

Sait Tunc

211 Durham Hall (MC 0118)
1145 Perry Street, Blacksburg, VA 24061

(540) 231 6376 (phone)
sait.tunc@vt.edu

ACADEMIC EMPLOYMENT

Grado Department of Industrial and Systems Engineering, Virginia Tech, Blacksburg, VA
Assistant Professor August 2019 - Current

Booth School of Business, University of Chicago, Chicago, IL
Postdoctoral Research Associate January 2017 - July 2019

EDUCATION

Ph.D. , Industrial and Systems Engineering, University of Wisconsin-Madison	2016
M.S. , Industrial and Systems Engineering, University of Wisconsin-Madison	2015
M.S. , Electrical and Electronics Engineering, Koc University, Istanbul, Turkey	2012
B.S. , Electrical and Electronics Engineering, Bogazici University, Istanbul, Turkey	2010

HONORS AND AWARDS

Gustafson, Rea C & David H Scholarship	2016
Finalist for the Doing Good with Good OR Student Paper Competition	2016
The Scientific and Technological Research Council of Turkey (TUBITAK) Graduate Fellowship	2010 - 2012
Undergraduate Scholarship	2005 - 2010
International Mathematical Olympiads (IMO)	Silver Medal (2005), Bronze Medal (2004)
National Mathematical Olympiads of Turkey	Gold Medal (2004), Silver Medal (2003)

RESEARCH INTERESTS

Methodologies: Markov decision processes (MDPs), Queuing theory, Stochastic modeling and simulation, Game theory, Information theory

Applications: Medical decision making, Healthcare operations, Portfolio investment

PUBLICATIONS

1. **S. Tunc**, B. Sandikci, B. Tanriover, "Expanding the Donor Pool: The Use of Marginal Organs for Transplantation," under revision at *Management Science*
2. **S. Tunc**, B. Sandikci, P. Afeche, W. F. Parker, "Treating to the Priority in Heart Transplantation," working paper
3. B. Sandikci, **S. Tunc**, B. Tanriover, "A New Simulation Model for Kidney Transplantation in the United States," *Proceedings of the 2019 Winter Simulation Conference*, in press
4. **S. Tunc**, B. Sandikci, B. Tanriover, "Strategic Decisions of Kidney Transplant Centers under Competition," working paper
5. **S. Tunc**, O. Alagoz, E. B. Burnside, "A New Perspective on Breast Cancer Diagnostic Guidelines to Reduce Overdiagnosis," under review at *Operations Research*
– Finalist for the Doing Good with Good OR Student Paper Competition, 2016
6. **S. Tunc**, O. Alagoz, E. B. Burnside, "Sequential Analysis of Information Gain by Additional Tests in Breast Cancer Screening," working paper
7. **S. Tunc**, O. Alagoz, L. Wilke, A. Trentham-Dietz, E. B. Burnside, "Estimating the Progression Rates of DCIS Subtypes into Invasive Cancer," working paper

8. N. D. Vanli, **S. Tunc**, M. A. Donmez, S. S. Kozat, "Growth Optimal Investment in Discrete-time Markets with Proportional Transaction Costs," *Digital Signal Processing*, 48:226-238, 2016
9. H. Ozkan, M. A. Donmez, **S. Tunc**, S. S. Kozat, "A Deterministic Analysis of an Online Convex Mixture of Experts Algorithm," *IEEE Transactions on Neural Networks and Learning Systems*, 26(7):1575-1580, 2015
10. **S. Tunc**, O. Alagoz, E. B. Burnside, "Opportunities for Operations Research in Medical Decision Making," *IEEE Intelligent Systems*, 29(3):59-62, 2014 -invited paper
11. **S. Tunc**, M. A. Donmez, S. S. Kozat, "Optimal Investment Under Transaction Costs: A Threshold Rebalanced Portfolio Approach," *IEEE Transactions on Signal Processing*, 61(12):3129-3142, 2013

TEACHING

University of Chicago Booth School of Business

Teaching Assistant, BUSN 36106: Managerial Decision Modeling (MBA Curriculum)

Responsible of 9 Sections, 375 MBA Students in Total

Held Weekly Review Sessions and Helped Development of Course Materials

Spring, Fall 2017-2018

University of Wisconsin-Madison

Primary Instructor, ISyE 517: Decision Making in Health Care

Full Course Responsibility: 30 Students

Fall 2014

Grader, ISyE 517: Decision Making in Health Care

Fall 2013

Koc University, Turkey

Teaching Assistant, ELEC 202: Circuit Analysis

Spring 2012

Teaching Assistant, COMP 110: Programming with MATLAB

Spring 2011

Teaching Assistant, COMP 201: Discrete Computational Structures

Fall 2010

REFEREED BOOK CHAPTERS

1. **S. Tunc**, O. Alagoz, J. Chhatwal, E. B. Burnside, "Using Finite-Horizon Markov Decision Processes for Optimizing Post-mammography Diagnostic Decisions," In N. Kong & Shengfan Zhang (Eds.), *Decision Analytics and Optimization in Disease Prevention and Treatment*, John Wiley & Sons, 2018

REFEREED CONFERENCE PUBLICATIONS

(Regularly presented at INFORMS Annual Meetings since 2014.)

1. **S. Tunc**, B. Sandikci, B. Tanriover, "Expanding the Donor Pool: The Use of Marginal Organs for Transplantation," *POMS Annual Meeting*, 2019
2. **S. Tunc**, B. Sandikci, P. Afeche, W. F. Parker, "Treating to the Priority in Heart Transplantation," *POMS Annual Meeting*, 2019
3. **S. Tunc**, B. Sandikci, B. Tanriover, "Expanding the Donor Pool: The use of Marginal Organs for Transplantation," *MSOM Conference*, 2018
4. **S. Tunc**, O. Alagoz, E. B. Burnside, "Identifying Mammography Findings and Risk Factors to Reduce Over-diagnosis in Women over 65," *36th Annual North American Meeting of SMDM*, 2014
5. **S. Tunc**, M. A. Donmez, S. S. Kozat, "Growth Optimal Investment with Threshold Rebalancing Portfolios under Transaction Costs," *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2013
6. M. A. Donmez, **S. Tunc**, S. S. Kozat, "Growth Optimal Portfolios in Discrete-time Markets Under Transaction Costs," *IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2012
7. M. A. Donmez, **S. Tunc**, S. S. Kozat, "Optimal Portfolios Under Transaction Costs in Discrete-time Markets," *IEEE International Workshop on Machine Learning for Signal Processing (MLSP)*, 2012

TECHNICAL REPORTS

1. **S. Tunc**, Y. Altug, S. S. Kozat, M. K. Mihcak, "Information Theoretic Analysis of the Fundamental Limits of Content Identification," Technical Report, arXiv:1810.03255

OTHER PROFESSIONAL EXPERIENCE

Reviewer,

Management Science, Omega, European Journal of Operational Research, Decision Sciences, IEEE Transactions on Signal Processing, IEEE Transactions on Neural Networks and Learning Systems, AMIA

Session Organizer/Chair,

INFORMS Annual Meeting, Seattle, WA [scheduled]	2019
INFORMS Annual Meeting, Phoenix, AZ	2018
INFORMS Annual Meeting, Houston, TX	2017
INFORMS Annual Meeting, Philadelphia, PA	2015

Coordinator,

17th Junior Balkan Mathematical Olympiad, Antalya, Turkey	2013
29th Balkan Mathematical Olympiad, Antalya, Turkey	2012

Supervisor,

Summer and Winter International Mathematical Olympiads Preparation Camps, Turkey	2005-2012
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