systems (Shadow)	1998
MBA Mod 3	Decision Support Systems (Lead)	1999-2001
QTM8400	Data and Decision Modeling	2005-2006
QTM7200	Data, Models and Decisions	2014
QTM7200BL	Data, Models and Decisions Blended Learning San Francisco	2015-2018

1.2 MIT - GRADUATE COURSES

16.711	Probability & Statistics	1980-1981
16.602	Architecture & Programming a Microcomputer	1980-1984
16.73	Air Transport Management	1981-1984
16.74	Air Transport Economics	1981
16.77	Flight Transportation Operations Analysis	1981-1984
6.271	Operations Research I	1983-1984
6.272	Operations Research II	1983-1984
16.71	Computer Algorithms & Data Structures	1983-1984

1.3 UNIVERSITY OF INDONESIA (Visiting Lecturer)

Air Transport Economics	1994-1995
Flight Transportation Operations Analysis	1994-1995

2 EDUCATION

2.1 DEGREES

Bachelor of Science	Mechanical Engineering Northeastern University Boston, Massachusetts Thesis: "Construction of a Laminar Flow Table"	1969
Master of Science	Systems Engineering & Operations Research University of California Irvine, California Thesis: "An Airline Schedule Construction Model"	1975
Doctor of Philosophy	Aeronautics & Astronautics Massachusetts Institute of Technology Cambridge, Massachusetts Thesis: "Fleet Planning for the Air Transport Industry: Network Aggregation and Cell Theory Models"	1981

2.2 EDUCATION SINCE THE PhD DEGREE

Artificial Intelligence Lecture Series Lexington, Massachusetts	Spring 1985
Impact of Microcomputers on Operations Research Denver, Colorado	March 1985
Operations Research Cambridge, Massachusetts	July 1985

3 SCHOLARLY ACTIVITIES

3.1 BOOKS AND BOOK CHAPTERS

1. Sustaining the Military Enterprise: An Architecture for a Lean Transformation, Auerbach Publications, Taylor & Francis Group, ISBN-13: 978-1-4200-6224-3. 2007
2. Sustaining the Military Enterprise: Enhancing its Ability to Perform the Mission, ISBN: 978-1-4200-7858-9, with J. Manary and C. Comm, CRC Press. 2010
3. Engineering for Sustainability, CRC Press, with Joel M. Manary and Ned H. Criscimagna. ISBN-13: 978-1439853511. 2013
4. "A Syllabus for Resilience in Higher Education," Book Chapter in Sustainability Assessment Tools in Higher Education Institutions – Mapping Trends and Good Practice at Universities, edited by Walter Leal Filho, Ulisses Azeiteiro, Sandra Caeiro, and Charbel Jabbour, IX, with C. Comm, 432 pages, 58 illustrations, ISBN 978-3-319-02375-5, Fall 2013. 2013
5. "Entrepreneurial Sustainability: A Strategy for New Ventures." 2015
Book Chapter. Unpublished.
6. "Scalability." Book Chapter. Unpublished. 2015

3.2 REFEREED JOURNAL PUBLICATIONS

1. "Directions for Developing an Air Cargo System Planning Model" 1978
with P.A. Kivestu and N.K. Taneja, Society of Automotive Engineers (SAE) Paper No. 78-0556.
2. "A Long Term System Planning Model for the U.S. Air Transport Industry," American Institute of Aeronautics & Astronautics (AIAA) Paper No. 78-1555. 1978
3. "Manufacturer Views on New Order Outlook," Air Finance Journal, No. 29, pp. 3-6. 1983
4. "Optimal Gate Assignment at Airport Terminals," with R. Mangoubi, Transportation Science, Vol. 19, No. 2. 1985
5. "Airline Scheduling: An Overview," with M. Etschmaier, 1985
Transportation Science, Vol. 19, No. 2.
6. "Perceptions of the M.I.S. Major: Marketing the M.I.S. Major to Undergraduate Business Students," with C. Comm, Interface: The Computer Education Quarterly, Vol. 10, Issue 2, Summer. 1988

7. "College Course Scheduling: A Market for Computer Software Support," with C. Comm, Journal of Research on Computing in Education, Volume 21, Issue 2, December. 1988
8. "Course and Classroom Scheduling with Interactive Computer Graphics," with C. Comm, Journal of Systems and Software, Vol. 15, pp. 149-157. 1991
9. "The Marketing of a Hospital Scheduling System," with C. Comm, Journal of Hospital Marketing, Volume 9, Number 2, Spring. 1995
10. "Evaluating Teaching Effectiveness in America's Business Schools: Implications for Service Marketers," with C. Comm, Journal of Professional Services Marketing, Volume 16. 1996
11. "Decision Support for Airline Systems Operations Control and Irregular Operations," Computers & Operations Research, Vol. 23, No. 11, pp. 1083-1098. 1997
12. "Decision Support for Airline Schedule Planning," Journal of Combinatorial Optimization, 1, 251-275 1997
13. "The Processes of Airline System Operations Control," published in Operations Research in the Airline Industry, Kluwer Academic Publishers, a book of refereed papers on airline operations research, edited by the University of Texas at Austin, with S. Grandeau and M. Clarke. 1998
14. "Aircraft Ground Movement Simulation," published in Operations Research in the Airline Industry, Kluwer Academic Publishers, with H. Idris. 1998
15. "A Paradigm for Benchmarking Lean Initiatives for Quality Improvement," Benchmarking: An International Journal, with C. Comm, Vol.7, Issue 2. 2000
16. "Assessing Employee Satisfaction in Service Firms: An Example in Higher Education," Journal of Business and Economic Studies, with C. Comm, Vol. 6, No. 1. 2000
17. "Developing, Implementing and Transferring Lean Quality Initiatives from the Aerospace Industry to All Industries," Managing Service Quality, with C. Comm, Vol. 10, No. 4. 2000

18. “Employing “Gap Analysis” to Measure Classroom Outcomes,” 2002
Journal of the Academy of Business Education, with C. Comm,
Vol. 3, Fall.
19. “A Lean Sustainment Enterprise Model for Military Systems,” 2002
Acquisition Review Quarterly, with M. Agripino and T. Cathcart,
Vol. 9, No. 4, Fall.
20. “Less is More: A Framework for a Sustainable University,” 2003
International Journal of Sustainability in Higher Education, with C.
Comm, Vol. 4, No. 4.
21. “A Case Study of the Implications of Faculty Workload and 2003
Compensation for Improving Academic Quality,” International
Journal of Educational Management, with C. Comm, Vol. 17, No.
5.
22. “A Framework for Benchmarking, Classifying, and Implementing 2004
Best Sustainment Practices,” Benchmarking: An International
Journal, with T. Cathcart and C. Comm, Vol. 11, No. 4, pp 403-
417.
23. “A Case Study in Applying Lean Sustainability Concepts to 2005
Universities,” with C. Comm, International Journal of
Sustainability in Higher Education, Vol. 6, No. 2.
24. “Meeting the Competitive Challenge,” with T. P. Cathcart, Dennis 2005
J. Stamm, and Mario F. Agripino, Industrial Engineer, Institute of
Industrial Engineers, Vol. 37, No. 1, January.
25. “Sustaining the Military Enterprise: Architecture for a Lean 2005
Transformation,” First of two Articles, with T. Cathcart and M.
Agripino,” Defense Procurement Analysis, Logistics Special Focus,
Spring.
26. “A Lean Architecture for Transforming the Aerospace 2005
Maintenance, Repair and Overhaul Enterprise,” International
Journal of Productivity and Performance Management, Summer.
27. “An Exploratory Study of Best Lean Sustainability Practices in 2005
Higher Education,” with C. Comm, Quality Assurance in
Education, Volume 13, Issue 3.

28. “An Exploratory Analysis in Applying Lean Manufacturing to a Labor-Intensive Industry in China, with Clare Comm, Asia Pacific Journal of Marketing and Logistics, Volume 17, No. 4. 2005

29. “Adding Value to Service Providers: Benchmarking Wal-Mart,” Benchmarking: An International Journal, with C. Blanchard and C. Comm, Volume 15, Issue 2. 2008

30. “Sustaining Higher Education Using Wal-Mart’s Best Supply Chain Management Practices,” International Journal of Sustainability in Higher Education, with C. Comm, Volume 9, Issue 2. 2008

31. “Transforming Urban Public Transportation: A Lean Enterprise Approach,” with S. Hirsch, Journal of Business & Economics Research, August. 2008

32. “Implementing a Lean Enterprise Approach to Achieve Business Excellence,” with C. Comm, International Journal of Business Excellence, Accepted for publication in Fall 2008. 2008

33. “Changing the Business Travel Market: The Innovation of the Very Light Jet,” with C. Comm, Journal of American Academy of Business, Cambridge (JAABC). 2009

34. “A Strategy for Enterprise Sustainability”, Business Review Cambridge, with C. Comm, Vol. 17, No. 1, Summer. **Feature/Cover Article.** 2011

35. “A Lesson Plan for Communicating the Sustainability of an Enterprise,” Atlantic Marketing Journal, with C. Comm, Vol. 1, No. 1, Winter 2012. 2012

36. “A Lesson Plan for Sustainability in Higher Education,” American Journal of Business Education, with E. Driscoll and C. Comm, Vol. 6, No. 2, March/April 2013. 2013

37. “Health Care Sustainability,” The Business Review Cambridge (BRC), ISSN 1553–5827, Vol. 22, Number 1, Summer. 2014

38. “Designing an Engineering System for Sustainability,” Applied Mechanics and Materials Journal (AMMJ), Vol. 704. Elsevier, ISSN: 978-3-03835-365-2, Fall. 2014
39. “Is Scalability Necessary for Economic Sustainability?” European Journal of Sustainable Development, 4(2), 275-282. 2015
40. “New Venture Sustainability.” Journal of American Academy of Business, Cambridge, 21(2), 8 pages. 2016
41. “The Role of Analytics in Business Sustainability.” Journal of Scholastic Inquiry: Special Edition, with C.L. Comm. 7(1), 104-121. 2016
42. “The Use of Analytics to Market the Sustainability of ‘Unique’ Products. Journal of Marketing Analytics. 6(4), 150–156. 2018

3.3 CASES AND TEACHING NOTES

1. “Analytics for the Sustainability of Unique Products: the Case for Hemp.” BAB424, In Babson College Center for Engaged Learning and Teaching (Ed.), Analytics for the Sustainability of Unique Products. (pp. 7). Cambridge, MA: Harvard Business Publishing. 2018
2. “Analytics for the Sustainability of Unique Products: the Case for Sustainable Beef.” BAB427. In Babson College Center for Engaged Learning and Teaching (Ed.), Analytics for the Sustainability of Unique Products. (pp. 5). Cambridge, MA: Harvard Business Publishing. 2018

3.4 JOURNAL ARTICLES ACCEPTED OR UNDER REVIEW

- “Interactive Analytic Visualizations for Marketing Decisions”. 2018
Submitted to Quantitative Marketing and Economics. Springer.
December.

3.5 OTHER PUBLICATIONS (PROCEEDINGS, PAPERS, REPORTS, CASES)

3. "Airline Schedule Planning and Evaluation Model," McDonnell Douglas Corporation Paper No. 6096, 1972 1972
4. "A Long Range Fleet Planning Model for the Air Transport Industry," Flight Transportation Laboratory Paper No. 77-6, MIT, 1977. 1977
5. "A Robust, Policy-Oriented Econometric Model of the Demand for Air Transportation," Flight Transportation Laboratory Report No. 79-4, MIT, 1978. 1978
6. "Massachusetts State Airport System Plan Forecasts, A Review of Available Methodologies," Flight Transportation Laboratory Report No. 78-3, MIT, 1978. 1978
7. "Optimal Assignment of Cargo Flows to an Airline Network," with M. Muller, paper presented at the Operations Research Society of America (ORSA) national meeting, Los Angeles, 1978. 1978
8. "Fleet Assignment with Variable Demand: A Goal Programming Approach," Unpublished Paper, MIT, 1983. 1983
9. "Optimization of Air Transport Capacity and Yields," Flight Transportation Laboratory Memorandum M83-1, MIT, 1983. 1983
10. "Cell Theory-Linear Programming Fleet Planning Model," Synergy Report, 1983. 1983
11. "A Library of Computer Algorithms for Operations Research and Management Science," Operations Research Center, Unpublished Paper, MIT, 1984. 1984
12. "Aircraft Scheduling: The State of the Art," International Federation of Operational Research Societies, Airline Group, Annual Proceedings of AGIFORS, Strassbourg, France, September 1984. 1984
13. "Automation of Airlift Scheduling for the Upgraded Command and Control System of Military Airlift Command," with R.W. Simpson, MIT Flight Transportation Laboratory Report, R84-6, 1984. 1984
14. "Classroom Scheduling," with M. Ludwig, Report on Research, Babson College, 1985. 1985

15. "Dijkstra: A Software Package for Aid in Teaching Dijkstra's Shortest Path Algorithm," Unpublished Paper, MIT, Operations Research Center, 1986. 1986
16. "Hungarian: A Software Package for Aid in Teaching the Hungarian Algorithm for Solving the Assignment Problem," Unpublished Paper, MIT, Operations Research Center, 1986. 1986
17. "Cell Theory: A Cluster Approach to the Airline Fleet Planning Problem," Proceedings of the Decision Sciences Institute, Honolulu, November 1986. 1986
18. "Airlift System Analysis Program: Investigation of the Potential for Adding Alternative Forms of Ownership to the Airlift System Analysis Program Model," Unpublished Paper, written for the U.S. Air Force and SYNERGY, 1986. 1986
19. "Airlift Loading Model (ALM): Model Improvements and Operating System Enhancements," Unpublished Paper, written for the U.S. Air Force, 1986. 1986
20. "Course and Classroom Scheduling: Assessing a Market for Computer Software Support," with C. Comm, Proceedings of the Decision Sciences Institute, November 1988. 1988
21. "Course and Classroom Scheduling using Interactive Computer Graphics," Proceedings of the Decision Sciences Institute, November 1989. 1989
22. "Airline Safety: Public Policy and Marketing Issues", with C. Comm and E. Foster-Curtis, Proceedings of the Decision Sciences Institute, November 1990. 1990
23. "An Expert System for the Classroom Scheduling Problem," with L.R. Hazelton, Proceedings of the Decision Sciences Institute, November 1991. 1991
24. "A Command and Control System for Airline Flight Operations," Proceedings of the Decision Sciences Institute, November 1992. 1992
25. "Analysis and Implications of Student Course Evaluation Instruments Used by AACSB Schools." Proceedings of the Decision Sciences Institute, November. 1992
26. "Aircraft Ground Motion Simulation," Proceedings of the Decision Sciences Institute, November 1993. 1993

27. "A Simulation of Aircraft Motion on the Airport Surface," Flight Transportation Laboratory, Report R94-10, 1994. 1994
28. "EXPRESS White Paper," Lean Sustainment Initiative, MIT, 1998. 1998
29. "White Paper on Best Sustainment Practices," Lean Sustainment Initiative, MIT, 1999. 1999
30. "Industry Benchmarking Survey of Lean Initiatives," Lean Sustainment Initiative, MIT, 1999. 1999
31. "Analysis of the Industry Benchmarking Survey of Lean Initiatives," Lean Sustainment Initiative, MIT, 1999. 1999
32. "On the relationship between the EXPRESS model and Goals, Objectives and Metrics: A Case Study," Lean Sustainment Initiative, MIT, 1999. 1999
33. "A Framework for Identifying and Classifying Best Sustainment Practices," with C. Comm and T. Cathcart, August 2001. 2001
34. "Less is More: The Concept of a 'Lean' Airline," with C. Comm, September 2001. 2001
35. "How are Automatic Test Systems (ATS) Contributing to the US Air Force Parts and Materials Problem?" with T. Cathcart, October 2001. 2001
36. "Best Sustainment Practices for the Parts and Materials Problem in the Military", White Paper, with W. Patrick, October 2001. 2001
37. "High Level Value Stream Mapping," with A. Davis and K. Chase, October 2001. 2001
38. "C-141 Panel Case Study," with K. Chase, October 2001. 2001
39. "F-15 Heads Up Display Case Study, with K. Chase, October 2001. 2001
40. "Configuration Management Practices Contribute to Parts and Materials Shortages for U.S. Air Force MRO Operations," with M. Agripino, October 2001. 2001
41. "Draft Program Concept (Strategic Plan)," for the U.S. Air Force, Oklahoma City Air Logistics Center (OC-ALC) Maintenance, Repair and Overhaul (MRO) Transformation Program, June 2003. 2003

42. "Statement of Objectives (SOO) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program, July 2003. 2003
43. "Performance Work Statement (PWS) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," August 2003. 2003
44. "Single Acquisition Management Plan (SAMP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program, September 2003. 2003
45. "White Paper on Lean," October 2003. 2003
46. "White Paper on Cellular," October 2003. 2003
47. "Source Selection Plan (SSP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," November 2003. 2003
48. "Market Research for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," November 2003. 2003
49. "Treatise on Process Improvement Programs," November 2003. 2003
50. "Communications Plan for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," December 2003. 2003
51. "Risk Management Plan (RMP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," December 2003. 2003
52. "Oklahoma City Air Logistics Center (OC-ALC) Maintenance, Repair and Overhaul (MRO) Transformation Program, An Architecture for a Lean Transformation," December 2003. 2003
53. "Best Sustainment Practices Case Study: Pratt & Whitney," January 2003. 2003
54. "Best Sustainment Practices Case Study: Sandia National Laboratories and Los Alamos National Laboratories," May 2003. 2003
55. "Best Sustainment Practices Case Study: Airbus Industries and the European Aeronautic Defense and Space Companies," June 2003. 2003

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|-----|--|------|
| 56. | “Best Sustainment Practices Case Study: Lockheed Martin,”
December 2004 | 2004 |
| 57. | “Best Sustainment Practices Case Study: Rockwell Collins,”
December 2004 | 2004 |
| 58. | “Business Case Analysis,” written for the Oklahoma City Air
Logistics Center, US Air Force, Oklahoma City, OK, January 2005. | 2005 |
| 59. | “Lean Enterprise Architecting for Military Sustainability,” written
for the Oklahoma City Air Logistics Center, US Air Force,
Oklahoma City, OK, May 2005. | 2005 |
| 60. | “Continuous Process Improvement (CPI) Initiatives for Military
Sustainability,” written for the Oklahoma City Air Logistics
Center, US Air Force, Oklahoma City, OK, June 2005. | 2005 |
| 61. | “A Plan for Benchmarking, Classifying, and Implementing Best
Sustainment Practices,” written for the Oklahoma City Air
Logistics Center, US Air Force, Oklahoma City, OK, June 2005. | 2005 |
| 62. | “Best Sustainment Practices Case Study: Naval Air (NAVAIR)
U.S. Navy, Jacksonville, FL,” March 2005. | 2005 |
| 61. | “Privatization”, A Case Study in privatizing government
enterprises and privatizing Olympic Airways, Athens, Greece, June
2005. | 2005 |
| 62. | “V-22 Osprey: Naval Aviation (NAVAIR) Depot, U.S. Navy,
North Island, San Diego, CA,” July 2005. | 2005 |

3.5 PRESENTATIONS AT SCHOLARLY MEETINGS

- | | | |
|----|--|------|
| 1. | An Airline Schedule Planning and Evaluation Model - invited
presentation before the Airline Group International Federation of
Operational Research Societies (AGIFORS), San Francisco,
December 1972. | 1972 |
| 2. | Long Range Fleet Planning Model for the Air Transport Industry,
an LP Application - presentation before the Air Transportation
Research International Forum (ATRIF), Atlanta, November 1977. | 1977 |

3. A Long Term System Planning Model for the U.S. Air Transportation Industry - presentation before the American Institute of Aeronautics & Astronautics (AIAA), Los Angeles, August 1978. 1978
4. Optimal Assignment of Cargo Flows to an Airline Network - presentation with M. Muller at the National Meeting of the Operations Research Society of America (ORSA), Los Angeles, November 1978. 1978
5. Economic Equilibrium in Air Transportation Systems Planning - presentation at the National Meeting of the Operations Research Society of America (ORSA), Los Angeles, November 1978. 1978
6. An Interactive, Policy-Oriented Forecasting System for State Airport Activity - speech before the New England Aviation Data and Model Workshop, Department of Transportation, Cambridge, Massachusetts, April 1979. 1979
7. A Mathematical Programming Solution to the Gate Assignment Problem at Airport Terminals - presentation with R. Mangoubi at the National Meeting of the Operations Research Society of America (ORSA), Colorado Springs, November 1980. 1980
8. Cell Theory: Cluster Analysis for Aggregate Transport Networks - presentation at the National Meeting of the Operations Research Society of America (ORSA), Colorado Springs, November 1980. 1980
9. Airline Corporate Planning - speech before the Transportation Research Board (TRB), Menlo Park, California, November 1980. 1980
10. Aircraft Selection and Acquisition - seminar at the Centre of Transport Research, University of Montreal, Canada, March 1981. 1981
11. Proposed Domestic Air Carrier Policy for Canada: The Case of U.S. Airline Deregulation - witness before the Standing Committee on Transport, House of Commons, Canadian Parliament, Ottawa, February 1982. 1982
12. Cell Theory - invited presentation before the Airline Group International Federation of Operational Research Society, Memphis, October 1983. 1983
13. Fleet Assignment with Variable Demand: A Goal Programming Approach - invited presentation before the Airline Group International Federation of Operational Research Society, Memphis, October 1983. 1983

14. Aircraft Scheduling: The State of the Art, Invited Keynote Speaker, Airline Group of IFORS (International Federation of Operational Research Societies), This paper won the Award for Originality in the paper competition, Strassbourg, France, September 1984. 1984
15. Optimizing Gate Assignments at Airport Terminals, Invited Keynote Speaker, Airline Group of IFORS (International Federation of Operational Research Societies), with R. Mangoubi, Strassbourg, France, September 1984. 1984
16. Automation of Airlift Scheduling for the USAF MAC - presentation before the ORSA/TIMS annual meeting, Boston, April 1985. 1985
17. Airline Scheduling - Presentation at the Transportation and Logistics Conference, Babson College, June 1985. 1985
18. Operations Research in the Airline Industry - presentation at MIT's Operations Research Seminar - July 1985. 1985
19. New Technologies for Classroom Scheduling, National Conference, American Association of Collegiate Registrars and Admissions Officers, with Marilyn Bachelder and Marsha Ludwig, Baltimore, MD, April 15, 1986. 1986
20. Interactive Graphics on Advanced Microcomputer Workstations for Aircraft Scheduling, Presentation at the annual meeting of the AGIFORS (Airline Group International Federation of Operational Research Societies) Study Group, Cambridge, MA, September 1986. 1986
21. Cell Theory: A Cluster Approach to the Airline Fleet Planning Problem, a refereed paper accepted for the National Meeting of Decision Sciences Institute, Honolulu, November 1986. 1986
22. The Market for Computer Software in Academic Course and Classroom Scheduling, with C. Comm, presentation before the ORSA/TIMS annual meeting, New Orleans, May 1987. 1987
23. Course and Classroom Scheduling: Assessing a Market for Computer Software Support, National Meeting of the Decision Sciences Institute, Las Vegas, November 1988. 1988

24. Interactive Computer Graphics for Execution Rescheduling, IBM Airline Operations Conference, Brussels, Belgium, June 1989. 1989
25. Interactive Computer Graphics for Execution Rescheduling, Airline Group, International Federation of Operational Research Societies, Hong Kong, November 1989. 1989
26. Course and Classroom Scheduling with Interactive Computer Graphics, National Meeting of the Decision Sciences Institute, New Orleans, November 1989. 1989
27. Airline Safety: Public Policy and Marketing Issues, National Meeting of the Decision Sciences Institute, San Diego, November 1990. 1990
28. An Expert System for the Classroom Scheduling Problem, National Meeting of the Decision Sciences Institute, Miami, November 1991. 1991
29. A Command and Control System for Airline Flight Operations, National Meeting of the Decision Sciences Institute, San Francisco, November 1992. 1992
30. Analysis and Implications of Student Course Evaluation Instruments Used by AACSB Schools, National Meeting of the Decision Sciences Institute, San Francisco, November 1992. 1992
31. Aircraft Ground Motion Simulation, National Meeting of the Decision Sciences Institute, Washington, DC November 1993. 1993
32. New Technologies for Air Transportation, Invited Speaker at the Asian Airline Marketing Conference, sponsored by McDonnell Douglas, Jakarta, Indonesia, June 1995. 1995
33. Airline Planning and Operations Control: Technologies for Surviving Competition, ATRIF National Meeting, Hartford, October 1995. 1995
34. Aircraft Routing and Maintenance Planning for Irregular Operations Control, Institute for Operations Research and Management Sciences (INFORMS) National Meeting, New Orleans, October 1995. 1995
35. Simulating the Use of Scheduling, Quality of Service and Price as Competitive Tools in Asian Airlines, with C. Comm, INFORMS National Meeting, New Orleans, October 1995. 1995

36. Modeling Consumer Behavior in the Airline Industry, with C. Comm, INFORMS National Meeting, Atlanta, November 1996. 1996
37. Scheduling Facilities and Events, INFORMS National Meeting, Atlanta, November 1996. 1996
38. A Paradigm for Benchmarking Lean Operations in the U.S. Aerospace Industry, with C. Comm, INFORMS National Meeting, Dallas, October 1997. 1997
39. In Search of Intelligent Maintenance Practices: Part I, with C. Comm, INFORMS National Meeting, Montreal, April 1998. 1998
40. In Search of Intelligent Maintenance Practices: Part II, with C. Comm, INFORMS National Meeting, Seattle, October 1998. 1998
41. “Assessing Employee Satisfaction in Service Firms: An Example in Higher Education,” INFORMS National Meeting, Cincinnati, April 1999. 1999
42. “Outcome Assessment in the Classroom: Employing the SERVQUAL Model,” INFORMS National Meeting, Philadelphia, November 1999. 1999
43. “Results of Employing the SERVQUAL Model to Measure Classroom Outcomes,” Decision Sciences Institute (DSI) National Meeting, Orlando, November 2000. 2000
44. “Less is More: The Concept of a ‘Lean’ Airline,” presentation to the Airline Group International Federation of Operational Research Societies (AGIFORS) Annual Symposium, with C. Comm, Sydney Australia, September 2001. 2001
46. “A Framework for Identifying and Classifying Best Sustainment Practices,” INFORMS National Meeting, Miami Florida, with C. Comm and T. Cathcart, August 2001. 2001
47. “Lean University,” Northeast Decision Sciences Institute (NEDSI) Meeting, Puerto Rico, with C. Comm, March 2002. 2002
48. “A Lean Sustainment Model for Military Systems,” American Society of Naval Engineers (ASNE) conference, Washington, D.C., April 2002. 2002

49. “Value Stream Mapping for Sustainment,” International Federation of Operational Research Societies (IFORS) Triennial Conference, Edinburgh Scotland, July 2002. 2002
50. “A Model for Corporate Sustainability,” 2003 International Applied Business Research (ABR) Conference, with C. Comm, Acapulco, Mexico, March 2003. 2003
51. “A Preliminary Assessment of Best Sustainability Practices in Higher Education,” Decision Sciences Institute (DSI) National Conference, with C. Comm, Washington, DC, November 2003. 2003
52. “Lessons Learned From a Comparison of Two Integrated Business Curriculums,” 2004 College Teaching and Learning Conference, Lake Buena Vista / St. Petersburg, FL, January 2004, **Best Paper Award**. 2004
53. “A Case Study on the Impact of a University Community on a Mid-Sized City’s Economic and Cultural Environment,” Southeast Decision Sciences Institute Conference, Charleston, SC, February 2004. 2004
54. “Applying Lean Thinking to the Service Industry: A Study of Three Successful Airlines”, International Applied Business Research (ABR) Conference, San Juan, Puerto Rico, March 2004, **Best Paper Award**. 2004
55. “Sustaining Public Sector Enterprises: Educating A Lean Transformation”, 2004 International Conference on Business, Honolulu, Hawaii, June 2004. 2004
56. “A Case Study in Applying Lean Manufacturing to a Labor Intensive Operation in China,” 31st Annual Conference of the Northeast Business & Economics Association, New York, September 2004. 2004
57. “The Implications of Applying Lean Sustainability Theory to Teaching and Learning,” 2005 College Teaching and Learning Conference, Orlando, FL, January 2005, **Best Paper Award**. 2005
58. “Transforming the Public Sector Supply Chain with Private Sector Best Practices,” Production and Operations Management Society (POMS) Annual Conference, Chicago, IL, May 2005. 2005
59. “A Process for Benchmarking, Classifying, and Implementing Best Sustainment Practices”, European Applied Business Research 2005

(EABR) Conference, Athens, Greece, June 13-17, 2005, **Best Paper Award.**

60. “Benchmarking Best Practices for the U.S. Military Sustainment Community,” European Applied Business Research (EABR) Conference, Santorini, Greece, June 20-22, 2005. 2005
61. “The Future of Work in Higher Education: A Case Study in Massachusetts,” Northeast Business & Economics Association Conference, Newport, RI, October 2005. 2005
62. “Lessons Learned from Wal-Mart’s Expertise in Supply Chain Management,” Decision Sciences Institute Annual Conference, San Francisco, CA, November 2005. 2005
63. “Applying a Lean Enterprise Approach to Urban Mass Transit Agencies,” 2006 Applied Business Research Conference, Orlando, FL, January 2006. 2006
64. “Marketing Sustainable Building Programs: A Case Study in Lowell, MA,” European Applied Business Research (EABR) Conference, Siena, Italy, June 21-23, 2006. 2006
65. “Lessons Learned from Group Class Projects in a “Real” Sustainable Environment,” College Teaching and Learning Conference (CTLIC), Florence, Italy, June 25-28, 2006. 2006
66. “Applying Wal-Mart’s Best Practices in Supply Chain Management to the Health Care Industry,” Decision Sciences Institute Conference, San Antonio, TX, November 2006. 2006
67. “Applying Wal-Mart’s Best Supply Chain Management Practices to the Airline Industry,” International Academy of Business and Public Administration Disciplines (IABPAD) Conference, Contemporary Business Issues Track, Orlando, FL, January 2007. 2007
68. “Military Depot Requirements Forecasting: A Reliability-Based Approach,” Joint Statistical Meeting (JSM), Salt Lake City, UT, August 2007. 2007
69. “Sustaining Higher Education Using Wal-Mart’s Best Supply Chain Management Practices,” Decision Sciences Institute Conference, Phoenix, AZ, November 2007. 2007

70. “Exceeding the Competition by Implementing a Lean Enterprise Approach for Change, 2008 Applied Business Research Conference, Orlando, FL, January 2008. **Best Paper Award.** 2008
71. “Sustaining Service in the Very Light Jet Air Taxi Market,” Western Decision Sciences Institute Conference, San Diego, CA, March 2008. 2008
72. “Analysis of Using the SERVQUAL Model for Student Faculty Course Evaluations,” Joint Statistical Meeting (JSM), Denver, CO, August 3-7, 2008. 2008
73. “A Complexity Science Algorithm for Routing and Scheduling Very Light Jets (VLJs).” AGIFORS Conference, Montreal, Canada, September 21-27, 2008. **Sloan Award.** 2008
74. “Opportunities for Decision Support in the Very Light Jet Market,” INFORMS Conference, Washington, DC, October 12-15, 2008. 2008
75. “Sustaining Service in the Very Light Jet Air Taxi Market,” International Academy of Business and Public Administration Disciplines Conference, Orlando, FL, January. 2009
76. “Changing the Business Travel Market: The Innovation of the Very Light Jet,” International Business & Management Research (IBMR) Conference, Honolulu, HI, June. 2009
77. “Very Light Jets Provide Opportunities for Changing the Business Travel Market,” INFORMS Conference, San Diego, CA, October 11-14. 2009
78. “A Prescription for Service/Product Sustainability,” International Journal of Arts and Sciences Conference, Orlando, FL, March 1-4. 2010
79. “A Lean Enterprise Architecture for Business Process Re-Engineering and Re-Marketing,” International Conference on Enterprise Information Systems (ICEIS), Madeira, Portugal, June 9-12 2010
80. “A Prescription for Sustainability,” Decision Sciences Institute Conference, San Diego, CA, November 20-23. 2010
81. “A Prescription to Achieve Economic and Social Sustainability,” Resilience 2011, Arizona State University, Tempe, Arizona, March. 2011

82. “A Strategy for Enterprise Sustainability”, The International Business & Economics Research Conference, Los Angeles, CA, June. 2011
83. “A Lesson Plan for Sustainability in Higher Education”, Atlantic Marketing Association Annual Conference, Charleston, SC., September. 2011
84. “Telecommunications Quality Abilities,” INFORMS Telecommunications Conference, Boca Raton, FL, 15-17 March. 2012
85. “A Prescription for Healthcare Sustainability Focusing on Availability,” European Academic Conference, Rome, Italy, 6 June. 2012
86. “A Prescription for Healthcare Sustainability Focusing on Dependability,” Mediterranean Conference, 10 June. 2012
87. “A Prescription for Healthcare Sustainability Focusing on Capability and Affordability,” INFORMS, Phoenix, AZ, 14-17 October. 2012
88. “A Prescription for Healthcare Sustainability Focusing on Marketability,” Decision Sciences Institute, San Francisco, CA, 17-20 November. 2012
89. “The Value of Health Care Sustainability,” Northeast Decision Sciences Institute Conference, New York, NY. April 5-8, 2013. 2013
90. “A Paradigm for Communicating Sustainability to Businesses”, 2013 International Academic Conference, June 6-19, 2013. 2013
91. “A Model for Achieving Environmental Sustainability through Group Decision Making and Negotiation,” INFORMS 2013 Group Decision Making Conference, Stockholm, Sweden, June 19-24, 2013. 2013
92. “A Strategy to Achieve Sustainable Abilities in Services Marketing,” Society for Marketing Advances Conference, Hilton Head, SC, Oct 26 – Nov 3, 2013. 2013
93. “A Statistical Definition of Sustainability,” Conference on Statistical Practice, Tampa, FL, February. 2014

94. "Health Care Sustainability," Global Business, Marketing, Finance & Economics Research Conference, Los Angeles, June. 2014
95. "A Strategy for Promoting Health Care Sustainability," 2014 International Academic Conference, San Antonio, TX, March. **Best Paper Award** 2014
96. "Designing an Engineering System for Sustainability," 2014 3rd International Conference on Mechanics and Control Engineering (ICMCE 2014) , Asheville, NC, October. 2014
97. Oral Presentation: Mathaisel, D. F. (Presenter & Author), Critical Communications, "Critical Communications Sustainability," Critical Communications World, Barcelona, Spain. May. 2015
98. Paper: Mathaisel, D. F. (Presenter & Author), 3rd European Conference on Sustainable Development, "Is Scalability Necessary for Economic Sustainability," European Center of Sustainable Development, Rome, Italy. June. (Refereed) 2015
99. Paper: Mathaisel, D. F. (Presenter & Author), Comm, C. L. (Author Only), Atlantic Marketing Association Annual Conference, "Can Scalability be a Marketing Liability for Sustainability?," Atlantic Marketing Association, Savannah, GA. September. (Refereed) 2015
100. Oral Presentation: Mathaisel, D. F. (Presenter & Author), American Society for Competiveness 2015 Conference, "Applying Five Abilities for Sustainability to Achieve Global Competitiveness," American Society for Competiveness, Falls Church, VA. October 2015. (Refereed) 2015
101. Oral Presentation: Mathaisel, D. F. X. (Presenter & Author), Organization for Advancement of Strategic and International Studies, "Can Analytics Play a Role in Sustainable Development," International Association of Applied Business Research (IAABR), Orlando, FL. (March 2016). (Refereed) 2016

102. Paper: Mathaisel, D. F. X. (Presenter & Author), International Academic Research Conference, "Analytics for Sustainability," Center for Scholastic Inquiry, Scottsdale, AZ. (October 2016). (Refereed) 2016
103. Oral Presentation: Mathaisel, D. F. X. (Presenter & Author), Organization for Advancement of Strategic and International Studies, "An Analytical Approach to the Sustainable Development of Unique Products", International Association of Applied Business Research (IAABR), Miami, FL. (June 2017). (Refereed) 2017
104. Paper: Mathaisel, D. F. X. (Presenter & Author), International Academic Research Conference, "The Use of Business Intelligence to Market the Sustainability of Unique Products", Atlantic Marketing Association, Williamsburg, VA. (September 2017). (Refereed) 2017
105. Oral Presentation: Liberal Arts Data Science, "Computer Science in the Data Science Curriculum," New College of Florida, Sarasota, FL. January. 2018
106. Paper: Society for Marketing Advances Annual Conference, "Using Interactive Analytic Visualizations to Market Organic Products," Society for Marketing Advances, West Palm Beach, FL. November. (Refereed) 2018

3.6 RESEARCH

3.6.1 BOOK MANUSCRIPT IN PROGRESS

Enterprise Sustainability

Sustainability is the ability to endure. In ecology, sustainability describes how biological systems survive. For humans, it is our long-term wellbeing. For mechanical systems and structures, it is conserving required resources and reducing waste. For an enterprise, it is the ability of its products and systems to remain productive long term, without failure and minimizing waste. Sustainability and sustainable development has become a popular goal. It has also become a wide-ranging term that can be applied on a local or a global scale and over long time periods.

3.6.2 RESEARCH IN PROGRESS

1 Business Analytics for Enterprise Sustainability

Sustainability is an ability: the ability to endure. To be sustainable, the entity or enterprise, whether it is an ecological, environmental, human, or service enterprise, must possess five “abilities”: availability; dependability; capability; affordability; and marketability. How does analytics relate to each of these five abilities? Business analytics is a merger of three disciplines: quantitative methods and modelling, computer science, and “big data”. The recent technological advances (powerful tablets, fast internet, and end-user software) have allowed these disciplines to merge and become the analytics tools that are available today to businesses. The research in question is how analytics (i.e., these three disciplines) support and encourage the ability of any entity or enterprise to be successful.

2 Very Light Jets (VLJs)

VLJs are radically new concept jets costing around \$1.5 million. They have spawned a series of entrepreneurial start-up airlines flying 1-4 passengers on-demand point-to-point from small airports for about the cost of a full-fare coach or first class ticket. The problem is to find an optimal routing and scheduling of aircraft to satisfy the customer demands (as defined by a desired departure and arrival time window). This problem has never specifically been solved, except for the ground transportation “dial-a-ride” problem. I have developed a minimum cost optimization algorithm and coded it on a computer. It is under test and evaluation by two airlines.

3 Sustainability

This research project entails the development of strategies, principles, approaches, and technologies necessary to effectively and efficiently sustain an enterprise and its products. Sustainment is defined here as the means by which an enterprise is enduring. It also is defined as the maintenance, repair and/or overhaul practices that keep systems (the products of the enterprise) operating and up-to-date (new technology upgrades) throughout their entire life cycles. The research focuses on the tools that management, product development, and operational support teams should consider in the design, development, operation, and improvement of their products that are cost-effective in all phases of the product’s life cycle: from cradle to grave. The goal is to minimize non-value-added activities throughout the entire sustainment enterprise.

3.7 AWARDS

3.7.1 SCHOLARLY AWARDS

- | | | |
|----|---|------|
| 1. | First Prize in Paper Competition: Most Original Paper, “Aircraft Scheduling: The State of the Art,” International Federation of Operational Research Societies, Airline Group, Strassbourg, France. | 1984 |
| 2. | Nominated and Promoted to Full Member of the Operations Research Society of America (ORSA) | 1995 |

3. Tenure, Babson College 1987
4. Promotion to rank of Associate Professor, Babson College 1987
5. Promotion to rank of Professor, Babson College 2003
6. Best Paper Award: “Lessons Learned from a Comparison of Two Integrated Business Curriculums,” College Teaching and Learning Conference, Orlando, Florida, January 5-9, 2004 2004
7. Best Paper Award: “Applying Lean Thinking to the Service Industry: A Study of Three Successful Airlines,” International Applied Business Research (ABR) Conference, San Juan, Puerto Rico, March 2004 2004
8. Best Paper Award: “The Implications of Applying Lean Sustainability Theory to Teaching and Learning,” College Teaching and Learning Conference, January 2005. 2005
9. Best Paper Award: “A Process for Benchmarking, Classifying, and Implementing Best Sustainment Practices”, European Applied Business Research (EABR) Conference, Athens, Greece, June 2005. 2005
10. Best Paper Award: “Exceeding the Competition by Implementing A Lean Enterprise Approach for Change”, Applied Business Research (ABR) Conference, January 2008. 2008
11. Invited by the Alfred P. Sloan Foundation to join the Sloan Industry Studies Program as an Affiliate, and was awarded a grant to make a presentation at the AGIFORS Conference (www.agifors.org) in Montreal, Canada, September 21-27. The presentation was entitled “A Complexity Science Algorithm for Routing and Scheduling Very Light Jets (VLJs).” 2008
12. Mike Fetters Term Chair, Babson College 2009-2014
13. 2010 Faculty Scholarship Award, Babson College 2010
14. Best Paper Award: “A Strategy for Promoting Health Care Sustainability,” 2014 International Academic Conference, San Antonio, TX, March. 2014

3.7.2 GRANTS

1. Massachusetts Aeronautics Commission, Aviation activity forecasts, MIT 1978-1979
2. Department of Transportation, Office of the Secretary for International Policy, Transportation systems modeling, MIT 1979
3. Federal Aviation Administration, Manpower and equipment forecast modeling, MIT 1980
4. Pratt & Whitney Aircraft Group, Development of fleet planning models, MIT 1980-1981
5. Cooperative Research Program in Air Transportation, Computer models for air transport planning, MIT 1980-1984
6. U.S. Air Force, Equipment planning, logistics, dynamic (real-time) Aircraft and crew deployment, MIT 1983-1984
7. Babson College Board of Research, Classroom scheduling research 1985
8. Babson College Board of Research, Expert system software for academic course and classroom scheduling 1987
9. Babson College Board of Research, Classroom scheduling survey 1987
10. Babson College, Event Scheduling System Development 1994
11. Babson College Board of Research, A Paradigm for Benchmarking Lean Initiatives for Quality Improvement in the Aerospace Industry 1998
12. Babson College Board of Research, Assessing Employee Satisfaction in Service Firms 1999
13. Fallon McElligott, United Airlines 2010 Case Study 1999
14. Babson College Technology Advisory Board
Modelbase of Decision Support Systems on the Web 1999
15. Babson College Board of Research, A Framework for Identifying and Classifying Best Sustainment Practices 2001
16. Babson College Board of Research, Development of a Framework for a Lean University 2002

17. Babson College Board of Research, A Lean Sustainment Enterprise Model for Military Systems 2002
18. Babson College Technology Advisory Board, “Modelbase” A Database of Models on BlackBoard 2002
19. Babson College Board of Research, Best Sustainment Practices Case Studies 2003
20. Boston Consortium for Higher Education, Lean Sustainable University 2003
21. Babson College: Faculty Research Facility (FRF) Course Releases for a book manuscript “Sustaining the Military Enterprise” 2003-2005
22. Babson College Board of Research Grant, Best Sustainment Practices Case Studies 2004
23. Babson College Board of Research Grant, Best Sustainment Practices Case Studies, continuation of the 2004 award 2005
24. Babson College Board of Research Course Release “An Architecture for Transforming the Military Industrial Enterprise,” Spring 2006
25. Babson Faculty Research Fund, Major Course Release Award for the second book Sustaining the Military Enterprise: Enhancing its Ability to Perform the Mission 2007

3.7.3 TEACHING AWARDS

1. Teaching Innovation Fund: Business Analytics for Sustainability. Babson College. November. 2015

3.8 JOURNALS RECEIVED THROUGH SOCIETY MEMBERSHIPS

Operations Research
 Management Science
 Transportation Science
 Decision Sciences

4 PROFESSIONAL COMPETENCE

4.1 ACADEMIC EXPERIENCE

MIT, Flight Transportation Laboratory, Department of Aeronautics & Astronautics: Post Doctoral Research Engineer	1981-1984
MIT, Flight Transportation Laboratory, Department of Aeronautics & Astronautics: Research Associate	1984-1998
MIT, Center for Technology, Policy and Industrial Development: Research Associate	1998-2001
Babson College, Department of Mathematics & Science: Assistant Professor	1984-1987
Babson College, Department of Mathematics & Science: Associate Professor	1987-2003
Babson College, Department of Mathematics & Science: Professor	2003-Present

4.2 INDUSTRIAL EXPERIENCE

Berkeley Enterprises, Newtonville, Massachusetts, Assistant Editor, Computers and People (formerly Computers & Automation); System Programmer for a DEC PDP-9 computer.	1964-1965
Douglas Aircraft Company, Engineering, Long Beach, California, Aerodynamics performance and systems engineer. Computer modeling of engineering systems.	1965-1969
McDonnell Douglas Corporation, Market Development, Long Beach, California, Branch Manager, Operations Research. The position required formulation of the design and development of computer-aided O.R. models for production, operations, maintenance, engineering, and product market research. Managed a group of 12 operations research analysts.	1969-1975
Founder and President: Scheduling Systems Inc. Cambridge, MA Analytics and computer software for scheduling and resource allocation.	1990-1995

4.3 CONSULTING RECORD

4.3.1 INDUSTRY

1. Pratt & Whitney - fleet planning	1978-1979
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2.	The Flying Tiger Line - logistics, cargo allocation	1978
3.	Hughes Air West - network rationalization	1980
4.	Pan American World Airways - B-727-100 aircraft replacement	1981
5.	Federal Express - maintenance and engineering simulation	1982
6.	Olympic Airways - fuel optimization and burn, fleet planning, schedule planning	1983
7.	British Caledonian Airways - scheduling	1984-1985
8.	KLM - scheduling	1985
9.	Air New Zealand - scheduling	1986
10.	Cathay Pacific - scheduling	1985-1986
11.	Northwest Orient - merger with Republic	1986-1987
12.	Continental Airlines/Texas Air Corporation - effect of aircraft noise rules on schedules	1987
13.	Iberia - Spain - scheduling	1990
14.	Canadian Airlines - scheduling	1990
15.	Saudia - Airline of Saudi Arabia - scheduling	1990
16.	Aeromexico - Mexico - Strategic Planning	1991-1992
17.	Northwest Airlines - scheduling	1991-1992
18.	Alitalia - Italy - scheduling	1992
19.	USAir - scheduling	1992
20.	Garuda Indonesia - Indonesia - corporate planning	1994-1995
21.	Continental - scheduling	1994-1995
22.	Federal Aviation Administration – scheduling (with Gull Electronics, Parker Hannifen)	1996
23.	Trans World Airlines – schedule optimization	1998-2001

4.3.2 GOVERNMENT AND MILITARY

1.	National Aeronautics & Space Administration (NASA) - forecasting methods	1977
2.	Massachusetts Aeronautics Commission - aviation activity forecasts	1978-1979
3.	Department of Transportation, Office of the Secretary - transportation systems modeling	1979
4.	Federal Aviation Administration - manpower & equipment production forecast modeling	1980-1982
5.	U.S. Air Force - equipment planning, logistics, dynamic (real-time) aircraft and crew deployment	1983-1987
6.	U.S. Air Force Materiel Command, Manufacturing Technology () Lean Sustainment	1997-2001
7.	U.S Air Force, Oklahoma City Industrial Complex – Lean/Cellular Transformation	2003-2005

4.4 ENTREPRENEURIAL ACTIVITIES

Founder and President of Scheduling Systems, Inc., Analytics and computer software for scheduling and resource allocation.	1990-1995
Founder and Director of Opus Technology, Inc., a Massachusetts Corporation for the development and support of resource allocation computer software.	1996

4.5 ATTENDANCE AT PROFESSIONAL MEETINGS

Institute for Operations Research and Management Science (INFORMS)	
-San Francisco	May 1977
-Atlanta	Nov 1977
-New York	May 1978
-Los Angeles	Nov 1978
-New Orleans	May 1979
-Washington DC	May 1980
-Colorado	Nov 1980
-Toronto	May 1981
-Houston	Oct 1981
-Detroit	Apr 1982
-San Diego	Oct 1982
-Chicago	Apr 1983
-San Francisco	May 1984
-Boston	Apr 1985
-New Orleans	May 1987
-New Orleans	Nov 1995
-Atlanta	Nov 1996
-Dallas	Oct 1997
-Montreal	Apr 1998
-Seattle	Oct 1998
-Cincinnati	Apr 1999
-Philadelphia	Nov 1999
-Miami	Nov 2001
-Washington, DC	Oct 2008
-San Diego	Oct 2009
-Boca Raton	Mar 2012
-Phoenix	Oct 2012
-Stockholm, Sweden	Jun 2013
International Federation of Operational Research Societies Airline Group (AGIFORS)	
-San Francisco	Dec 1972
-Memphis	Oct 1983

-Strassbourg, France	Sept 1984
-Cambridge, MA	Sept 1986
-Hong Kong	Nov 1989
-Chicago	Oct 1993
-Atlanta	Nov 1996
-Sydney, Australia	Sep 2001
-Montreal, Canada	Sep 2008
American Institute of Aeronautics & Astronautics (AIAA)	
-Los Angeles	1978
Transportation Research Board (TRB)	
-Menlo Park, CA	1980
Air Transportation Research International Forum (ATRIF)	
-New York	Nov 1973
-Cambridge, MA	Apr 1974
-Northwestern University	Apr 1975
-University of Pennsylvania	Mar 1976
-MIT, Cambridge, MA	Oct 1976
-San Francisco	May 1977
-Georgia Institute of Technology, Atlanta	Nov 1977
-MIT	May 1978
-Washington, DC	Oct 1978
-New Orleans	May 1979
-Maryland	Oct 1979
-Cincinnati	May 1980
-Menlo Park, CA	Nov 1980
-Atlantic City	May 1981
-Northwestern University	Oct 1981
-San Francisco	May 1982
-Memphis	Nov 1982
-Montreal	Jun 1983
-Dallas	Nov 1983
-Virginia	Feb 1984
-St. Louis	Oct 1984
-Hartford, CT	Oct 1995
Transportation and Logistics Conference	
-Babson College	1985
Decision Sciences Institute (DSI)	
-Honolulu	1986
-Las Vegas	1988
-New Orleans	1989
-San Diego	1990

-Miami	1991
-San Francisco	1992
-Washington	1993
-Orlando	2000
-Pittsburgh (NorthEastDSI)	2001
-Puerto Rico (NEDSI)	2002
-Washington, DC	2003
-Providence RI (NEDSI)	2003
-Charleston, SC	2004
-San Francisco	2005
-San Antonio	2006
-Phoenix	2007
-San Diego	2008
-San Diego	2010
-San Francisco	2012
-New York (NEDSI)	2013
 International Federation of Operational Research Societies (IFORS)	
-Edinburgh	2002
 American Society of Naval Engineers (ASNE)	
-Washington	2002
 International Applied Business Research (ABR) Conference	
-Acapulco, Mexico	2003
-Puerto Rico	2004
 European Applied Business Research (EABR) Conference	
-Athens, Greece	2005
-Santorini, Greece	2005
-Siena, Italy	2006
 European Academic Conference (EAC)	
-Rome, Italy	2012
-Mediterranean	2012
-Baltic Region	2013
 Applied Business Research & College Teaching and Learning Conference (ABR)	
-Lake Buena Vista / Orlando, FL	2004
-Lake Buena Vista / Orlando, FL	2005
-Lake Buena Vista / Orlando, FL	2006
-Florence, Italy	2006
-Lake Buena Vista / Orlando, FL	2008
 International Conference on Business	

-Honolulu, Hawaii	2004
Northeast Business & Economics Association (NBEA)	
-New York, NY	2004
-Newport, RI	2005
Production and Operations Management Society (POMS)	
-Chicago, IL	2005
International Academy of Business and Public Administration Disciplines (IABPAD)	
-Lake Buena Vista / Orlando, FL	2007
-Lake Buena Vista / Orlando, FL	2009
Joint Statistical Meeting (JSM) of the American Statistical Association	
-Salt Lake City	2007
-Denver	2008
-Tampa (Conference on Statistical Practice)	2014
International Business & Management Research (IBMR)	
-Honolulu	2009
International Journal of Arts & Sciences Conference	
-Orlando	2010
International Conference on Enterprise Systems (ICEIS)	
-Madeira, Portugal	2010
International Business & Economics Research (IBER)	
-Los Angeles	2011
Resilience	
-Tempe, AZ	2011
Atlantic Marketing Association	
-Charleston, SC	2011
-Savannah, GA	2015
-Williamsburgh, VA	2017
Society for Marketing Advances (SMA)	
-Hilton Head, SC	2013
-West Palm Beach	2018
Global Business, Marketing, and Economic Conference	
-Los Angeles	2014

International Academic Conference -San Antonio	2014
International Conference on Mechanics and Control Engineering -Asheville, NC	2014
European Conference on Sustainable Development -Rome, Italy	2015
Critical Communications World -Barcelona, Spain	2015
American Society for Competiveness (ASC) -Falls Church, VA	2015
International Association of Applied Business Research (IAABR) -Orlando	2016
-Miami	2017
Center for Scholastic Inquiry (CSI) -Scottsdale	2016

4.6 PROFESSIONAL SOCIETY MEMBERSHIPS

Institute for Operations Research and Management Science (INFORMS)
Decision Sciences Institute (DSI)
International Federation of Operational Research Societies (IFORS)
Airline Group of IFORS (AGIFORS)
Mathematics Association of America (MAA)
Society for Marketing Advances (SMA)

4.7 PROFESSIONAL SOCIETY ACTIVITIES

President - Air Transportation Research International Forum	1982-1984
Referee for Journals:	
-Transportation Science	1984-Present
-Management Science	1984-Present
-Decision Sciences	1984-Present
-Journal of Air Transport Management	1984-2000
Paper reviewer for Decision Sciences Institute (DSI) and Northeast DSI conferences	1990-Present

4.8 PROGRAMMING LANGUAGES

R
C
BASIC
FORTRAN
PASCAL

5 CONTRIBUTIONS TO THE COLLEGE COMMUNITY

5.1 COMMITTEES

Faculty Computer Committee	1984-1985
Undergraduate Planning Review Board (PRB)	1988-1990
Undergraduate Strategic Planning Committee	1990
Undergraduate Foundation Program Coordinators Council	1990-1991
Board of Research (BoR)	1997, 2001-2004
Faculty Compensation Committee (Chair)	1999-2005
Employee Benefits Committee	2000
Babson Faculty Research Fund (BFRF)	2005-2007
Faculty Workload and Compensation Committee (FWCC)	2012-Present
Math/Science Division Undergraduate Curriculum Committee	2012-2013
Math/Science Division Scheduling Committee	2012-Present
Math/Science Division Speaker's Committee	2017

5.2 COURSE COORDINATOR

Introduction to Information Systems	1985-1990
Quantitative Methods	1992-1995
QTM2420/2421 Applied Quantitative Modeling	2002-2007
QTM2420/2421 Applied Quantitative Modeling	2012-2013
QTM1010 Quantitative Methods for Business Analytics	2013

5.3 OTHER COLLEGIATE ACTIVITIES

1. Management Consulting Field Experience (MCFE) Wang Labs	1985
2. Plymouth-Provincetown Relay Race	1984-1988
3. Course and Classroom Scheduling	1984
4. Student Computer Fair, Faculty Advisor to a student, Chris Levy	1985
5. Presentation at Babson's Transportation and Logistics Conference	1985
6. Management Information Systems Student Survey	1987
7. International Internship Program - Faculty Advisor	1990
8. Faculty Advisor: Undergraduate Program	1992-1996
9. Undergraduate Mentor Program	1997-1998

10. Module III, 2-year MBA, Lead for the DSS Stream	1999-2001
11. Babson Employee Survey	1999
12. Outcome Assessment in the Classroom, Analysis of the Babson Student Opinion Survey	1999
13. Web-Based Model Database for the Babson Technology Advisory Board	1999-2000
14. Math/Science Sub-Committee to Evaluate DSS in the Graduate Program	1999-2000
15. Math/Science Sub-Committee, Course Software Task Force	2002
16. Math/Science Sub-Committee, Undergraduate Core Task Force, Chair in 2004	2002-2004
17. Integrated Management Core (IMC) Redesign Team	2002-2003
18. Independent Study	2003-2005
19. Honors Thesis Advisor	2003-2008
20. Fund Raising: Student Scholarship Program in Business Analytics.	2018
21. Fund Raising: Attended a Babson fund raising event hosted by Bob Weissman at Shadowood, Bonita Springs, FL.	2018

5.4 COURSE AND CURRICULUM DEVELOPMENT

Development of QTM7520 (Operations Research)	1985
Development of MIS2630 (Problem Solving & Software Design)	1986-1991
Management Information Systems Curriculum Development	1986-1994
Development of QTM3520 (Management Science)	1992
Development of QTM1301 (Advanced Applied Calculus)	2008
Revision of QTM2421 (Honors Applied Quantitative Modeling)	2008
Development of QTM2300 (Honors Applied Calculus II)	2009
QTM1010 Quantitative Methods for Business Analytics	2013
QTM7540 Business Forecasting with Predictive Analytics	2016
QTM2623 Programming with R for Business Analytics	2017
QTM7200BL Miami Business Analytics: Data, Models and Decisions	2018

5.5 COMMUNITY AFFAIRS

Public Expert Witness, Standing Committee on Transport, House of Commons, Canadian Parliament, Ottawa, Canada	1982
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5.6 OTHER ACTIVITIES

Private Pilot	Present
Aircraft Owner	1999-2012
Member: Aircraft Owners and Pilots Association	Present