



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
QTM7800	Business Analytics Boston, Wellesley	2022-

### 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, Transportation Science, Vol. 19, No. 2. 1985
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”. with C.L. Comm. Journal of Marketing Analytics. 6(4), 150–156. 2018
43. “The Contribution of Analytic Visualizations to the Marketing of Sustainable Products”. with C.L. Comm. Journal of Marketing Analytics. 8(2/3), 31–38. DOI: [10.1057/s41270-019-00066-3](https://doi.org/10.1057/s41270-019-00066-3). 2020
44. Political Marketing with Data Analytics. Journal of Marketing Analytics, 9, 56-64. 2021
45. Data Science in a Pandemic. Data Science Journal. 22(1), 41. 2023
46. Using data visualizations as information communication tools during a crisis: a critical review. Journal of Information Communication and Ethics in Society, 22(1), pp. 103–pp. 123. <https://doi.org/10.1108/jices-06-2023-0080> 2024
47. Addressing “Social Hesitancy” with Visual Marketing. Journal of Social Marketing, 14(No. 3/4), 483–509. <https://doi.org/10.1108/JSOCM-01-2024-0006> 2024

### 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 UNDER REVIEW OR BEING REVISED

Status	Project Title	Journal or Publisher	Date
Submitted	<i>Addressing "Social Hesitancy" with Visual Marketing</i>	Journal of Social Marketing	December 2023

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

1. "Airline Schedule Planning and Evaluation Model," McDonnell Douglas Corporation Paper No. 6096, 1972 1972
2. "A Long Range Fleet Planning Model for the Air Transport Industry," Flight Transportation Laboratory Paper No. 77-6, MIT, 1977. 1977
3. "A Robust, Policy-Oriented Econometric Model of the Demand for Air Transportation," Flight Transportation Laboratory Report No. 79-4, MIT, 1978. 1978
4. "Massachusetts State Airport System Plan Forecasts, A Review of Available Methodologies," Flight Transportation Laboratory Report No. 78-3, MIT, 1978. 1978
5. "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
6. "Fleet Assignment with Variable Demand: A Goal Programming Approach," Unpublished Paper, MIT, 1983. 1983

7. "Optimization of Air Transport Capacity and Yields," Flight Transportation Laboratory Memorandum M83-1, MIT, 1983. 1983
8. "Cell Theory-Linear Programming Fleet Planning Model," Synergy Report, 1983. 1983
9. "A Library of Computer Algorithms for Operations Research and Management Science," Operations Research Center, Unpublished Paper, MIT, 1984. 1984
10. "Aircraft Scheduling: The State of the Art," International Federation of Operational Research Societies, Airline Group, Annual Proceedings of AGIFORS, Strassbourg, France, September 1984. 1984
11. "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
12. "Classroom Scheduling," with M. Ludwig, Report on Research, Babson College, 1985. 1985
13. "Dijkstra: A Software Package for Aid in Teaching Dijkstra's Shortest Path Algorithm," Unpublished Paper, MIT, Operations Research Center, 1986. 1986
14. "Hungarian: A Software Package for Aid in Teaching the Hungarian Algorithm for Solving the Assignment Problem," Unpublished Paper, MIT, Operations Research Center, 1986. 1986
15. "Cell Theory: A Cluster Approach to the Airline Fleet Planning Problem," Proceedings of the Decision Sciences Institute, Honolulu, November 1986. 1986
16. "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
17. "Airlift Loading Model (ALM): Model Improvements and Operating System Enhancements," Unpublished Paper, written for the U.S. Air Force, 1986. 1986
18. "Course and Classroom Scheduling: Assessing a Market for Computer Software Support," with C. Comm, Proceedings of the Decision Sciences Institute, November 1988. 1988

19. "Course and Classroom Scheduling using Interactive Computer Graphics," Proceedings of the Decision Sciences Institute, November 1989. 1989
20. "Airline Safety: Public Policy and Marketing Issues", with C. Comm and E. Foster-Curtis, Proceedings of the Decision Sciences Institute, November 1990. 1990
21. "An Expert System for the Classroom Scheduling Problem," with L.R. Hazelton, Proceedings of the Decision Sciences Institute, November 1991. 1991
22. "A Command and Control System for Airline Flight Operations," Proceedings of the Decision Sciences Institute, November 1992. 1992
23. "Analysis and Implications of Student Course Evaluation Instruments Used by AACSB Schools." Proceedings of the Decision Sciences Institute, November. 1992
24. "Aircraft Ground Motion Simulation," Proceedings of the Decision Sciences Institute, November 1993. 1993
25. "A Simulation of Aircraft Motion on the Airport Surface," Flight Transportation Laboratory, Report R94-10, 1994. 1994
26. "EXPRESS White Paper," Lean Sustainment Initiative, MIT, 1998. 1998
27. "White Paper on Best Sustainment Practices," Lean Sustainment Initiative, MIT, 1999. 1999
28. "Industry Benchmarking Survey of Lean Initiatives," Lean Sustainment Initiative, MIT, 1999. 1999
29. "Analysis of the Industry Benchmarking Survey of Lean Initiatives," Lean Sustainment Initiative, MIT, 1999. 1999
30. "On the relationship between the EXPRESS model and Goals, Objectives and Metrics: A Case Study," Lean Sustainment Initiative, MIT, 1999. 1999
31. "A Framework for Identifying and Classifying Best Sustainment Practices," with C. Comm and T. Cathcart, August 2001. 2001
32. "Less is More: The Concept of a 'Lean' Airline," with C. Comm, September 2001. 2001

33. "How are Automatic Test Systems (ATS) Contributing to the US Air Force Parts and Materials Problem?" with T. Cathcart, October 2001. 2001
34. "Best Sustainment Practices for the Parts and Materials Problem in the Military", White Paper, with W. Patrick, October 2001. 2001
35. "High Level Value Stream Mapping," with A. Davis and K. Chase, October 2001. 2001
36. "C-141 Panel Case Study," with K. Chase, October 2001. 2001
37. "F-15 Heads Up Display Case Study, with K. Chase, October 2001. 2001
38. "Configuration Management Practices Contribute to Parts and Materials Shortages for U.S. Air Force MRO Operations," with M. Agripino, October 2001. 2001
39. "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
40. "Statement of Objectives (SOO) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program, July 2003. 2003
41. "Performance Work Statement (PWS) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," August 2003. 2003
42. "Single Acquisition Management Plan (SAMP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program, September 2003. 2003
43. "White Paper on Lean," October 2003. 2003
44. "White Paper on Cellular," October 2003. 2003
45. "Source Selection Plan (SSP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," November 2003. 2003
46. "Market Research for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," November 2003. 2003

47. "Treatise on Process Improvement Programs," November 2003. 2003
48. "Communications Plan for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," December 2003. 2003
49. "Risk Management Plan (RMP) for the Oklahoma City Air Logistics Center (OC-ALC) MRO Transformation Program," December 2003. 2003
50. "Oklahoma City Air Logistics Center (OC-ALC) Maintenance, Repair and Overhaul (MRO) Transformation Program, An Architecture for a Lean Transformation," December 2003. 2003
51. "Best Sustainment Practices Case Study: Pratt & Whitney," January 2003. 2003
52. "Best Sustainment Practices Case Study: Sandia National Laboratories and Los Alamos National Laboratories," May 2003. 2003
53. "Best Sustainment Practices Case Study: Airbus Industries and the European Aeronautic Defense and Space Companies," June 2003. 2003
54. "Best Sustainment Practices Case Study: Lockheed Martin," December 2004. 2004
55. "Best Sustainment Practices Case Study: Rockwell Collins," December 2004. 2004
56. "Business Case Analysis," written for the Oklahoma City Air Logistics Center, US Air Force, Oklahoma City, OK, January 2005. 2005
57. "Lean Enterprise Architecting for Military Sustainability," written for the Oklahoma City Air Logistics Center, US Air Force, Oklahoma City, OK, May 2005. 2005
58. "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
59. "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
60. "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.
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.
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.
23. Course and Classroom Scheduling: Assessing a Market for Computer Software Support, National Meeting of the Decision Sciences Institute, Las Vegas, November 1988.
24. Interactive Computer Graphics for Execution Rescheduling, IBM Airline Operations Conference, Brussels, Belgium, June 1989.
25. Interactive Computer Graphics for Execution Rescheduling, Airline Group, International Federation of Operational Research Societies, Hong Kong, November 1989.
26. Course and Classroom Scheduling with Interactive Computer Graphics, National Meeting of the Decision Sciences Institute, New Orleans, November 1989.
27. Airline Safety: Public Policy and Marketing Issues, National Meeting of the Decision Sciences Institute, San Diego, November 1990.
28. An Expert System for the Classroom Scheduling Problem, National Meeting of the Decision Sciences Institute, Miami, November 1991.
29. A Command and Control System for Airline Flight Operations, National Meeting of the Decision Sciences Institute, San Francisco, November 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.

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,” 31<sup>st</sup> 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 (EABR) Conference, Athens, Greece, June 13-17, 2005, **Best Paper Award**. 2005
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 (CTL), 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 2015



Scalability be a Marketing Liability for Sustainability?," Atlantic Marketing Association, Savannah, GA. September. (Refereed)

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

- 107. Paper: Society for Marketing Advances Annual Conference, “The Application of Analytics to Scarcity Marketing: The Case of Abalone,” Society for Marketing Advances, New Orleans, LA. November. (Refereed) 2019
- 108. Paper: Society for Marketing Advances Annual Conference, “The Use of Data Science to Market Vaccinations,” Society for Marketing Advances, Orlando, FL. November. (Refereed) 2021
- 109. Paper: Society for Marketing Advances Annual Conference, “Sentiment Analysis on Vaccine Hesitancy for Marketing Vaccines,” with Comm, C. L., Charlotte, NC. (November 2022). (Refereed) 2022

### 3.6 RESEARCH

#### 3.6.1 RESEARCH IN PROGRESS

Project Title, Description, and Timeline
<p><i>Global Entrepreneurial Monitor and Fear of Failure</i></p> <p>This study focuses on the “fear of failure” among individuals or firms who perceive favorable opportunities to start a new business, but that a fear of failure prevents them from doing so. The variation between countries’ fear of failure rates depends on several factors. As a result of this study, a link between fear of failure and other factors is explained, and a conclusion is drawn about how fear of failure changes in relation to other factors followed by recommendations to promote entrepreneurial activities. It has been found that self-reported ‘fear of failure’ negatively impacts individuals’ decision to become entrepreneurs.</p> <p>Timeline: This research-in-progress is expected to result in a draft paper for Summer 2024, with a target of a journal article submission later in 2024.</p> <p>Assistance/ Acknowledgement: Mohit Bansal - MBA (Class of 2024) - assisting in the research under the Graduate Assistantship Program.</p>
<p><i>The Relationship between Financial Market Performance and Social Media</i></p> <p>Social media has become a popular open forum for analysing financial market performance; and, even more important, it can reflect sentiment towards the market. This paper investigates the impact of social media sentiment on the stock market. Using sentiment analysis, the correlation between daily sentiment scores and stock price movements was explored, as well as the relationship between sentiment and the crypto market, focusing on Bitcoin and Ethereum. Additionally, the sentiment expressed on Twitter and Reddit was compared to determine the differences between these platforms. The results of the study revealed a statistically significant relationship between social media sentiment and stock prices for selected companies. However, the correlation between social media sentiment and crypto market performance was virtually nonexistent. A comparison of Twitter and Reddit sentiment scores showed differences in the sentiment expressed on these platforms, with Twitter sentiment generally being more positive. These findings have important implications for investors, who should</p>

be cautious when relying on social media sentiment analysis for their investment decisions. The study contributes to the literature by highlighting the varying influence of social media sentiment on different financial markets and emphasizing the need for investors to consider these differences when making investment decisions.

Timeline: The research is expected to be completed Spring/Summer 2024, with a target of a journal article submission later in 2024.

Assistance/ Acknowledgements:

- Aryan Jatwani - Undergraduate. Graduated May 2023. Assisting with modelling.
- Zide Yang - Undergraduate. Graduated December 2023. Teaching Assistant Fall 2023. Assisting with Data Science and modelling.

### **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](http://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 <u>Sustaining the Military Enterprise: Enhancing its Ability to Perform the Mission</u> | 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
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
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Transportation Research Board (TRB)

-Menlo Park, CA	1980
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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, FL	2018
-New Orleans, LA	2019
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
Comparative & International Education Society (CIES 2019)	

**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  
 Python  
 C/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) (Co-chair 2022-2023)	2012-2015, 2020-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
QTM7800 Business Analytics	2022-

#### 5.5 COMMUNITY AFFAIRS

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

#### 5.6 OTHER ACTIVITIES

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