CURRICULUM VITAE

Mehmet Selim Aktürk

1. PERSONAL DATA

Date and Place of Birth	: June 14, 1959, Ankara – Turkey
Address	: Department of Industrial Engineering Bilkent University, 06800 Ankara – Turkey
Phone	: 90–312–290 1360
Fax	: 90–312–266 4054
E-Mail	: akturk@bilkent.edu.tr
URL	: http://akturk.bilkent.edu.tr

2. ACADEMIC DEGREES

Assoc. Prof.	Higher Educational Council of Turkey, 1996.
Ph.D.	Industrial Engineering Department, 1990 Lehigh University, Bethlehem, Pennsylvania, USA.
M.S.	Department of Industrial Engineering, 1984 Middle East Technical University, Ankara, Turkey.
B.S.	Department of Industrial Engineering, 1982 Middle East Technical University, Ankara, Turkey.

3. EMPLOYMENT HISTORY

August'13- **Present**	Chair Bilkent University, Dept. of Industrial Engineering
September'90- **Present**	Professor / Associate Professor / Assistant Professor Bilkent University, Dept. of Industrial Engineering
August'09- **July'10**	Visiting Professor University of California at Berkeley, Department of Industrial Engineering and Operations Research, USA.
May'98- **August'99**	Visiting Professor McGill University, Master of Manufacturing Management Program and Faculty of Management, Montreal, Canada.
July'92- **August'92**	Visiting Scholar Carnegie Mellon University, Graduate School of Industrial Administration and The Robotics Institute, Pittsburgh, USA.

January'90- Summer'90	Instructor Lehigh University, Industrial Engineering Department
Summer'88 and 8/1989 - 12/1989	Teaching Assistant Lehigh University, Manufacturing Systems Engineering Department
August'86- June'89	Teaching Assistant Lehigh University, Industrial Engineering Department
July'83- February'84	Industrial Engineer
November'82- June'83	Teaching Assistant Middle East Technical University, Dept. of Industrial Engineering

4. PROFESSIONAL AWARDS

- 2011 The Airline Group of the International Federation of Operational Research Societies (AGIFORS) 'Best Technical Paper' award in 51^{st} Annual Symposium
- 2008 Winner of the Bilkent University Distinguished Teaching Award
- 1988 Winner of the Lehigh University Arthur E. Humphrey Outstanding Teaching Assistant Award
- Turkish Government scholarship for Ph.D. study
- Scientific and Technical Research Council of Turkey scholarship for M.S. study
- Sabancı Corporation scholarship for B.S. study

5. HONORS, SCHOLARLY and PROFESSIONAL DUTIES and ACHIEVEMENTS

- President, Operational Research Society of Turkey, for three terms 2013-2015, 2015-2017 and 2017-2019.
- Editor, 1998-2007, Editorial Board Member, 1993-1998, Industrial Engineering Journal published by Turkish Chamber of Mechanical Engineers
- Chair, Program Committee of XXIX. Operations Research and Industrial Engineering Conference, Ankara, Turkey, June 2009
- Chair, Organization Committee of XVI. Operations Research and Industrial Engineering Conference, Ankara, Turkey, July 1994
- President of Graduate Student Council at Lehigh University for two terms 1986-1987 and 1987-1988

6. MEMBERSHIP

- Senior Member of Institute of Industrial Engineers

- Full member of INFORMS
- Member of Operational Research Society, Turkey
- Member of Turkish Chamber of Mechanical Engineers
- Member of Association for Evaluation and Accreditation of Engineering Programs (MÜDEK)

7. **INVITED LECTURES and INVITED TALKS**

- 'Multi-stage airline scheduling problem with stochastic passenger demand and non-cruise times', (Invited Talk), presented at *INFORMS Annual Meeting, Houston*, October 2017.
- 'How to deal with disruptions: Robust scheduling vs Recovery algorithms in Airline Scheduling', (Invited Talk), presented at *AGIFORS Scheduling and Strategic Planning Group Annual Meeting*, June 1-2, 2016. (**Best Presentation Award**)
- 'How to deal with disruptions: Robust scheduling vs Recovery algorithms', (Invited Talk), presented at *Integrated Supply Chain, Istanbul*, May 7-8, 2014.
- 'Lot sizing with piecewise concave production costs', (Invited Talk), presented at *26th EURO/INFORMS, Rome*, July 1-4, 2013.
- 'Robust airline scheduling with controllable cruise times and chance constraints' AGIFORS 52^{nd} Annual Symposium, October 9-13, 2012.
- 'Aircraft and passenger recovery with cruise speed control', (Invited Talk), presented at *INFORMS Annual Meeting, Phoenix*, October 2012.
- "Aircraft recovery model with flight time controllability", AGIFORS 51^{st} Annual Symposium, October 10-14, 2011.
- "Aircraft recovery model with flight time controllability", Joint Seminar, November 16, 2011, Sabancı University, Faculty of Management and Dept. of Industrial Engineering.
- "Bi-criteria scheduling with controllable processing times", September 21, 2009, University of California at Berkeley, Dept. of Industrial Engineering and Operations Research.
- "Bi-criteria scheduling with controllable processing times", Semi-plenary talk, presented at PMS 2008, Eleventh International Workshop on Project Management and Scheduling, April 28-30, 2008, Istanbul, Turkey.
- "Bi-criteria scheduling with controllable processing times", December 1, 2006, Koc University, Business Administration and Dept. of Industrial Engineering.
- "Scheduling with controllable processing times", November 24, 2005, Bogazici University, Dept. of Industrial Engineering.
- "Scheduling with controllable processing times", April 14, 2004, Sabancı University, Dept. of Manufacturing Systems Engineering.
- "Bicriteria scheduling and tool management in flexible manufacturing cells", November 21, 2000, Lehigh University, Dept. of Industrial and Manufacturing Systems Engineering.

- "A problem space genetic algorithm to bicriteria scheduling in flexible manufacturing cells", presented at *15th International Conference on Multiple Criteria Decision Making*, July 10-14, 2000, Ankara, Turkey.
- "ERP systems and E-Commerce", presented at *20th Operational Research and Industrial Engineering Conference*, June 11-14, 2000, Magosa, Cyprus.
- "Problem Space Search in Scheduling", (Invited Talk), presented at *INFORMS Meeting, Cincinnati*, May 1999.
- "Integrated scheduling and tool management in automated manufacturing systems", presented at *McGill University, Faculty of Management*, May 1999.
- "Scheduling a CNC machine with tool changes", (Invited Talk), presented at *INFORMS Meeting, Montreal*, April 1998.
- "Integrated lot sizing, scheduling and tool management in automated manufacturing systems", presented at *Middle East Technical University, Industrial Engineering Department*, November 1997.
- "Ülkemizde Endüstri-İşletme Mühendisliği Eğitimi", *Endüstri-İşletme Mühendisliği Kurultayı*, İzmir, Kasım 1997.
- "Tool management in automated manufacturing systems", presented at *Turkish-Finnish Workshop on Operations Research, Ankara*, August 1996.
- "An exact tool allocation approach for CNC machines", presented at *Bilkent/Georgia Tech/Technion Joint Conference on Manufacturing Logistics*, Ankara, April 1996.
- "Match-up scheduling under a machine breakdown in cellular manufacturing systems", presented at *Lehigh University, Industrial and Manufacturing Systems Engineering Department*, November 1995.
- "Reactive scheduling in cellular manufacturing systems", (Invited Talk), presented at *INFORMS Annual Meeting, New Orleans*, October 1995.
- "An exact approach to minimize total tardiness subject to release dates", presented at *Combinatorial Optimization Workshop*, Ankara, May 1995.

8. TEACHING

Graduate Courses :

- IE 561 Manufacturing Systems (Bilkent Univ.) Spring 1991, 1992, 1996, 2000, 2003, Fall 2006
- IE 573 Theory of Machine Scheduling (Bilkent Univ.) Spring 2004, Fall 2005, 2007, 2008, 2010, 2013
- IE 590/690 Research Topics in IE and OR (Bilkent Univ.) 1996, 2000, 2013, 2014
- 305-529 Discrete Manufacturing Systems (McGill Univ.) Summer 1998, 1999
- 277-601 Management of Technology in Manufacturing Systems (McGill Univ.) Winter 1999

- 277-631 Analysis of Manufacturing Systems (McGill Univ.) Winter 1999
- MSE 433 Technology of the Factory of Future (Lehigh Univ.) Fall 1989

Undergraduate Courses :

- IE 262 Manufacturing Processes (Bilkent Univ.) Spring 1991, 1992, 1993, 1994, 1995, 1997, 1998, 2000, 2001
- IE 322 Stochastic Models (Bilkent Univ.) Spring 1995
- IE 371 Operations Analysis and Design (Bilkent Univ.) Fall 1994, 1996, 1997
- IE 376 (former IE 473) Production Information Systems (Bilkent Univ.) Fall 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, Spring 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2018
- IE 462 Introduction to Advanced Manufacturing Technologies (Bilkent Univ.) Fall 2007, 2008
- IE 463 Operations Scheduling (Bilkent Univ.) Fall 2017
- IE 400 Principles of Engineering Management (Bilkent Univ.) Fall 1995
- IE 477 Production Systems Design - Synthesis (Bilkent Univ.) Fall 2000, 2001, 2011, 2012, 2015, 2016
- IE 478 Production Systems Design - Practice (Bilkent Univ.) Spring 1994, 2001, 2002, 2012, 2013, 2016, 2017
- IE 490 Introduction to Research in IE & OR (Bilkent Univ.) Fall 1996
- IE 496 Seminar in Production Systems (Bilkent Univ.) Spring 2001, 2002, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- GE 401-402 Innovative Product Design and Development I-II (Bilkent Univ.) 2000, 2001, 2002, 2003
- 280-373 Operations Research (McGill Univ.) Summer 1998
- IE 222 Operations Research - Deterministic Models (Lehigh Univ.) Spring 1990

Independent Study Supervised :

As a part of IE 490 Introduction to Research in IE & OR course, I have supervised more than 20 senior students.

9. GRADUATE STUDENT SUPERVISION

Ph.D. Students:

- Ayten Türkcan, Ph.D., Essays on scheduling with controllable processing times in flexible manufacturing systems, April 2003.
- Hakan Gültekin, Ph.D., Scheduling in flexible robotic manufacturing cells, September 2006.
- Sinan Gürel, Ph.D., Time/Cost trade-offs in machine scheduling with controllable processing times, January 2008.

- Uğur Arıkan, Ph.D., Aircraft and passenger recovery with cruise speed control, September 2014, (co-advised with S. Gürel).
- Esra Koca, Ph.D., Essays on the capacitated lot sizing problem, July 2015, (co-advised with H. Yaman).
- Özge Şafak, Ph.D., Optimizing airline operations under uncertainty, expected graduation August 2018.
- İrfan Mahmutoğulları, Ph.D., Risk-averse multi-stage stochastic mixed integer programming, expected graduation August 2018, (co-advised with Ö. Çavuş).

M.Sc. Students:

- İhsan Durusoy, M.S., Joint economic lot sizing approach to the just-in-time purchasing problem, February 1993.
- Orhan Dağlıoğlugil, M.S., Dynamic lot-sizing and scheduling in a cellular manufacturing system, August 1993.
- Selçuk Avcı, M.S., Machining conditions optimization, tool magazine arrangement and operation sequencing on a CNC turning center, August 1993.
- Elif Görgülü, M.S., Reactive scheduling in cellular manufacturing systems, September 1993.
- H. Okan Balköse, M.S., A part family formation algorithm in a group technology environment using a multi-objective cluster analysis, September 1993.
- Haluk Yılmaz, M.S., Planning and control of automated guided vehicle systems in the AMRF decision hierarchy, September 1993.
- M. Bayram Yıldırım, M.S., A new dominance rule to minimize total weighted tardiness on a single machine, July 1996.
- Siraceddin Önen, M.S., Joint lot sizing and tool management in a single CNC environment, October 1996.
- Feryal Erhun, M.S., Design and scheduling of periodic-review kanban systems, June 1997.
- Serkan Özkan, M.S., Integrated scheduling and tool management in flexible manufacturing cells, July 1997.
- Kemal Kılıç, M.S., Generating short-term observation schedules for space mission projects, August 1997.
- Deniz Özdemir, M.S., An exact approach to minimize total weighted tardiness subject to release dates, August 1998.
- Ayten Türkcan, M.S., Design of cellular manufacturing systems using a holonistic approach, August 1998.
- E. Didem Güneş, M.S., Scheduling with tool changes to minimize total completion time, December 1998.
- Rabia Köylü, M.S., Scheduling with tool changes to minimize total completion time under controllable machining conditions, September 2001.
- Hakan Gültekin, M.S., Robotic cell scheduling with operational flexibility, June 2002.

- Taylan İlhan, M.S., Scheduling with controllable processing times in a CNC environment, August 2002.
- Sinan Gürel, M.S., Scheduling preventive maintenance on a single machine: A machining conditions based approach, December 2002.
- H. Müge Yayla, M.S., Effects of product variety in technology selection decision for cellular manufacturing system design, July 2003.
- M. Oğuz Atan, M.S., Single CNC machine scheduling with controllable processing times and multiple due dates, July 2004.
- Nuriye Kaptanlar, M.S., Factory level preventive maintenance in Turkish Air Force, August 2006.
- Serdar Yıldız, M.S., An analysis of pure robotic cell cycles, July 2008.
- Ersin Körpeoğlu, M.S., Master production scheduling under uncertainty with controllable processing times, July 2009 (co-advised with H. Yaman).
- Adnan Tula, M.S., Robotic assembly line design with tool changes, July 2009.
- Zeynep Uruk, M.S., Two-machine flow shop scheduling with flexible operations and controllable processing times, August 2011, (co-advised with H. Gultekin).
- Müge Muhafız, M.S. Rescheduling parallel machines with controllable processing times, May 2012, (co-advised with S. Gurel).
- Aslıgül Serasu Duran, M.S., Robust airline scheduling with controllable cruise times and chance constraints, July 2012, (co-advised with S. Gurel).
- Özge Şafak, M.S., Robust airline scheduling with fleet assignments, August 2013, (co-advised with S. Gurel).
- Hüseyin Gürkan, M.S., An integrated approach for robust airline scheduling, aircraft fleeting and routing, July 2014, (co-advised with S. Gurel).
- Nil Karacaoğlu, M.S., An application of stochastic programming on robust airline scheduling, July 2014, (co-advised with H. Yaman).
- Y. Naz Yetimoğlu, M.S., expected graduation June 2019.

10. SCHOLARLY PUBLICATIONS

10.1 Ph.D. Dissertation

A Hierarchical-Multiobjective Approach to Production Planning and Scheduling Problems in Cellular Manufacturing Systems, August 1990, Supervisor: Dr. George R. Wilson, Lehigh University.

10.2 Edited Books

Conference Proceedings of XVI. National Operations Research and Industrial Engineering Conference, ISBN 975-7679-18-6, Bilkent University, Ankara, October 1996. M. S. Aktürk.

10.3 Articles in refereed journals

1) M. S. Aktürk and S. Avcı, "Tool Allocation and Machining Conditions Optimization for CNC Machines", *European Journal of Operational Research*, Vol. 94, No. 2, pp. 335-348, 1996.
2) M. S. Aktürk and H. Yılmaz, "Scheduling of Automated Guided Vehicles in a Decision Making Hierarchy", *International Journal of Production Research*, Vol. 34, No. 2, pp. 577-591, 1996.
3) M. S. Aktürk and H. O. Balköse, "Part-Machine Grouping Using a Multi-Objective Cluster Analysis", *International Journal of Production Research*, Vol. 34, No. 8, pp. 2299-2315, 1996.
4) M. S. Aktürk and S. Avcı, "An Integrated Process Planning Approach for CNC Machine Tools", *International Journal of Advanced Manufacturing Technology*, Vol. 12, No. 3, pp. 221-229, 1996.
5) M. S. Aktürk, "A Note on the Within-Cell Layout Problem based on Operation Sequences", *Production Planning & Control*, Vol. 7, No. 1, pp. 99-103, 1996.
6) M. S. Aktürk and O. Dağlıoğlugil, "Dynamic Lot-Sizing and Scheduling in Cellular Manufacturing Systems Using Hybrid Simulation/Analytic Model", *International Journal of Industrial Engineering*, Vol. 2, No. 4, pp. 251-260, 1995.
7) S. Avcı and M. S. Aktürk, "Tool Magazine Arrangement and Operations Sequencing on CNC Machines", *Computers & Operations Research*, Vol. 23, No. 11, pp. 1069-1081, 1996.
8) M. S. Aktürk and İ. Durusoy, "Joint Economic Lot-Sizing Approach to the Just-in-Time Purchasing Problem", *Transactions on Operational Research*, Vol. 8, No. 2, pp. 77-95, 1996.
9) M. S. Aktürk and M. B. Yıldırım, "A New Lower Bounding Scheme for the Total Weighted Tardiness Problem", *Computers & Operations Research*, Vol. 25, No. 4, pp. 265-278, 1998.
10) M. S. Aktürk and G. R. Wilson, "A Hierarchical Model for Cell Loading Problem of Cellular Manufacturing Systems", *International Journal of Production Research*, Vol. 36, No. 7, pp. 2005-2023, 1998.
11) M. S. Aktürk and E. Görgülü, "Match-up Scheduling Under a Machine Breakdown", *European Journal of Operational Research*, Vol. 112, No. 1, pp. 81-97, 1999.
12) M. S. Aktürk, "An Exact Tool Allocation Approach for CNC Machines", *International Journal of Computer Integrated Manufacturing*, Vol. 12, No. 2, pp. 129-140, 1999.
13) M. S. Aktürk and K. Kılıç, "Generating Short-Term Observation Schedules for Space Mission Projects", *Journal of Intelligent Manufacturing*, Vol. 10, No. 5, pp. 387-404, 1999.
14) M. S. Aktürk and M. B. Yıldırım, "A New Dominance Rule for the Total Weighted Tardiness Problem", *Production Planning & Control*, Vol. 10, No. 2, pp. 138-149, 1999.
15) M. S. Aktürk and S. Önen, "Joint Lot Sizing and Tool Management in a CNC Environment", *Computers in Industry*, Vol. 40, No. 1, pp. 63-77, 1999.

16) M. S. Aktürk and F. Erhun, "An Overview of Design and Operational Issues of Kanban Systems", *International Journal of Production Research*, Vol. 37, No. 17, pp. 3859-3881, 1999. (**Reprint:** in ICFAI Journal of Operations Management, May 2004).

17) M. S. Aktürk and D. Özdemir, "An Exact Approach to Minimizing Total Weighted Tardiness with Release Dates", *IIE Transactions*, Vol. 32, No. 11, pp. 1091-1101, 2000.

18) M. S. Aktürk and A. Türkcan, "Cellular Manufacturing System Design Using a Holonistic Approach", *International Journal of Production Research*, Vol. 38, No. 10, pp. 2327-2347, 2000.

19) M. S. Aktürk and D. Özdemir, "A New Dominance Rule to Minimize Total Weighted Tardiness with Unequal Release Dates", *European Journal of Operational Research*, Vol. 135, No. 2, pp. 394-412, 2001.

20) M. S. Aktürk and S. Özkan, "Integrated Scheduling and Tool Management in Flexible Manufacturing Systems", *International Journal of Production Research*, Vol. 39, No. 12, pp. 2697-2722, 2001.

21) M. S. Aktürk and S. Önen, "Dynamic Lot Sizing and Tool Management in Automated Manufacturing Systems", *Computers & Operations Research*, Vol. 29, No. 8, pp. 1059-1079, 2002.

22) A. Türkcan and M. S. Aktürk, "A Problem Space Genetic Algorithm in Multiobjective Optimization", *Journal of Intelligent Manufacturing*, Vol. 14, No. 3-4, pp. 363-378, 2003.

23) S. Avcı, M. S. Aktürk and R. H. Storer, "A Problem Space Algorithm for Single Machine Weighted Tardiness Problems", *IIE Transactions*, Vol. 35, No. 5, pp. 479-486, 2003.

24) M. S. Aktürk, J. B. Ghosh and E. D. Güneş, "Scheduling With Tool Changes to Minimize Total Completion Time: A Study of Heuristics and Their Performance", *Naval Research Logistics*, Vol. 50, No. 1, pp. 15-30, 2003.

25) A. Türkcan, M. S. Aktürk and R. H. Storer, "Nonidentical Parallel CNC Machine Scheduling", *International Journal of Production Research*, Vol. 41, No. 10, pp. 2143-2168, 2003.

26) F. Erhun, M. S. Aktürk and A. Türkcan, "Interaction of Design and Operational Parameters in Periodic Review Kanban Systems", *International Journal of Production Research*, Vol. 41, No. 14, pp. 3315-3338, 2003.

27) M. S. Aktürk, J. B. Ghosh and E. D. Güneş, "Scheduling With Tool Changes to Minimize Total Completion Time: Basic Results and SPT Performance", *European Journal of Operational Research*, Vol. 157, No. 3, pp. 784-790, 2004.

28) M. S. Aktürk, H. Gültekin and O. E. Karaşan, "Robotic Cell Scheduling with Operational Flexibility", *Discrete Applied Mathematics*, Vol. 145, No. 3, pp. 334-348, 2005.

29) R. K. Kayan and M. S. Aktürk, "A New Bounding Mechanism for the CNC Machine Scheduling Problems with Controllable Processing Times", *European Journal of*

Operational Research, Feature Issue on Multicriteria Scheduling, Vol. 167, No. 3, pp. 624-643, 2005.

30) M. S. Aktürk and H. M. Yayla, “Management of Product Variety in Cellular Manufacturing Systems”, *International Journal of Flexible Manufacturing Systems*, Special Issue on Virtual & Non-traditional Manufacturing Cells, Vol. 17, No. 2, pp. 93-117, 2005.

31) H. Gültekin, M. S. Aktürk and O. Karaşan, “Cyclic Scheduling of a 2-Machine Robotic Cell with Tooling Constraints”, *European Journal of Operational Research*, Vol. 174, No. 2, pp. 777-796, 2006.

32) M. S. Aktürk, J. B. Ghosh and R. K. Kayan, “Scheduling With Tool Changes to Minimize Total Completion Time Under Controllable Machining Conditions”, *Computers & Operations Research* Vol. 34, No. 7, pp. 2130-2146, 2007.

33) S. Gürel and M. S. Aktürk, “Considering manufacturing cost and scheduling performance on a CNC turning machine”, *European Journal of Operational Research*, Vol. 177, No. 1, pp. 325-343, 2007.

34) H. Gültekin, M. S. Aktürk and O. Karaşan, “Scheduling in a Three-Machine Robotic Flexible Manufacturing Cell”, *Computers & Operations Research*, Vol. 34, No. 8, pp. 2463-2477, 2007.

35) A. Türkcan, M. S. Aktürk and R. H. Storer, “Due date and cost-based FMS loading, scheduling and tool management”, *International Journal of Production Research*, Vol. 45, No. 5, pp. 1183-1213, 2007.

36) S. Gürel and M. S. Aktürk, “Scheduling parallel CNC machines with time/cost trade-off considerations”, *Computers & Operations Research* Vol. 34, No. 9, pp. 2774-2789, 2007.

37) M. S. Aktürk and S. Gürel, “Machining Conditions Based Preventive Maintenance”, *International Journal of Production Research*, Vol. 45, No. 8, pp. 1725-1743, 2007.

38) S. Gürel and M. S. Aktürk, “Optimal allocation and processing time decisions on non-identical parallel CNC machines: ϵ-constraint approach”, *European Journal of Operational Research*, Vol. 183, No. 2, pp. 591-607, 2007.

39) H. Gültekin, M. S. Aktürk and O. Karaşan, “Scheduling in Robotic Cells: Process Flexibility and Cell Layout”, *International Journal of Production Research*, Vol. 46, No. 8, pp. 2105-2121, 2008.

40) M. O. Atan and M. S. Aktürk, “Single CNC machine scheduling with controllable processing times and multiple due dates”, *International Journal of Production Research*, Vol. 46, No. 21, pp. 6087-6111, 2008.

41) H. Gültekin, M. S. Aktürk and O. Karaşan, “Bicriteria Robotic Cell Scheduling”, *Journal of Scheduling*, Vol. 11, No. 6, pp. 457-473, 2008.

42) S. Gürel and M. S. Aktürk, “Scheduling preventive maintenance on a single CNC machine”, *International Journal of Production Research*, Vol. 46, No. 24, pp. 6797-6821, 2008.

43) H. Gültekin, O. Karaşan and M. S. Aktürk, “Pure cycles in flexible robotic cells”, *Computers & Operations Research*, Vol. 36, No. 2, pp. 329-343, 2009.

44) M. S. Aktürk, A. Atamtürk and S. Gürel, "A strong conic quadratic reformulation for machine-job assignment with controllable processing times", *Operations Research Letters*, Vol. 37, No. 3, pp. 187-191, 2009.

45) A. Türkcan, M. S. Aktürk and R. H. Storer, "Predictive/reactive scheduling with controllable processing times and earliness-tardiness penalties", *IIE Transactions*, Vol. 41, No. 12, pp. 1080-1095, 2009.

46) H. Gültekin, M. S. Aktürk and O. Karaşan, "Bicriteria robotic operation allocation in a flexible manufacturing cell", *Computers & Operations Research*, Vol. 37, No. 4, pp. 779-789, 2010.

47) M. S. Aktürk, A. Atamtürk and S. Gürel, "Parallel machine match-up scheduling with manufacturing cost considerations", *Journal of Scheduling*, Vol. 13, No. 1, pp. 95-110, 2010.

48) S. Gürel, E. Körpeoglu and M. S. Aktürk, "An anticipative scheduling approach with controllable processing times", *Computers & Operations Research*, Vol. 37, No. 6, pp. 1002-1013, 2010.

49) S. Yıldız, M. S. Aktürk and O. Karaşan, "Bicriteria robotic cell scheduling with controllable processing times", *International Journal of Production Research*, Vol. 49, No. 2, pp. 569-583, 2011.

50) M. S. Aktürk and T. Ilhan, 'Single CNC machine scheduling with controllable processing times to minimize total weighted tardiness', *Computers & Operations Research*, Vol. 38, No. 4, pp. 771-781, 2011.

51) E. Körpeoglu, H. Yaman and M. S. Aktürk, 'A multi-stage stochastic programming approach in master production scheduling', *European Journal of Operational Research*, Vol. 213, No. 1, pp. 166-179, 2011.

52) M. S. Aktürk, 'Joint cell loading and scheduling approach to cellular manufacturing systems', *International Journal of Production Research*, Vol. 49, No. 21, pp. 6321-6341, 2011.

53) S. Yıldız, O. Karaşan and M. S. Aktürk, 'An analysis of cyclic scheduling problems in robot centered cells', *Computers & Operations Research*, Vol. 39, No. 6, pp. 1290-1299, 2012.

54) G.D. Batur, O.E. Karaşan and M. S. Aktürk, 'Multiple part-type scheduling in flexible robotic cells', *International Journal of Production Economics*, Vol. 135, No. 2, pp. 726-740, 2012.

55) Z. Uruk, H. Gültekin and M. S. Aktürk, 'Two-machine flowshop scheduling with flexible operations and controllable processing times', *Computers & Operations Research*, Vol. 40, No. 2, pp. 639-653, 2013.

56) E. Koca, H. Yaman and M. S. Aktürk, 'Lot-sizing with piecewise concave production costs', *INFORMS Journal on Computing*, Vol. 26, No. 4, pp. 767-779, 2014.

57) M. S. Aktürk, A. Atamtürk and S. Gürel, 'Aircraft rescheduling with cruise speed control', *Operations Research*, Vol. 62, No. 4, pp. 829-845, 2014.

58) A. S. Duran, S. Gürel and M. S. Aktürk, 'Robust airline scheduling with controllable cruise times and chance constraints', *IIE Transactions*, Vol. 47, No. 1, pp. 64-83,

2015.

59) E. Koca, H. Yaman and M. S. Aktürk, ‘Stochastic lot-sizing with controllable processing times‘, *OMEGA*, Vol. 53, pp. 1-10, 2015.

60) U. Arıkan, S. Gürel and M. S. Aktürk, ‘Integrated aircraft and passenger recovery with cruise time controllability’, *Annals of Operations Research*, Vol. 236, No. 2, pp. 295-317, 2016.

61) H. Gültekin, A. Tula and M. S. Aktürk, ‘Automated robotic assembly line design with unavailability periods and tool changes’, *European Journal of Industrial Engineering* Vol. 10, No. 4, pp. 499-526, 2016.

62) H. Gürkan, S. Gürel and M. S. Aktürk, ’An integrated approach for airline scheduling, aircraft fleeting and routing with cruise speed control’, *Transportation Research Part C: Emerging Technologies*, Vol. 68, pp. 38-57, 2016.

63) Ö. Şafak, S. Gürel and M. S. Aktürk, ’Integrated aircraft-path assignment and robust schedule design with cruise speed control’, *Computers & Operations Research*, Vol. 84, pp. 127-145, 2017.

64) H. Gültekin, O. Dalgıç and M. S. Aktürk, ‘Pure cycles in two-machine dual gripper robotic cells’, *Robotics and Computer Integrated Manufacturing*, Vol. 48, pp. 121-131, 2017.

65) U. Arıkan, S. Gürel and M. S. Aktürk, ‘Flight network-based approach for integrated airline recovery with cruise speed control’, *Transportation Science*, Vol. 51, pp. 1259-1287, 2017.

66) İ. Mahmutoğulları, Ö. Çavuş and M. S. Aktürk, ’Bounds on risk-averse mixed-integer multi-stage stochastic problems with mean-CVAR’, *European Journal of Operational Research*, Vol. 266, pp. 595-608, 2018.

67) E. Koca, H. Yaman and M. S. Aktürk, ’Stochastic lot sizing problem with nervousness considerations’, *Computers & Operations Research*, Vol. 94, pp. 23-37, 2018.

10.4 Non-refereed journal articles (in Turkish)

1) “Internet: Enformasyona Erişim ve Paylaşım. Bölüm I. Internet ve Bilgisayar Ağları”, *Endüstri Mühendisliği*, Vol. 6, No. 1, pp.21-29, 1995. M. Akgül and M. S. Aktürk.

2) “Internet: Enformasyona Erişim ve Paylaşım. Bölüm II. Internet Servisleri”, *Endüstri Mühendisliği*, Vol. 6, No. 2, pp.24-29, 1995. M. Akgül and M. S. Aktürk.

3) “Internet: Enformasyona Erişim ve Paylaşım. Bölüm III. Türkiye’deki Internet Servisleri ve Öneriler”, *Endüstri Mühendisliği*, Vol. 6, No. 3, pp.19-27, 1995. M. Akgül and M. S. Aktürk.

4) “Sunuş: Üretim Kaynak Planlaması”, *Endüstri Mühendisliği*, Vol. 6, No. 6, pp.3-4, 1995. M. S. Aktürk.

5) F. Erhun and M. S. Aktürk, “Hücresel İmalat Sistemlerinde Çok Amaçlı Öbekleme ve Sınıflandırma Yöntemi”, *Endüstri Mühendisliği*, Vol. 6, No. 4, pp.3-13, 1995.

6) “Tepe Mobilya’da Hücresel Üretimle Teslimat Sürelerinin Kısaltılması”, *Endüstri Mühendisliği*, Vol. 17, No. 3, pp.16-30, 2006. C. H. Bozkurt, Y. Çınar, B. Kayayurt, B. Sevinçli, Ş. O. Tamer, A. D. Usluoğlu, M. S. Aktürk.

7) “Endüstri Mühendisliği Dergisi ve Değişim“, *Endüstri Mühendisliği*, 18 (1), 2-5, 2007. M. S. Aktürk.

10.5 Papers under review

1) İ. Mahmutoğulları, Ö. Çavuş and M. S. Aktürk, ’An exact solution approach for multi-stage risk-averse mixed-integer problems ’, *Annals of Operations Research*, (The first revision is being submitted).
2) Ö. Şafak, Ö. Çavuş and M. S. Aktürk, ’Multi-stage airline scheduling problem with stochastic passenger demand and non-cruise times’, *Transportation Research Part B: Methodological*, (The first revision is being submitted).

10.6 Papers submitted for publication

1) Ö. Şafak, A. Atamtürk and M. S. Aktürk, ’Airline flight network re-design in response to passenger growth’, *Transportation Science*.

10.7 Refereed proceedings

1) M. S. Aktürk, “A Hierarchical-Multiobjective Production Planning and Scheduling Approach to Cellular Manufacturing Systems”, *Proceedings of First International Conference on Manufacturing Technology, Hong Kong*, pp. 91-94, December 1991.
2) M. S. Aktürk and S. Önen, “Integrated Lot Sizing and Tool Management in Automated Manufacturing Systems”, *Proceedings of the Sixth Industrial Engineering Research Conference*, pp. 340-345, Miami, May 1997.
3) D. Özdemir and M. S. Aktürk, “New Dominance Rules to Minimize $1||\sum w_jT_j$ and $1|r_j|\sum w_jT_j$ Problems”, *Proceedings of the Sixth International Workshop on Project Management and Scheduling*, pp. 261-264, July 1998.
4) M. S. Aktürk and S. Özkan, “An Integrated Approach to Tool Management and Scheduling Problems in Flexible Manufacturing Cells”, *8^{th} International Machine Design and Production Conference*, pp. 185-194, September 1998.
5) A. Türkcan and M. S. Aktürk, “A Holonistic Approach to Cellular Manufacturing System Design Problem”, *Proceedings of the Group Technology/Cellular Manufacturing World Symposium*, pp. 73-76, Puerto Rico, March 2000.
6) H. Gültekin, M. S. Aktürk and O. Karaşan, “Scheduling in a Three-Machine Flexible Robotic Cell”, *Proceedings of the 12th Triennial Symposium on Information Control Problems in Manufacturing (INCOM’06)*, pp. 3-101-106 Saint-Etienne, France, May 17-19, 2006.
7) M. S. Aktürk, “Bi-criteria scheduling with controllable processing times”, Semi-Plenary Talk, *Proceedings of the Eleventh International Workshop on Project Management and Scheduling*, pp. 4, April 28-30, 2008.
8) M. S. Aktürk, A. Tula and H. Gültekin, “Design of a fully automated robotic spot-welding line ”, *Proceedings of the Eighth International Conference on Informatics in Control, Automation and Robotics (ICINCO’11)*, pp. 387-392, Noordwijkerhout, The Netherlands, July 28-31, 2011.

11. **TOTAL NUMBER OF CITATIONS (LISTED IN CITATION INDEX)**

Citations by others : 895
Self citations : 107

12. **CURRENT RESEARCH INTERESTS**

- Production Management Systems
- Airline Disruption Management
- Cellular Manufacturing Systems
- Advanced Manufacturing Technologies
- Production Scheduling

13. **GRANTS**

1) "Incorporating machining parameters into manufacturing logistics", NATO Collaborative Research Grant 971489, Project Co-ordinator, (Other Principle Investigator Prof. Robert H. Storer from Lehigh University, USA), February 1998 - October 1999, BF 206,000.
2) "Integrated lot sizing, scheduling and machining conditions optimization for CNC machines", The Scientific and Technological Research Council of Turkey - MISAG, 197M017, Principle Investigator, January 1998 - August 1999.
3) Faculty Development Grant, July 2000 - June 2001, Bilkent University.
4) "Robotic cell scheduling of automotive body parts at TURK-FIAT", Principle Investigator, March 2008 - December 2008, US$40,000.
5) Research Fellowship Grant, The Scientific and Technological Research Council of Turkey - BIDEB 2219, August 2009 - July 2010, US$24,000.
6) "Lot sizing problem with capacity limitations, controllable processing times and demand uncertainty", The Scientific and Technological Research Council of Turkey, MAG 112M220, Principle Investigator, November 2012 - May 2015, 159,250 TL.
7) "Optimizing airline operations under uncertainty", The Scientific and Technological Research Council of Turkey, MAG 116M542, Principle Investigator, March 2017 - September 2019, 191,900 TL.
8) MSB AFGM, PI, January 2018 - November 2018, 170,000 TL.

14. **EDUCATIONAL DEVELOPMENT ACTIVITIES**

- Chaired new undergraduate curriculum development committee, that designed and implemented a new IE UG curriculum which is currently being used
- Actively participated in developing new flexible manufacturing systems and manufacturing processes laboratories

- Designed a new sophomore level IE 261, Computer Aided Manufacturing course
- Coordinated summer practices for three years
- Served in 20 Ph.D. and more than 70 M.Sc. thesis committees
- Participated to the U.S.A. National Science Foundation Workshop on Manufacturing Logistics, May 29–30, 1997
- Engineering Dean's Council (Turkey) Team Chair and Program Evaluator of the Industrial Engineering Programs (Mühendislik Değerlendirme Kurulu (MÜDEK), Program Değerlendiricisi)
- Actively involved in ABET 1995, ABET 2002, ABET 2008, and ABET 2012, and as a department chair of ABET 2018 successful applications of the Bilkent Univ. Industrial Engineering program

15. CONTRIBUTION TO BILKENT UNIVERSITY

- Member of Engineering Faculty Council 2016-2019, 2013-2016, 2003-2006 and 1990-1993.
- Member of Engineering Faculty Executive Council 2003-2006.
- Member of Graduate School of Engineering and Science Institute 2016-2019, 2013-2016.
- Chaired the Organization Committee of XVI. Operations Research and Industrial Engineering Conference co-organized by Bilkent University
- Chaired the Industrial Engr. Dept. Facilities and Support Systems Planning Committee
- Chaired the Industrial Engr. Dept. Undergraduate Curriculum Development Committee
- Member of Industrial Engr. Dept. Recruitment Committee
- Chaired the Industrial Engr. Dept. Undergraduate Committee
- Chaired the Industrial Engr. Dept. ABET 2000 Committee
- Member of Industrial Engr. Dept. Graduate Committee

16. CONTRIBUTION TO SOCIETY AT LARGE

- Served as Editor of only Industrial Engineering Journal in Turkey for 14 years, which is published quarterly and subscribed by more than 4000 industrial engineers
- Served as a committee member on developing strategic policies for new information technologies formed by the Scientific and Technical Research Council of Turkey
- Participated in a project on the Performance and Productivity Study of the Community Service Division, New York City Department of Social Services, USA
- Evaluation of research proposals and grant applications from TUBITAK.
- Evaluation of Eurostars and CORNET project applications from EUREKA.
- Organized different workshops on production management systems to leading Turkish companies including Arçelik, Vestel A.Ş., Eczacıbaşı Holding and MAN A.Ş.

- Served as a referee for several international journals including Management Science, IIE Transactions, Journal of Operations Management, Discrete Applied Mathematics, International Journal of Production Research, European Journal of Operational Research, Journal of Operational Research Society, Naval Research Logistics, Annals of Operations Research, International Journal of Computer Integrated Manufacturing, International Journal of Flexible Manufacturing Systems, OMEGA, Optimization Letters, IEEE Transactions on Automatic Control, Computers & Operations Research, Computers & Industrial Engineering, International Journal of Production Economics, International Transactions in Operational Research, Mathematical and Computer Modelling, Transactions on Parallel and Distributed Systems, International Journal of Systems Science, Computational Optimization and Applications, Transactions on Operational Research, Journal of Global Optimization, 4OR, Discrete Optimization, Journal of Scheduling, Journal of Heuristics, Production and Operations Management, Transportation Research Part C, Journal of Air Transport Management, and Industrial Engineering Journal.

February, 2018.