

CURRICULUM VITAE
NIYAZI ONUR BAKIR, Ph.D.

Department of Industrial Engineering
İstanbul Kemerburgaz University
Mahmutbey Dilmenler Caddesi, No: 26
34217, Bağcılar, İstanbul, Turkey

mobile: +90 (532) 460-1139
office: +90 (212) 604-0100, ext.: 4100
fax: +90 (212) 445-8171
email: onur.bakir@kemerburgaz.edu.tr

EDUCATION

- 2000-2004** **TEXAS A&M UNIVERSITY, COLLEGE STATION, TX**
Ph.D., Department of Industrial Engineering (GPA: 3.92)
Principal Advisor: Georgia-Ann Klutke
Thesis: "Evaluation of Information Bundles in Engineering Decisions"
- 1998-2000** M.S., Department of Economics (GPA: 3.92)
- 1994-1998** **BILKENT UNIVERSITY, ANKARA, TURKEY**
B.S., Department of Industrial Engineering (GPA: 3.28)

RESEARCH INTERESTS

Decision and Risk Analysis, Applied Probability, Economics of Information, Homeland Security

ACADEMIC EXPERIENCE

- 2014 -** **İstanbul Kemerburgaz University, İstanbul, Turkey**
Associate Professor, Department of Industrial Engineering
2015: Department Chair, Department of Industrial Engineering
- 2011 - 2014** **TOBB University of Economics and Technology, Ankara, Turkey**
2014: Associate Professor, Department of Industrial Engineering
2011 - 2014: Assistant Professor, Department of Industrial Engineering
- 2009 - 2011** **Bilkent University, Ankara, Turkey**
Visiting Assistant Professor, Department of Industrial Engineering
- 2005 - 2009** **University of Southern California, Los Angeles, CA**
Postdoctoral Research Associate, Center for Homeland Security (CREATE)
- 2004 - 2005** **Texas A&M University, College Station, TX**
Postdoctoral Research Associate, Department of Industrial Engineering
- 2000 - 2004** Graduate Research Assistant, Department of Industrial Engineering
Dissertation research supported by NSF Grant DMI-9900368

TEACHING EXPERIENCE

- 2014** **İstanbul Kemerburgaz University, İstanbul, Turkey**
Associate Professor, Department of Industrial Engineering
Courses: Decision Analysis, Stochastic Models, Service Systems, Production Information Systems
- 2011 - 2014** **TOBB University of Economics and Technology, Ankara, Turkey**
2014: Associate Professor, 2011-2014: Assistant Professor, Department of Industrial Engineering
Courses: Dec. Analysis, Stochastic Processes, Stochastic Models, Service Systems, Prod. Info. Sys.
- 2009 - 2011** **Bilkent University, Ankara, Turkey**
Visiting Assistant Professor, Department of Industrial Engineering
Courses: Principles of Engineering Management, Engineering Economics, Production Information Systems, Production Systems Design-Synth., Quality Assurance and Reliability, Decision Analysis

TEACHING EXPERIENCE CONTINUED

- Summer 2005, 2006** **University of Southern California, Los Angeles, CA**
Lecturer, Department of Industrial and Systems Engineering
Course: Advanced Engineering Economy (Graduate Level Distance Education Class)
- Fall 2003** **Texas A&M University, College Station, TX**
Graduate Assistant Lecturer, Department of Industrial Engineering
Course: Economic Analysis of Engineering Projects (Undergraduate Level)

REFEREED PUBLICATIONS

- N.O. Bakır, ‘Monotonicity of the selling price of information with risk aversion in two-action decision problems’, 2015, *To Appear in Central European Journal of Economic Modelling and Econometrics*
- N.O. Bakır, G-A. Klutke, ‘Buying price of event information in two-action decision problems’, 2014, *Environment Systems and Decisions*, Vol. 34, No. 1, pp. 38-48
- A.E. Abbas, N. O. Bakır, G-A. Klutke, Z. Sun, ‘Effects of risk aversion on the value of information in two-action decision problems’, 2013, *Decision Analysis*, Vol. 10, No. 3, pp. 257-275
- N.O. Bakır, D. von Winterfeldt, ‘Is better nuclear weapon detection capability justified?’, 2011, *Journal of Homeland Security and Emergency Management*, Vol. 8, No. 1, pp. 1-18
- N.O. Bakır, ‘A Stackelberg game model for resource allocation in cargo container security’, 2011, *Annals of Operations Research*, Vol. 187, No. 1, pp. 5-22
- N.O. Bakır, G-A. Klutke, ‘Information and preference reversals in lotteries’, 2011, *European Journal of Operational Research*, Vol. 210, No. 3, pp. 752-756
- N.O. Bakır, A.A. Savachkin, A. Uribe ‘Two countermeasure strategies to mitigate random disruptions in capacitated systems’, 2010, *Journal of Systems Science and Systems Engineering*, Vol. 19, No. 2, pp. 210-226
- N.O. Bakır, ‘A decision tree model for evaluating countermeasures to secure cargo at United States southwestern ports of entry’, 2008, *Decision Analysis*, Vol. 5, No. 4, pp. 230-248
- A.A. Savachkin, N.O. Bakır, A. Uribe ‘An optimal countermeasure policy to mitigate random capacity disruptions in a production system’, 2008, *Int. Journal of Agile Systems and Management*, Vol. 3, Nos. 1/2, pp. 4-17

BOOK CHAPTERS

- N.O. Bakır, ‘Optimal inspection strategies for Coast Guard operations’, 2007, In *The Economic Costs and Consequences of Terrorism*, edited by Harry W. Richardson et al., Edward Elgar, Cheltenham, UK
- N.O. Bakır, ‘A brief analysis of threats and vulnerabilities in the maritime domain’, 2007, In *Managing Critical Infrastructure Risks*, edited by I. Linkov et al., Springer, Dordrecht, The Netherlands

CONFERENCE PROCEEDINGS

- B.N. Güneş, N.O. Bakır, ‘Value of information in a supply-chain for a risk averse supplier’, 2013, *Proceedings of the International XI. Logistics and Supply Chain Congress*, Kayseri, Turkey

CONFERENCE PROCEEDINGS CONTINUED

- N.O. Bakır, E. Kardeş, 'A stochastic game model on container security', 2011, *Proceedings of the IEEE International Conference on Technologies for Homeland Security*, Waltham, MA
- M. Orosz, C. Southwell, A. Barrett, N.O. Bakır, J. Chen, I. Maya, 'PortSec: Port security risk management and resource allocation system', 2009, *Proceedings of the IFAC Symposium on Control in Transportation Systems*, Redondo Beach, CA
- N.O. Bakır, 'Time value of perfect information in a two period consumption choice model', 2008, *Proceedings of the Decision Sciences Annual Conference*, Baltimore, MD
- N.O. Bakır, 'Preference reversals for atomic information bundles in lotteries with multiple actions', 2007, *Proceedings of the Decision Sciences Annual Conference*, Phoenix, AZ

TECHNICAL REPORTS

- N.O. Bakır, E. Keinan, I. Maya, E. Southers, 'Evaluating deployment of peroxide-based explosive detection technology at US commercial airports', CREATE Technical Report, August 2009.
- A.M. Barrett, N.O. Bakır, I. Maya, 'Evaluation of US Coast Guard terrorism risk and decision analysis models and processes for port, waterways and coastal security', CREATE Technical Report, August 2009.
- N. O. Bakır, J.E. Moore II, A. Rose, 'A terrorist attack scenario for a major U.S. port', CREATE Technical Report, May 2009.
- N.O. Bakır, D. Pakdaman, 'An analysis of truck cargo security at southwestern borders and potential impacts of cross-border trucking services of Mexican carriers on terrorism risk exposure', CREATE Technical Report, September 2006.
- N.O. Bakır, 'Vulnerabilities along US borders: A brief analysis of potential terrorist traffic through US borders', CREATE Technical Report, March 2006.
- D. Belson, N.O. Bakır, T. O'Sullivan, H. Bowman 'Los Angeles County operational area strategic national stockpile plan', CREATE Technical Report, January 2006.
- N.O. Bakır, Debra Elkins, Georgia-Ann Klutke, 'Fire risk modeling: Evaluating different risk mitigation options for a risk averse decision maker', General Motors R&D Center Technical Report, August 2004.

WORKING PAPERS

- N.O. Bakır, G-A. Klutke, 'Risk aversion and the value of information in multi-action lottery choice problems', 2015, *Working Paper, Target Journal: IIE Transactions*
- B. Keleş, S. Tekin, N.O. Bakır 'Maintenance policies for a deteriorating system subject to non-self-announcing failures', 2015, *Working Paper, Target Journal: IEEE Transactions on Reliability*
- H.T. Birihan, N.O. Bakır 'Value of intelligence on terrorist preferences', 2015, *Working Paper, Target Journal: European Journal of Operational Research*
- B. Ersü, N.O. Bakır 'Value of intelligence on terrorists' target choice', 2015, *Working Paper, Target Journal: European Journal of Operational Research*

WORKING PAPERS CONTINUED

- D. Gülel, N.O. Bakır, S. Tekin ‘Sigorta mükelleflerinin optimal beyan zamanlarının belirlenmesi’, 2015, *Working Paper, Target Journal: Endüstri Mühendisliği Dergisi*

RESEARCH GRANTS

- *Principal Investigator*: Value of intelligence on terrorist preferences, İstanbul Kemerburgaz University Research Grant, 2015, 11,250 TL.
- *Principal Investigator*: Analysis of the relationship between risk aversion and the value of information under various approaches, The Scientific and Technological Research Council of Turkey Research Grant under Program No. 1002, 2011, 13,000 TL.
- *Investigator*: PortSec: Port operations modeling through computer simulation, CREATE Renewal 3-Year Project Grant, 2007-2010, \$100,000.
- *Principal Coordinator*: Stochastic game analysis for container security, CREATE Renewal Grant, 2007-2008, \$100,000.
- *Investigator*: Peroxide-based explosives: Properties, detection technologies & risk assessment, Department of Homeland Security Grant, 2007-2008, \$200,000.

WORK EXPERIENCE

Summer 2004 **General Motors R&D, Warren, MI**
Visiting Scholar, Manufacturing Systems Research Lab

SELECTED RESEARCH PRESENTATIONS

- N.O. Bakır, “Optimal claiming behavior for third-party auto insurance market in Turkey”, INFORMS 2014, San Francisco, CA
- N.O. Bakır, “Value of intelligence on terrorist preferences”, INFORMS 2012, Phoenix, AZ
- N.O. Bakır, “Sensitivity of inventory management policies to the level of risk aversion”, INFORMS 2011, Charlotte, NC
- N.O. Bakır, “Risk aversion and value of information under various approaches”, INFORMS 2010, Austin, TX
- N.O. Bakır, “Is better nuclear weapon detection capability justified?”, YAEM 2010, İstanbul, Turkey
- N.O. Bakır, Georgia-Ann Klutke “Risk aversion and the value of information”, INFORMS 2009, San Diego, CA
- N.O. Bakır, “A stochastic game model on overseas cargo container security”, INFORMS 2008, Washington DC
- N.O. Bakır, A.A. Savachkin, A. Uribe “Countermeasure policies to mitigate random disruptions in a capacitated system”, POMS Annual Meeting 2008, La Jolla, CA
- N.O. Bakır, “Cargo security at land borders”, POMS Annual Meeting 2008, La Jolla, CA
- N.O. Bakır, “Securing cargo at southwestern ports of entry”, INFORMS 2007, Seattle, WA

SELECTED RESEARCH PRESENTATIONS CONTINUED

- N.O. Bakır, “Preference reversals for information bundles”, INFORMS 2006, Pittsburgh, PA
- N.O. Bakır, “Threat and vulnerability analysis for border security”, The Los Alamos National Laboratories Risk Analysis Symposium 2006, Santa Fe, NM
- N.O. Bakır, “A systems based risk management approach for border security”, INFORMS 2005, San Francisco, CA
- N.O. Bakır, “Optimal inspection strategies for Coast Guard operations”, CREATE Economics Symposium 2005, Los Angeles, CA
- N.O. Bakır, “Information preference reversals for a risk averse decision maker”, INFORMS 2004, Denver, CO
- N.O. Bakır, “Fire risk modeling”, General Motors R&D, 2004, Detroit, MI

PROFESSIONAL MEMBERSHIPS

Institute for Operations Research and the Management Sciences (INFORMS)
Decision Analysis Society
Applied Probability Society

GRADUATE THESES SUPERVISED

1. Buğra Ersü, Value of intelligence resource allocation in counter-terrorism planning, *Completed December 2014*.
2. Büşra Keleş, Optimal inspection strategies to maintain systems subject to non-self-announcing failures, *Completed August 2014*, Co-supervisor: Salih Tekin.
3. Derya Gülel, Optimal claim behavior in Turkish insurance market: The Case of Traffic Insurance, *Completed August 2014*, Co-supervisor: Salih Tekin.
4. Hasan Tugay Birihan, Optimal allocation of intelligence resources against an adaptive adversary committing terrorist attacks, *Completed December 2012*.

REFeree FOR (journals in alphabetical order)

Annals of Operations Research
Decision Analysis Journal
Endüstri Mühendisliği Dergisi
European Journal of Operational Research
IIE Transactions
International Journal of Emerging Markets