

UNSAI OZDOGRU, Ph.D.

222 N Columbus Dr. #4107

Chicago, IL 60601

(312) 385-0313

ozdogru@sbcglobal.net

EDUCATION

Fall 2000	Doctor of Philosophy	Operations Research (RUTCOR), Rutgers University, New Brunswick, NJ Thesis "Performance Analysis of Continuous Material Flow Systems" Committee: Tayfur Altiok (Advisor), Adi Ben-Israel, Michael Katehakis, András Prékopa, Esra Doğan Şahiner
Winter 2000	Master of Science	Industrial & Systems Engineering, Rutgers University, New Brunswick, NJ
Spring 1997	Master of Science	Operations Research (RUTCOR), Rutgers University, New Brunswick, NJ
Spring 1991	Master of Science	Mathematics, Faculty of Arts & Science, Yildiz Technical University, Istanbul
Spring 1989	Bachelor of Science	Mathematics, Faculty of Natural Sciences & Literature, Mimar Sinan University of Fine Arts, Istanbul

CAREER PROFILE

- ◆ 5+ years of experience as Research Analyst consulting and delivering analytic based solutions to Consumer Packaged Goods (CPG) industry
- ◆ 2+ years of experience as Software Engineer delivering analytic based solutions to transportation industry
- ◆ 7+ years of experience in teaching various undergraduate and graduate level courses

PROFESSIONAL EXPERIENCE

THE NIELSEN COMPANY, Chicago IL

2006- 2012

Research Analyst

Understand client's business needs; innovate high impact solutions; enhance and maintain existing products with high standards of performance ensuring accuracy, efficiency and effectiveness; function as a consultant role for project/client managers and production team; pull/prepare data, analyze, design, test, prototype, validate, debug, and eliminate redundancies; write up specifications for production, technical and non-technical white papers

- Built a robust model to estimate item/store level daily baselines to be used for detecting items out of stock and increasing overall sales forecasts resulted in processing time reduction by 80% and provided client with faster cube build times with less hardware and with 50% increase in revenue
- Fully automated brand selection and innovated model to impute missing values for key variables used in loyalty applications resulted in completely eliminating complications and facilitated carrying out in production with high performance and capability

Research Analyst, continued;

- Facilitated roll-out of Spectra BehaviorScape in the global markets, launching successfully in Australia and France while collaborating for Canada
- Devised automated computationally efficient model to cluster a large number of basic levels of demographic variables into a smaller number of groups, used for segmentation
- Identified key drivers for selected categories based on macroeconomic trends, consumption behavior patterns and demographics; decomposed category to display dynamics of growth/decline for enabling client to leverage its engagement with retailers to establish long term strategies
- Analyzed factors comprehensively including trips, purchases, price and quantity, determining the reasons of Homescan under coverage by consumer segment
- Estimated buyer counts for a set of custom demographic and attitudinal profiles and behaviors at multiple levels of geography to increase sales
- Created a robust model to obtain expected spending for non-Hispanics, devised a model to score Hispanic consumer segments for better targeting to execute marketing programs for increasing sales

Selected Projects

2011	"Trade Promotion Optimization"
2011	"Forecasting Total Category for Canned Tomatoes and three Subcategories"
2011	"Forecasting Category Margarine"
2010	"Forecasting Baselines"
2010	"Futurecast: Diary Aisle Forecasting"
2010	"Estimating Local Area Household Counts"
2009	"Modeling Hispanic Household Acculturation"
2009	"Estimating Buyer Counts at Various Geographic Levels for Custom Profiles"
2009	"A Comprehensive Analysis of Homescan Panel Coverage"
2009	"Imputing Age of Head of Household"
2008	"Collapsing Segmentation Schemes"
2008	"Imputing Missing Age of Oldest Child for Australian BehaviorScape"
2007	"A Loyalty Application: Automating Brand Selection & Modeling Missing Kid's Values"
2006-2008	"Global Expansion of Spectra BehaviorScape for Canada, France, Australia"

TRANSPORT DYNAMICS, INC., Princeton, NJ**2001- 2003****OR Software Engineer**

Maintained all aspects of feature enhancements of Decision Support Software in real-time Truckload Companies to minimize total mileage traveled by trailers on business network including survey for appropriate information/data from the client, defining the problem, documenting scope, running feasibility analysis, describing methodologies to address the problem, designing logic, coding, testing, documenting, presenting results of analyses

- Significantly improved total mileage traveled by trailers after implementing features that would combine trailers, subject to constraints on the existing solution paths
- Improved robustness of the Network Generation Module by implementing second and third alternate shortest paths, both on regular weighted networks and weighted networks with the additional constraint of feasible time-windows
- Recognized improvement on the program architecture and design of all products, facilitating easier maintenance of the software

RUTGERS UNIVERSITY, New Brunswick, NJ**1998-2000****Teaching Assistant & Part Time Lecturer**

Held practice sessions and graded homework and exams as Teaching Assistant for undergraduate courses "Information Management" and "Calculus"; Taught as Part Time Lecturer for undergraduate courses "Production and Operations Management" and "Calculus"; and for graduate courses "Calculus for Managers" and "Statistical Models" in the MBA program

Selected Graduate Projects

- 1999 "Investigating the Impact of Correlation on Manufacturing System Behavior", funded by the National Science Foundation
- 1999 Engineering Economics: "A Numerical Approach for Solving High Dimensional Non-Linear Cost-Driven Design Problems", Rutgers University
- 1997 Simulation Models in IE: "A Simulation Model of Yard Operations in Port Trombetas", Bauxite Terminal, Brazil
- 1996 Performance Analysis of Manufacturing Systems: "A Numerical Approach to Find Performance Measures of an Existing Mine (Bauxite) Terminal", Rutgers University
- 1996 Case Studies in OR: "Lateness in Back to Back Classes by Rutgers Undergraduate Students Impacted by Intercampus Bussing", Rutgers University

YILDIZ TECHNICAL UNIVERSITY, Istanbul**1989-1993****TA, Instructor**

Held practice sessions and graded homework and exams as Teaching assistant for undergraduate courses "Probability", "Statistics", "Linear Programming" and "Calculus"; taught as Instructor for courses opened for public attendance in Programming Languages "GWBASIC", "FORTRAN" and "PASCAL"

SELECTED GRADUATE COURSES

Linear Programming	Nonlinear Programming	Multi-objective Mathematical Programming
Discrete Optimization	Deterministic Models	Network and Combinatorial Optimization
Stochastic Models	Queuing Theory	Methods of Statistical Inference
Numerical Analysis	Theory of Probability	System Reliability Engineering
Engineering Economics	Production Analysis	Performance Analysis of Manufacturing Systems

AWARDS

Summer/Fall 1999	DIMACS Fellowship, Rutgers- The State University of New Jersey
Summer 1998	DIMACS Fellowship, Rutgers- The State University of New Jersey
1993 - 1997	Graduate Educational Fellowship, High Educational Council (Ankara) & Yildiz Technical University (Istanbul), Turkey

ADDENDUM

TECHNICAL SKILLS

- Programmed in SAS, C/C++, Pascal, Fortran, SQL, SIMAN, UML
- Experienced with optimization/simulation packages MATLAB, Maple, LINDO, LINSOLVE and ARENA

CERTIFICATIONS

- | | |
|---------------------------------------------------|--------------------------------------------------------------------------|
| • C++ Object Oriented Programming, Microsoft Inc. | • SAS Programming III: Advanced Techniques & Efficiencies, SAS Institute |
| • Category Management, Nielsen | |
| • Project Management, Nielsen | • SAS Macro Language, SAS Institute |

PUBLICATIONS

- 2012 U. Ozdogru, T. Altiok, "Decomposition of Continuous Material Flow Systems: Analysis of Marine Ports Handling Bulk Materials", submitted to Annals of Operations Research, 2012
- 2003 U. Ozdogru, T. Altiok, "Analysis of Two-Valve Fluid Flow Systems with General Repair Times", Analysis and Modeling of Manufacturing Systems, Special Volume, Kluwer Publications, Boston, pp. 255-288, 2003
- 2000 U. Ozdogru, T. Altiok, "A Two-Valve Flow System with Random Material Arrival Process", RUTCOR Research Report 36-00, Rutgers University, 2000
- 2000 U. Ozdogru, T. Altiok, "Analysis of Two-Valve Fluid-Flow Systems with two Types of Materials", RUTCOR Research Report 29-00, Rutgers University, 2000
- 1999 U. Ozdogru, T. Altiok, "Analysis of Two-Valve Fluid-Flow Systems with General Repair Times", RUTCOR Research Report 50-99, Rutgers University, 1999
- 1999 U. Ozdogru, T. Altiok, "A comparative Review of Two-Valve Fluid-Flow Systems with Storage in Between", ISE Working Paper 99-1001, Rutgers University, 1999

PRESENTATIONS

- 2010 "Forecasting Baselines", The Nielsen Company, Chicago, IL
- 2010 "2-segment Hispanic Household Acculturation", The Nielsen Company, Chicago, IL
- 2010 "Estimating Local Area Household Counts", The Nielsen Company, Chicago, IL
- 2009 "Household Acculturation Segmentation", The Nielsen Company, Chicago, IL
- 2009 "A Comprehensive Analysis of Homescan Panel Coverage", The Nielsen Company, Chicago, IL
- 2008 "A Validation Study: Share of Wallet (SOW) Modeling", The Nielsen Company, Chicago, IL
- 2008 "Collapsing Segmentation Schemes", The Nielsen Company, Chicago, IL
- 2007 "A loyalty marketing application: Automating Brand Selection& Modeling Missing Kid's Values", The Nielsen Company, Chicago, IL
- 2005 "Analysis of Continuous Material Flow Systems in Bulk Ports", I3M, Marseilles, France
- 2001 "Performance Analysis of Two-Valve Continuous Material Flow Systems with Two Types of Materials", Mühendislik ve Doğa Bilimleri Fakültesi, Sabanci Üniversitesi, Tuzla, Istanbul, Turkey
- 2000 "Analysis of Two-Valve Continuous Material Flow Systems with General Repair Times", IBM T. J. Watson Research Center, New York, NY, USA
- 1999 "An Analytical Approach to Two-Valve Fluid-Flow Systems with Repair Times Phase Type Distributed", IE Graduate Student Presentation Series, Rutgers University, New Brunswick, NJ, USA,
- 1999 "Modeling Continuous-Flow Manufacturing Systems", INFORMS, Philadelphia, PA, USA