

Hakan Gültekin

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EMPLOYMENT

- ◇ **September 2013 - :** Assoc. Prof., Department of Industrial Engineering, TOBB University of Economics and Technology.
- ◇ **November 2007 - September 2013:** Asst. Prof., Department of Industrial Engineering, TOBB University of Economics and Technology.
- ◇ **April 2009 - March 2010:** Compulsory Military Service, Team Commander, 57th Artillery Brigade, Bornova, Izmir.
- ◇ **January 2007 - November 2007 :** Post-Doctoral Fellow, Université de Liège, Supervisor: Prof. Yves Crama.
- ◇ **2002-2006:** Ph.D., Bilkent University, Industrial Engineering, Cumulative GPA: 3.96/4.00. Ph.D. Dissertation Title: *Scheduling in Flexible Robotic Manufacturing Cells*, Supervisor: Prof. M. Selim Aktürk.
- ◇ **2000-2002:** MS, Bilkent University, Industrial Engineering, Cumulative GPA: 3.92/4.00. Thesis title: *Robotic Cell Scheduling with Operational Flexibility*, Supervisor: Prof. M. Selim Aktürk
- ◇ **1996-2000:** BS, Bilkent University, Industrial Engineering, Cumulative GPA: 3.52/4.00.
- ◇ **Grants**
 - Université de Liège, scholarship for postdoctoral study, August 2007 – November 2007.
 - Scientific and Technological Research Council of Turkey, scholarship for postdoctoral study, January 2007 – August 2007.
 - Scientific and Technological Research Council of Turkey, grant for attending international scientific activities to attend INCOM'2006 conference in St-Etienne, France, May 2006.
 - EU Erasmus exchange grant to give a seminar and lectures at the Université de Liège, Belgium, December 2005
 - Scientific and Technological Research Council of Turkey, scholarship for Ph.D. study, September 2003 – September 2006.
 - Graduate Assistantship, awarded by Bilkent University, September 2000 – December 2006.
 - Undergraduate Study Fellowship, awarded by Bilkent University, September 1996 – July 2000.
 - Ranked 96th over a million in University Entrance Exam, Turkey, 1996.
- ◇ **Academic Responsibilities**
 - August 2014 – : Board Member, Engineering Faculty, TOBB University of Economics and Technology.
 - May 2011 – November 2013: Vice Dean, Engineering Faculty, TOBB University of Economics and Technology.
 - September 2010 – September 2011: Assistant Director, Institute of Engineering and Sciences, TOBB University of Economics and Technology.
 - January 2008 – April 2009: Board Member, Engineering Faculty, TOBB University of Economics and Technology.

RESEARCH INTERESTS ◇ Applied operations research, Decision support systems, Modern manufacturing systems, Production scheduling, wireless sensor networks, heuristic optimization, discrete optimization, multi-criteria optimization, flexible manufacturing systems, assembly line balancing.

PUBLICATION

◇ **Ph.D. Thesis**

- *Scheduling in Flexible Robotic Manufacturing Cells*, September 2006.

◇ **M.S. Thesis**

- *Robotic Cell Scheduling with Operational Flexibility*, June 2002.

◇ **Book**

- H. Gultekin, *Scheduling in Flexible Robotic Manufacturing Cells*, VDM Verlag Dr. Muller, ISBN:9783639266542, 2010.

◇ **Articles in Refereed Journals**

1. H. Gultekin, O.O. Dalgic, M.S. Akturk, Pure Cycles in Dual Gripper Robotic Cells, *Robotics and Computer-Integrated Manufacturing*, 48:121-131, 2017.
2. H. Gultekin, A. Tula, M.S. Akturk, Automated robotic assembly line design with unavailability periods and tool changes, *European Journal of Industrial Engineering* 10 (4):499-526, 2016.
3. E. Gundogdu, H. Gultekin, Scheduling in 2-machine robotic cells with a self-buffered robot, *IIE Transactions*, 48(2):170-191, 2016.
4. H.U. Yildiz, K. Bicakci, B. Tavli, H. Gultekin, D. Incebacak, Maximizing Wireless Sensor Network lifetime by communication/computation energy optimization of non-repudiation security service: node level versus network level strategies, *Ad Hoc Networks*, 37(2):301-323, 2016.
5. Z. Uruk, H. Gultekin and M.S. Akturk Two-machine flowshop scheduling with flexible operations and controllable processing times, *Computers & Operations Research*, 40(2):639-653, 2013.
6. H. Gultekin, Scheduling in Flowshops with Flexible Operations: Throughput Optimization and Benefits of Flexibility, *International Journal of Production Economics*, 140(2):900-911, 2012.
7. K. Bicakci, H. Gultekin, B. Tavli and I.E. Bagci, Maximizing lifetime of event-unobservable wireless sensor networks, *Computer Standards & Interfaces*, 33:401-410, 2011.
8. Y. Crama, H. Gultekin, Throughput optimization in two-machine flowshops with flexible operations, *Journal of Scheduling*, 13(3):227-243, 2010.
9. H. Gultekin, M.S. Akturk, and O.E. Karasan, Bicriteria robotic operation allocation in a flexible manufacturing cell, *Computers & Operations Research*, 37(4):779-789, 2010.
10. K. Bicakci, H. Gultekin, B. Tavli, The impact of one-time energy costs on network lifetime in wireless sensor networks, *IEEE Communication Letters*, 13(12):905-907, 2009.
11. H. Gultekin, O.E. Karasan and M.S. Akturk, Pure cycles in flexible robotic cells, *Computers & Operations Research*, 36(2):329-343, 2009.
12. H. Gultekin, M.S. Akturk, and O.E. Karasan, Bicriteria robotic cell scheduling, *Journal of Scheduling*, 11(6):457-473, 2008.
13. H. Gultekin, M.S. Akturk, and O.E. Karasan, Scheduling in robotic cells: process flexibility and cell layout. *International Journal of Production Research*, 46(8):2105-2121, 2008.
14. H. Gultekin, M.S. Akturk, and O.E. Karasan, Scheduling in a three-machine robotic flexible manufacturing cell. *Computers & Operations Research*, 34:2463-2477, 2007.
15. H. Gultekin, M.S. Akturk, and O.E. Karasan, Cyclic scheduling of a robotic cell with tooling constraints. *European Journal Operational Research*, 174:777-796, 2006.
16. M.S. Akturk, H. Gultekin, and O.E. Karasan, Robotic cell scheduling with operational flexibility. *Discrete Applied Mathematics*, 145(3):334-348, 2005.

◇ **Papers Submitted for Publication**

- H. Gultekin, B.C. Yildiz, Robotic cell design through operation assignment integrated with sequencing of robot moves, *Journal of Manufacturing Systems*, submitted, 2016.

- H. Gultekin, B. Coban V. Eghbal Akhlaghi, Cyclic Scheduling of Parts and Robot Moves in m-machine Robotic Cells, *Computers & Operations Research*, submitted, 2016.

◇ **Projects**

- Green Robotic Cell Scheduling, TUBITAK-1001, 215M845, 243.750TL 2016-2018.
- Line Balancing in Flowshops with Single and Dual Gripper Material Handling Robots, TUBITAK-1001, 213M435, 126.800TL 2014-2016.
- Throughput Maximization in Flowshops with Flexible Operations: Benefits of Flexibility, Mathematical Models and Solution Procedures, TUBITAK-3501, 110M489, 121.530TL 2011-2013.
- Maximization of the throughput rate of the Fiancate robotic assembly line, TOFAS (Industrial Project), 2008, 45.000TL.

◇ **Refereed Proceedings**

- V. Eghbal Akhlaghi, H. Gultekin, B. Coban “Shortest k-unit cycle in a multiple part-type robotic cell” MISTA 2015 Proceedings of the 7th Multidisciplinary International Conference on Scheduling: Theory and Applications 876-878 August 2015.
- E.B. Ataseven, H. Gultekin, “Assembly line balancing in robotic cells” (in Turkish), *14th Symposium on National Production Research*, 163-172, Bahcesehir University, Istanbul, Turkey, 3-5 September 2014.
- H. Gultekin, “Benefits of flexible operations in 2-machine flowshops”, *Proceedings of the PMS 2012, 13th International Workshop on Project Management and Scheduling*, 164-167, Katholieke Universiteit Leuven, Belgium, 1-4 April 2012.
- H.H. Demirtas, H. Gultekin, “Minimizing the Makespan in Flowshops with Flexible Operations”, *Proceedings of the 14th IFAC Symposium on Information Control Problems in Manufacturing*, Volume 14, Part 1, 366-1370, University Politehnica of Bucharest, Romania, 23-25 May 2012.
- M.S. Akturk, A. Tula, and H. Gultekin “Design of a fully automated robotic spot-welding line”, *Proceeding s of the 8th International Conference on Informatics in Control, Automation and Robotics*, Noordwijkerhout, The Netherlands, 387–392, 28-31 July 2011.
- H. Gultekin, Y. Crama. Scheduling assembly lines with flexible operations to minimize the makespan, *Proceedings of the PMS 2008 11th International Workshop on Project Management and Scheduling*, pp. 108–111, Bogazici University, Istanbul, 28-30 April 2008.
- H. Gultekin, M.S. Akturk, and O.E. Karasan. Scheduling in a three-machine robotic cell, *INCOM’2006: 12th IFAC/IFIP/IFORS/IEEE/IMS Symposium on Information Control Problems in Manufacturing*, pp. 3:101–106, St. Etienne, France, 17-19 May 2006.
- H. Gultekin, Y.Crama ”Scheduling in assembly lines with flexible operations”, *7th Symposium on National Production Research*, Gazi University, Ankara, Turkey, 15-17 November 2007.

◇ **Seminars**

- “Throughput optimization in flowshops with flexible operations”, *Liege University, School of Management*, Liege, Belgium, March, 29 2012.
- “Flowshop Scheduling with Flexible Operations”, *Liege University, School of Management*, Liege, Belgium, October, 7, 2010.
- “Throughput optimization in flowshops with flexible operations”, *Bilkent University, Department of Industrial Engineering*, Ankara, Turkey, April 25, 2008.
- “Scheduling in flexible robotic manufacturing cells”, *Laboratoire G-SCOP*, Grenoble, France, October 18, 2007.
- “Scheduling in flexible robotic manufacturing cells”, *TOBB University of Economics and Technology, Department of Industrial Engineering*, Ankara, Turkey, June 29, 2007.
- “Scheduling in flexible robotic manufacturing cells”, *Middle East Technical University, Department of Industrial Engineering*, Ankara, Turkey, November 3, 2006.

- “Scheduling in flexible robotic manufacturing cells”, *University of Liege, School of Management*, Liege, Belgium, December 13, 2005.
- “Robotic cell scheduling with operational and process flexibility”, *Bilkent University, Department of Industrial Engineering*, Ankara, Turkey, March 18, 2005.

◊ **Conference Presentations**

- Vahid Eghbal Akhlaghi, Hakan Gultekin, Sinan Gurel, “Energy Conscious Robot Scheduling in Robotic Cell Manufacturing”, *INFORMS Annual Meeting 2016*, Nashville, USA, 13-16 November 2016.
- E.R. Karadeniz, H. Gultekin, “Scheduling of home appliances by the energy service provider in smart grids” (in Turkish), *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Z. Bulbul, E. A. Kakillioglu, H. Gultekin, “Machine scheduling with overtime ans sequence dependent setup times” (in Turkish), *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- V. Eghbal Akhlaghi, H. Gultekin, S. Gurel, “Green Scheduling in a Two-Machine Robotic Cell”, *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Hakan Gultekin, Vahid Eghbal Akhlaghi, Betul Coban, “Joint scheduling of parts and robot moves in robotic flowshops” (in Turkish), *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Ali Can Ozcan, Bahar Yetis Kara, Ozlem Cavus, Tolga Dizdarer, Onur Altintas, Hakan Gultekin, “Optimization for a Semi-Automated Warehouse”, *EURO 2016*, Poznan , Poland, 3-6 July 2016.
- Vahid Eghbal Akhlaghi, Hakan Gultekin, Betul Coban, “Comparison of CRM and k-Unit Cycles in Robotic Cells with Multiple Parts”, *EURO 2016*, Poznan , Poland, 3-6 July 2016.
- Cansu Agrali, Hakan Gultekin, Salih Tekin, “Optimization of Energy Storage Decisions in Power Networks with Renewable Generation”, *The 29th Conference of the European Chapter on Combinatorial Optimization*, Budapest, Hungary 26 - 28 May 2016.
- Suleyman Uludag, Tolga Girici, Bulent Tavli, Hakan Gultekin, “Optimization of Smart Grid Design, Operations, and Management (Tutorial)”, *IEEE/IFIP Network Operations and Management Symposium*, Istanbul, 5-29 April 2016.
- H. Gultekin, V. Eghbal Akhlaghi, B. Coban, “Balancing Dual Gripper Robotic Cells”, *INFORMS Annual Meeting 2015*, Philadelphia, USA, 1-4 November 2015.
- Cansu Agrali, Hakan Gultekin, Salih Tekin, Fehmi Tanrisever, Kursad Derinkuyu, “Optimization of the energy storage and distribution in electricity distribution networks with renewable resorces” (in Turkish), *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Vahid Eghbal Akhlaghi, Hakan Gultekin, Betul Coban, Line Balancing in Single Gripper Robotic Cells, *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Emine Gundogdu, Hakan Gultekin, Aysegul Altin Altin Kayhan, “A decomposition algorithm for the line balancing problem with skill-based operator teams” (in Turkish), *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Betul Coban, Hakan Gultekin, Vahid Eghbal Akhlaghi, “Line balancing and scheduling in robotic flowshops producing multiple parts” (in Turkish), *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Hossein Akbaripour, Vahid Eghbal Akhlaghi, Hakan Gultekin, “Robust Parameter Tuning in Genetic Algorithm for a Robotic Cell Scheduling Problem”, *23rd International Conference on Multiple Criteria Decision Making*, Hamburg, Germany, 2-7 August 2015
- “Shortest k-unit cycle in a multiple part-type robotic cell” *MISTA 2015 Proceedings of the 7th Multidisciplinary International Conference on Scheduling: Theory and Applications* 876-878 August 2015.

- “Balancing Assembly Lines with Material Handling Robots”, *INFORMS Annual Meeting 2014*, San Francisco, USA, 9-12 November 2014.
- “Robot Move Sequencing and Line Balancing in Robotic Cells”, *Joint International Symposium on CIE44 and IMSS’14*, Istanbul, Turkey, 14-16 September 2014.
- “Maximizing the throughput in dual gripper robotic cells: Pure cycles” (in Turkish), *34th National Operations Research and Industrial Engineering Conference*, Istanbul, Turkey, 25-28 June 2014.
- “Scheduling in Robotic Cells with a Self-Buffered Robot”, *EURO INFORMS 2013- 26th European Conference on Operational Research*, Rome, Italy, 1-4 July 2013.
- “A Dynamic Programming Algorithm for Scheduling Flexible Operations in a Three Machine Flowshop”, *EURO INFORMS 2013- 26th European Conference on Operational Research*, Rome, Italy, 1-4 July 2013.
- “Pure Cycles in Dual Gripper Robotic Cells”, *EURO INFORMS 2013- 26th European Conference on Operational Research*, Rome, Italy, 1-4 July 2013.
- “Scheduling in 3-machine Flowshops with Flexible Operations”, *EURO INFORMS 2013- 26th European Conference on Operational Research*, Rome, Italy, 1-4 July 2013.
- “Maximizing Lifetime with Minimum Required Bandwidth in Wireless Sensor Networks”, *EURO INFORMS 2013- 26th European Conference on Operational Research*, Rome, Italy, 1-4 July 2013.
- “Operation Allocation in a Flowshop with Three Non-identical Machines”, *The International IIE Conference*, Istanbul, Turkey, 26-28 June 2013.
- “Throughput Optimization in a Flowshop with Three Flexible Machines”, *The International IIE Conference*, Istanbul, Turkey, 26-28 June 2013.
- “Minimizing the Makespan in Flowshops with Flexible Operations”, *International IIE Conference*, Istanbul, Turkey, 26-28 June 2013.
- “Scheduling in robotic cells with a self buffered robot” (in Turkish), *33th National Operations Research and Industrial Engineering Conference*, Istanbul, Turkey, 26-28 June 2013.
- “Mathematical Methods for Industrial Problems (Optimization)” (in Turkish), *10th Mathematics Symposium*, Isik University, Istanbul, 21-23 September 2012.
- “Flowshop Scheduling with Flexible Operations: Throughput Optimization”, *25th European Conference on Operational Research (EURO)*, Vilnius, Lithuania, 8-11 July 2012.
- “Cycle time minimization in robotic assembly lines” (in Turkish), *32th National Operations Research and Industrial Engineering Conference*, Dogus University, Istanbul, 20-22 June 2012.
- “Flowshop Scheduling with Flexible Operations on 2 Adjacent Machines”, *The 25th Conference of the European Chapter on Combinatorial Optimization (ECCO)*, Antalya, Turkey, 26 - 28 April 2012.
- “Benefits of flexible operations in 2-machine flowshops”, *13th International Workshop on Project Management and Scheduling (PMS 2012)*, Katholieke Universiteit Leuven, Belgium, 1-4 April 2012.
- “Maximizing throughput rate in Flowshops with two non-identical machines and flexible operations”, *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.
- “Two-Machine Flowshop Scheduling with Flexible Operations and Controllable Processing Times”, *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.
- “Scheduling in m-machine flowshops with flexible operations” (in Turkish), *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.

- “Throughput Optimization in Flow shops with 2-nonidentical Machines and Flexible Operations”, *The 24th Conference of the European Chapter on Combinatorial Optimization (ECCO)*, University of Amsterdam and VU University Amsterdam, Amsterdam, Netherlands, 30 May - 1 June 2011.
- “Scheduling 2-Machine Flowshops with Multiple Parts and Flexible Operations” (in Turkish), *National Operations Research and Industrial Engineering Conference XXX*, Sabanci University, Istanbul, 30 June-02 July 2010.
- “Bicriteria Robotic Operation Allocation in a Flexible Manufacturing Cell” (in Turkish), *National Operations Research and Industrial Engineering Conference XXVIII*, Galatasaray University, Istanbul, 30 June-02 July 2008.
- “Scheduling assembly lines with flexible operations to minimize the makespan”, *PMS 2008 11th International Workshop on Project Management and Scheduling*, Bogazici University, Istanbul, 28-30 April 2008.
- “Scheduling flowshops with flexible machines to maximize the throughput rate” *GO VI Graphics and Optimization*, Cademario, Lugano, Switzerland, 19-23 August 2007.
- “Scheduling in a three-machine flexible robotic cell,” *INCOM’2006: 12th IFAC/IFIP/IFORS /IEEE/IMS Symposium on Information Control Problems in Manufacturing*, St-Etienne, France, 17-19 May 2006.
- “Robotic cell scheduling” (in Turkish), *National Operations Research and Industrial Engineering Conference XXV*, Koc University, Istanbul, Turkey, 4-6 July 2005.
- “Scheduling in robotic cells”, *35th International Conference of Computers & Industrial Engineering*, Istanbul Technical University, Istanbul, Turkey, 19-22 June 2005.
- “Determination of the robot move sequence and the allocation of operations in robotic cells” (in Turkish), *National Operations Research and Industrial Engineering Conference XXIV*, Cukurova University, Adana, Turkey, 16-18 June 2004.
- “Robotic cell scheduling with tooling constraints”, *EURO/INFORMS Joint International Meeting*, Bogazici University, Istanbul, Turkey, 06-10 July 2003.
- “Robotic cell scheduling”, *2nd International Conference on Responsive Manufacturing*, Gaziantep, Turkey, 26-28 June 2002.
- E.R. Karadeniz, H. Gultekin, “Scheduling of home appliances by the energy service provider in smart grids”, *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Z. Bulbul, E. A. Kakillioglu, H. Gultekin, “Machine scheduling with overtime and sequence dependent setup times”, *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- V. Eghbal Akhlaghi, H. Gultekin, S. Gurel, “Green Scheduling in a Two-Machine Robotic Cell”, *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Hakan Gultekin, Vahid Eghbal Akhlaghi, Betul Coban, “Joint scheduling of parts and robot moves in robotic flowshops”, *36th National Operations Research and Industrial Engineering Conference*, Izmir, 13-15 July 2016.
- Cansu Agrali, Hakan Gultekin, Salih Tekin, Fehmi Tanrisever, Kursad Derinkuyu, “Optimization of the energy storage and distribution in electricity distribution networks with renewable resources”, *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Vahid Eghbal Akhlaghi, Hakan Gultekin, Betul Coban, Line Balancing in Single Gripper Robotic Cells, *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- Emine Gundogdu, Hakan Gultekin, Aysegul Altin Altin Kayhan, “A decomposition algorithm for the line balancing problem with skill-based operator teams”, *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.

- Betül Coban, Hakan Gültekin, Vahid Eghbal Akhlaghi, “Line balancing and scheduling in robotic flowshops producing multiple parts”, *35th National Operations Research and Industrial Engineering Conference*, Ankara, 9-11 September 2015.
- “Maximizing the throughput in dual gripper robotic cells: Pure cycles”, *34th National Operations Research and Industrial Engineering Conference*, Istanbul, Turkey, 25-28 June 2014.
- “Scheduling in robotic cells with a self buffered robot”, *33th National Operations Research and Industrial Engineering Conference*, Istanbul, Turkey, 26-28 June 2013.
- “Mathematical Methods for Industrial Problems (Optimization)”, *10th Mathematics Symposium*, Isik University, Istanbul, 21-23 September 2012.
- “Cycle time minimization in robotic assembly lines”, *32th National Operations Research and Industrial Engineering Conference*, Dogus University, Istanbul, 20-22 June 2012.
- “Maximizing throughput rate in Flowshops with two non-identical machines and flexible operations”, *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.
- “Two-Machine Flowshop Scheduling with Flexible Operations and Controllable Processing Times”, *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.
- “Scheduling in m-machine flowshops with flexible operations”, *31st National Operations Research and Industrial Engineering Conference*, Sakarya University, Sakarya, 5-7 July 2011.
- “Scheduling 2-Machine Flowshops with Multiple Parts and Flexible Operations” (in Turkish), *National Operations Research and Industrial Engineering Conference XXX*, Sabanci University, Istanbul, 30 June-02 July 2010.
- “Bicriteria Robotic Operation Allocation in a Flexible Manufacturing Cell” (in Turkish), *National Operations Research and Industrial Engineering Conference XXVIII*, Galatasaray University, Istanbul, 30 June-02 July 2008.
- “Robotic cell scheduling” (in Turkish), *National Operations Research and Industrial Engineering Conference XXV*, Koc University, Istanbul, Turkey, 4-6 July 2005.
- “Determination of the robot move sequence and the allocation of operations in robotic cells” (in Turkish), *National Operations Research and Industrial Engineering Conference XXIV*, Cukurova University, Adana, Turkey, 16-18 June 2004.

COURSES
TAUGHT

- ◇ **END 520 Advanced Production Systems and Inventory Control:** Forecasting Methods, push and pull production systems, MRP and JIT, production scheduling, lot sizing, inventory control under deterministic and stochastic demand, multi-item, continuous and periodic inventory control policies, multi-echelon inventory systems.
Course web: <http://hgultekin.etu.edu.tr/end520/end520.html>
 - **Spring 2013:** Teaching Evaluation: 4.80/5.00
- ◇ **END 524 Sequencing and Scheduling:** Classification of sequencing and scheduling problems, solution methods (mathematical programming-heuristics), project scheduling, single machine and job-shop scheduling, lot sizing, reservation systems, staff scheduling.
Course web: <http://hgultekin.etu.edu.tr/end524/end524.html>
 - **Fall 2015:** Teaching Evaluation: 5.00/5.00
 - **Fall 2013:** Teaching Evaluation: 4.88/5.00
 - **Spring 2012:** Teaching Evaluation: 4.97/5.00
- ◇ **END 527 Facility Location and Layout Models:** Single and multi-facility location, location-allocation, quadratic assignment, covering, p-median, p-center, fixed-charge, location routing, hub location, warehouse location, multi-objective location, and warehouse layout models.

- **Fall 2016:** Teaching Evaluation: NA

- ◇ **END 424 Quantitative Decision Making Methods:** Quantitative methods for decision making process, decision support systems, MS Excel Macro and Visual Basic. Problem areas to be considered include: Production planning, inventory control, scheduling, logistics and distribution networks, and facility layout and location.
 - **Summer 2016:** Teaching Evaluation: NA
 - **Summer 2014:** Teaching Evaluation: 4.26/5.00

- ◇ **END 294 Operations Research I:** Linear programming, formulation examples, simplex algorithm, duality, sensitivity, computer packages (LINGO, Excel Solver), dynamic programming, assignment and transportation models.
Course web: <http://hgultekin.etu.edu.tr/end294/end294.html>
 - **Fall 2012:** Teaching Evaluation: 4.62/5.00
 - **Summer 2008:** Teaching Evaluation: 4.57/5.00

- ◇ **END 395 Operations Research II:** Modeling and solution methods of integer, mixed integer and nonlinear programming formulations. Branch and bound, cutting plane techniques, construction and improvement heuristics, meta-heuristics, unconstrained and constrained nonlinear programming, Lagrange multipliers, Karush-Kuhn-Tucker conditions.
Course web: <http://hgultekin.etu.edu.tr/end395/end395.html>
 - **Spring 2016:** Teaching Evaluation: NA
 - **Spring 2015:** Teaching Evaluation: 4.44/5.00
 - **Spring 2014:** Teaching Evaluation: 4.73/5.00
 - **Summer 2011:** Teaching Evaluation: 4.71/5.00
 - **Spring 2011:** Teaching Evaluation: 4.75/5.00
 - **Spring 2008:** Teaching Evaluation: 4.83/5.00
 - **Fall 2008:** Teaching Evaluation: 4.82/5.00

- ◇ **END 308 Facilities Design and Planning:** Systematic planning, single and multi-facility location, product and process design, basic layout types, group technology and cell design, computer-aided layout design, material handling systems, storage systems and warehouse design.
Course web: <http://hgultekin.etu.edu.tr/end308/end308.html>
 - **Fall 2014:** Teaching Evaluation: 4.40/5.00
 - **Summer 2010:** Teaching Evaluation: 4.68/5.00

- ◇ **END 320 (former IKT 321) Engineering Economy:** Engineering economic analysis, time value of money, cash flow analysis, cost of capital, return on investment, cost analysis, evaluating alternatives, break-even analysis, depreciation, taxes, sensitivity analysis.
Course web: <http://hgultekin.etu.edu.tr/ikt321/ikt321.html>
 - **Fall 2013:** Teaching Evaluation: 4.07/5.00
 - **Spring 2012:** Teaching Evaluation: 3.68/5.00
 - **Fall 2008:** Teaching Evaluation: 4.34/5.00
 - **Spring 2009:** Teaching Evaluation: 4.00/5.00

- ◇ **Production Planning II (Turkish Military Academy):** Production planning, control process, aggregate production planning, master production planning, materials requirement planning, shop-floor scheduling and control.
 - **Spring 2016:** Teaching Evaluation: NA

CONTRIBUTIONS

◊ **Advisor**

- Hatice Hande Demirtas, TOBB University of Economics and Technology, Department of Industrial Engineering, PhD Thesis, “Revenue management and scheduling for airport transfers”, (Expected graduation: August, 2018).
- Zeynep Bulbul, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “A logic based Benders decomposition algorithm for machine scheduling with overtime and sequence dependent setup times”, (Expected graduation: August, 2017).
- Betül Coban, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Cyclic scheduling in robotic cells producing multiple part types”, (June, 2016).
- Cansu Agrali, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Optimization of energy storage decisions in power networks with renewable generation”, (August, 2016).
- Elif Busra Ataseven, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Bicriteria Line Balancing in Robotic Cells”, (December, 2014).
- Ozden Onur Dalgic, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Pure cycles in dual gripper robotic cells”, (August, 2013).
- Emine Gundogdu, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Scheduling in robotic cells with self-buffered robots”, (August, 2013).
- Seda Sucu, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Throughput maximization in flowshops with multiple parts and flexible operations”, (August, 2013).
- Fatma Isler, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Operation allocation in 3-machine flowshops”, (August, 2013).
- Sumru Ustunol, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Balancing in Robotic Assembly Lines”, (December, 2012).
- Hande Demirtas, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Scheduling in 2-machine multi-model flowshops with flexible operations”, (December 2011).

◊ **Co-Advisor**

- Vahid Eghbal Akhlaghi, Middle East Technical University, Department of Industrial Engineering, M.S. Thesis, “Green robotic cell scheduling”, (December, 2016).
- Ugur Yildiz, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “Maximizing Lifetime and Security in Wireless Sensor Networks”, (August, 2014).
- Zeynep Uruk, Bilkent University, Department of Industrial Engineering, M.S. Thesis, “Scheduling in 2-machine flowshops with flexible operations and controllable processing times”, (September, 2010).

◊ **Thesis Jury**

- Isil Kirkizoglu, Middle East Technical University, Department of Industrial Engineering, M.S. Thesis, “Heat Exchanger Network Synthesis with Detailed Design: Reformulation As A Shortest Path Problem By Temperature Discretization”, (Thesis Defence: 11 September 2012).
- Atıl Kurt, Cankaya University, Department of Industrial Engineering, M.S. Thesis, “Unrelated Parallel Machines Scheduling Under Machine Availability And Eligibility Constraints”, (Thesis Defence: 7 February 2012).
- Muhammed Rasit Yildiz, TOBB University of Economics and Technology, Department of Electrics and Electronics, M.S. Thesis, “Resim sifre teknikleri: deneysel karsilastirma ve saha calismasi”, (Thesis Defence: 15 September 2010).

- Engin Sahin, TOBB University of Economics and Technology, Department of Computer Science, M.S. Thesis, “İnsan hesaplama ve bilgisayar oyunları ile resim etiketleme”, (Thesis Defence: 30 December 2010; 28 March 2011).
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- Onur Dikmen, TOBB University of Economics and Technology, Department of Industrial Engineering, M.S. Thesis, “ARAS Kargo Ankara bölgesi ana transfer merkezi çizelgelemesi ve araç çıkış zamanları koordinasyonu”, (Thesis Defence: 02 December 2010).
- Serdar Yıldız, Bilkent University, Department of Industrial Engineering, M.S. Thesis, “An analysis of pure robotic cycles” (Thesis Defence: July 16, 2008).

◇ **Journal Referee**

- Referee for several journals including Operations Research, IIE Transactions, Discrete Applied Mathematics, Computers & Operations Research, International Journal of Production Research, 4OR - A Quarterly Journal of Operations Research, International Journal of Production Economics, Journal on Computing, International Journal of Robotics and Automation, European Journal of Industrial Engineering, Discrete Optimization, IIE Transactions on Mechatronics, Transportation Logistics Part E: Logistics and Transportation Review, and International Journal of Economics and Management Engineering, CIRP Journal of Manufacturing.

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MEMBERSHIPS

- ◇ Operational Research Society, Turkey.
- ◇ European Chapter on Combinatorial Optimization, ECCO.
- ◇ EURO Working Group on Project Management and Scheduling.