

Sezgin Ayabakan

Management Information Systems Department
Fox School of Business
Temple University
1801 Liacouras Walk
Philadelphia, PA, 19122

✉ ayabakan@temple.edu
☎ +1 (215) 204-7142
🌐 community.mis.temple.edu/ayabakan
🌐 linkedin.com/in/ayabakan
🌐 researchgate.net/profile/Sezgin_Ayabakan

EDUCATION

University of Texas at Dallas

Ph.D., Management Science

Thesis *Essays on Healthcare Information Technology and Healthcare Outcomes*

Ph.D. Advisors Indranil R. Bardhan, Zhiqiang (Eric) Zheng

Dallas, TX

August 2014

University of Florida

M.S., Industrial and Systems Engineering

Gainesville, FL

December 2008

Bilkent University

B.S., Industrial Engineering

Ankara, Turkey

May 2007

PROFESSIONAL EXPERIENCE

Temple University

Assistant Professor

Philadelphia, PA

July 2017 - present

University of Baltimore

Assistant Professor

Baltimore, MD

August 2014 - May 2017

Schaefer Center for Public Policy, University of Baltimore

Faculty Fellow

Baltimore, MD

August 2014 - May 2017

Evaluated Million Hearts project for Maryland Department of Health and Mental Hygiene

Trained data analysts on data based decision making at the Social Security Administration (Headquarter)

RESEARCH

Research Interests and Application Areas: Research interests include healthcare analytics and the business value of information technologies. Both areas investigate the managerial implications of information technology implementation decisions at healthcare or manufacturing organizations and contain a major analytics or empirical component. Current projects involve analysis of over 500K patient admission records from 68 hospitals in the North Texas region and the state of Maryland's entire inpatient and outpatient admission claims' for the fiscal years of 2013 - 2016 (~5.4 million records).

Research Interests: Healthcare Analytics ◊ Healthcare Informatics ◊ Economics of Healthcare IT ◊ Economics and Business Value of Information Systems ◊ Open Source Production

Application Areas: Health Information Exchanges and Interoperability ◊ Telemedicine & Telehealth ◊ Patient Health Outcomes ◊ Production Information Systems ◊ Manufacturing Process Efficiency

Methodology, Computer Skills, and Data: I have taught courses on Data Science, Management Information Systems, Analytical Techniques, and Predictive Analytics. I have extensively used Python Scikit-learn, SAS, Enterprise Miner, and Stata in my research. I also have an Operations Research background and am well-versed in optimization tools such as Matlab.

Methodology: Data Analytics ◊ Data and Text Mining ◊ Econometrics ◊ Linear/nonlinear Optimization

Computer Skills: SAS ◊ Python ◊ STATA ◊ Matlab ◊ R ◊ MySQL ◊ Access ◊ Java ◊ VBA

Data: State of Maryland Inpatient and Outpatient 2013 - 2016 data from Health Services Cost Review Commission Review Board ◊ American Hospital Association IT Supplement 2008 - 2013 data.

HONORS AND AWARDS

Faculty Recognition Award for promoting learning services and supporting tutors, Achievement and Learning Center, University of Baltimore, 2016

Runner Up, Best Conference Paper Award in International Conference on Information Systems (ICIS) 2014

Research assistantship under the grant from University of Texas Southwestern Medical Center, Contract #: 34056002, 2012-13

Full Scholarship, University of Texas at Dallas including tuition waiver and monthly stipend, 2009-14

Full Scholarship, University of Florida including tuition waiver and monthly stipend, 2007-08

Best Senior Project in Bilkent University Industrial Engineering Project Fair, 2007

Best Industry-University Project in National Operations Research and Industrial Engineering Project Competition (YA/EM), Turkey, 2007

Ranked 9th, Industrial Engineering Department, Bilkent University, among 150 graduates, 2007

High Honor Student, Bilkent University, for all terms, 2002-07

Full Scholarship, Bilkent University, including tuition waiver and monthly stipend, 2002-07

Ranked 568th, National University Entrance Exam in Turkey among over 1.2 million students, 2002

SCHOLARLY WORK

REFEREED PUBLICATIONS

Ayabakan, S., I. R. Bardhan, Z. Zheng, and K. Kirksey. 2017. The Impact of Health Information Sharing on Duplicate Testing. *MIS Quarterly* 41 (4). [Link to the article](#)

Ayabakan, S., I. R. Bardhan, and Z. Zheng. 2017. A Data Envelopment Analysis Approach to Estimate IT-Enabled Production Capability. *MIS Quarterly*, 41 (1). [Link to the article](#)

Ayabakan, S., A. Celik, E. Erdogan, C. Karakan, S. Kocak, D. Konur, and H. Yaman. 2007. Market Analysis and Distribution Network Design for HOD-Demijohn Water. *Endustri Muhendisligi* 18 (3), 2-12 (in Turkish). [Link to the article](#)

SUBMITTED / WORKING PAPERS

Ayabakan, S., I. R. Bardhan, Z. Zheng. 2019. Impact of Telehealth Usage on Healthcare Resource Utilization: A Quasi-experimental Study on Maryland Hospitals. Invited for 2nd round revision at *Management Science*

Ayabakan, S., R. Banker, I. R. Bardhan. 2019. Performance-based Incentive Programs in Healthcare: An Empirical Study of Shared Savings Programs and Accountable Care Organizations. preparing for submission to *Journal of Accounting and Economics*.

Ayabakan, S., I. R. Bardhan, Z. Zheng. 2019. Did Hospital Readmission Reduction Program Achieve the Triple Aim Goals? revising for submission to *Annual Review of Public Health*.

Ayabakan, S., I. R. Bardhan, Z. Zheng. What Drives Readmission? A New Perspective from Hidden Markov Model Analysis. revising for submission to *Journal of Management Information Systems*.

WORK IN PROGRESS

Ayabakan, S., M. Pang. Impact of Data-driven Interventions on Health Outcomes: The Case of Enhanced State Opioid Overdose Surveillance. In preparation-data analysis.

Ayabakan, S., H. Atasoy, M. Pang. Where is My Goddamn Money? The Interplay between Healthcare Information Technologies and Unpaid Claims. In preparation-data analysis.

Deng, Z., **S. Ayabakan**, S. Kumar, P. Pavlou. Patient-Sharing Network, EHR Adoption, and Healthcare Outcomes: An Empirical Investigation. In preparation-data analysis.

Gao, Y., **S. Ayabakan**, S. Wattal. Data Variety Implications: The Case of Crowdmed. In preparation-data analysis

Ayabakan, S., C. Jung, P. Pavlou. The Interplay of Health Information Technology, Continuity of Care and Patient Readmissions. In preparation-data analysis.

Bao, C. **S. Ayabakan.**, I. R. Bardhan. Implications of Accountable Care Organizations on the Extent of Health Information Sharing.

Sun, Z., M. Tozal, **S. Ayabakan**, S. Radhakrishnan, and V. Jacob. 2015. IT and Crowdsourcing: A Cross-country Analysis Based on Contributions to Wikipedia. Working paper.

REFEREED CONFERENCE PROCEEDINGS

Bardhan, I. R., **S. Ayabakan**, Z. Zheng. *Did Hospital Readmission Reduction Program Achieve the Triple Aim Goals?*. Pacific Asia Conference on Information Systems (PACIS), June 26-30 2018, Yokohama Japan [Link to the article](#)

Ayabakan, S., I. R. Bardhan, Z. Zheng. *What Drives Readmission? A New Perspective from Hidden Markov Model Analysis*. International Conference on Information Systems (ICIS), December 11-14 2016, Dublin, Ireland. [Link to the article](#)

Bardhan, I. R., **S. Ayabakan**, Z. Zheng, K. Kirksey. *Value of Health Information Sharing in Reducing Healthcare Waste: An analysis of duplicate testing across hospitals*. International Conference on Information Systems (ICIS), December 14-17 2014, Auckland, New Zealand. **Best Conference Paper Runner-up Award**. [Link to the article](#)

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of IT-enabled Manufacturing Capabilities on Plant Profitability: New Models and Evidence*. International Conference on Information Systems (ICIS), December 2012, Orlando, FL. [Link to the article](#)

REPORTS

Di Franco, T., **S. Ayabakan**, J. Callahan, P. d. L. Julnes, R. Fredriksson. *Maryland Million Hearts Evaluation for Maryland Department of Health and Mental Hygiene - Center for Chronic Disease Prevention and Control*, 2015, Schaefer Center for Public Policy, University of Baltimore, Baltimore, MD.

PRESENTATIONS

Ayabakan, S., H. Atasoy, M.-S. Pang. 2019. *Where is My Goddamn Money? The Interplay between Healthcare Information Technologies and Unpaid Claims*. Accepted at Conference on Health IT and Analytics (CHITA), Nov 15-16, 2019, Washington D.C.

Pang, M.-S., **S. Ayabakan**. 2019. *The Impact of Data-Driven Interventions on Prescription Drug Overdose Mortality*. Accepted at Conference on Health IT and Analytics (CHITA), Nov 15-16, 2019, Washington D.C.

Gao, Y., **S. Ayabakan**, S. Wattal. 2019. *Engaging the crowd: Shall we tell stories or provide structured content?*. Accepted at Conference on Health IT and Analytics (CHITA), Nov 15-16, 2019, Washington D.C.

Ayabakan, S., R. Banker, I. R. Bardhan. 2019. *Sustainability of Accountable Care Organizations: Learning or Selection Effects?*. Accepted at Conference on Health IT and Analytics (CHITA), Nov 15-16, 2019, Washington D.C.

Ayabakan, S., R. Banker, I. R. Bardhan. 2019. *Performance-based Incentive Programs in Healthcare: An Empirical Study of Shared Savings Programs and Accountable Care Organizations*. INFORMS Healthcare, July 27-29, 2019, Cambridge, MA.

Ayabakan, S., Z. Deng, S. Kumar, P. Pavlou. *Patient-Sharing Network, EHR Adoption, and Healthcare Outcomes: An Empirical Investigation*. INFORMS Healthcare, July 27-29, 2019, Cambridge, MA.

Deng, Z., **S. Ayabakan**, S. Kumar, P. Pavlou. *Patient-Sharing Network, EHR Adoption, and Healthcare Outcomes: An Empirical Investigation*. Statistical Conference in E-Commerce (SCECR), June 10-13, 2019, Hong Kong

Bardhan, I.R., **S. Ayabakan**, Z. Zheng. *Impact of Telehealth on Healthcare Resource Utilization: Mechanisms and Empirical Evidence*. AcademyHealth Annual Research Meeting (ARM), June 2-4, 2019. Washington D.C.

Ayabakan, S., Z. Deng, S. Kumar, P. Pavlou. *Patient-Sharing Network, EHR Adoption, and Healthcare Outcomes: An Empirical Investigation*. POMS Conference, May 2-6, 2019, Washington D.C.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Impact of Telehealth on Healthcare Resource Utilization*. Workshop on Information Systems and Economics (WISE), December 17-18, 2018, San Francisco

Deng, Z., **S. Ayabakan**, S. Kumar, P. Pavlou. *Physician Pairing and Patient Outcomes: An Empirical Investigation*. Conference on Health IT and Analytics (CHITA), October 19-20, 2018, Washington D.C.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of Telehealth on Healthcare Resource Utilization*. Conference on Health IT and Analytics (CHITA), October 19-20, 2018, Washington D.C.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Reevaluating Readmission Reduction Policies: The Role of Telehealth and Latent Patient Health Status*. University of Rhode Island - College of Business Research Seminar Series, April 2018, Kingston, RI.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Reevaluating Readmission Reduction Policies: The Role of Telehealth and Latent Patient Health Status*. U.S. Census Bureau - Center For Statistical Research & Methodology Seminar, August, 2017, Washington DC.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Opening the Black Box: The Impact of Telehealth and Latent Health Status on Patient Readmissions*. INFORMS Annual Meeting, November 13-16, 2016, Nashville, TN.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Differential Impact of Health IT on Duplicate Testing*. INFORMS Annual Meeting, November 1-4, 2015, Philadelphia, PA.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of Patient Health Insurance Coverage and Latent Health Status on Readmissions*. INFORMS Healthcare, July 29-31, 2015, Nashville, TN.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of Patient Health Insurance Coverage and Latent Health Status on Readmissions*. Workshop on Information Systems and Economics (WISE), December 17-19, 2014, Auckland, New Zealand. [Link to the article](#)

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of Insurance Coverage and Unobservable Health Status on Readmission Rates*. INFORMS Annual Meeting, November 9-12, 2014, San Francisco, CA.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Rethinking Readmission as a Hospital Quality Metric: Insurance Coverage and Latent Patient Health Status Affect Patients' Rate of Readmission*. INFORMS Conference on Information Systems and Technology (CIST), November 8-9, 2014, San Francisco, CA.

Zheng, Z., **S. Ayabakan**, I. R. Bardhan, K. Kirksey. *Can Health Information Sharing Reduce Duplicate Testing?* The Eighth China Summer Workshop on Information Management (CSWIM), June 21-22 2014, Chengdu, China

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of Patient Health Insurance Coverage and Latent Health Status on Hospital Readmissions*. Fifth Annual Workshop on Health Information Technology and Economics (WHITE), October 10-11 2014, Washinton, D.C.

Ayabakan, S., I. R. Bardhan, Z. Zheng, K. Kirksey. *Can Health Information Sharing Reduce Duplicate Testing? A Longitudinal Analysis of Patient Switching Behavior across Multiple Hospitals*. Fourth Annual Workshop on Health Information Technology and Economics (WHITE), November 15-16 2013, Washington, D.C.

Ayabakan, S., I. R. Bardhan, Z. Zheng, K. Kirksey. *Patient Migration and Duplicate Procedures: A Longitudinal Study of CHF Patients in North Texas*. INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.

Ayabakan, S., I. R. Bardhan, Z. Zheng, K. Kirksey. *Hospital Switching and Duplicate Tests: Can Health Information Exchange Reduce Redundant Testing?*. INFORMS Conference on Information Systems and

Technology (CIST), October 5-6, 2013, Minneapolis, MN.

Ayabakan, S., I. R. Bardhan, Z. Zheng, K. Kirksey. *Patient Migration and Duplicate Procedures: A Longitudinal Study of CHF Patients*. INFORMS Healthcare, June 2013, Chicago, IL.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *The Impact of IT-enabled Manufacturing Capabilities on Plant Profitability: New Models and Evidence*. The Eleventh Annual Big XII+ MIS Research Symposium, April 2013, Stillwater, OK.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Modeling Patient Migration Behavior for Congestive Heart Failure Readmissions*. Invited, INFORMS Annual Meeting, 2012, Phoenix, AZ.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Determinants of Manufacturing Performance: The role of operational and supply chain capabilities*. Workshop on Information Systems and Economics (WISE), December 2011, Shanghai.

Ayabakan, S., I. R. Bardhan, Z. Zheng. *Productivity of US Manufacturing Plants: The role of operational efficiency*. Invited, INFORMS Annual Meeting, 2010, Austin, TX.

GRANTS

Developing a Post-Baccalaureate Certificate Program in Predictive Analytics and Knowledge Discovery from Data

- ◇ Award received from *Fund for Excellence Program - University of Baltimore*
- ◇ Award amount: **\$22,988** for two years.

TEACHING

Temple University

Instructor - MIS0855 (On-campus) - Data Science - Undergraduate Level

Semester (Evaluations): Spring 2019 (4.4/5, 4.5/5), Fall 2019 (4.3/5), Spring 2018 (4.1/5, 3.9/5), Fall 2017 (4.1/5)

University of Baltimore

Instructor - PUAD626 (On-campus) - Information Resource Management - Graduate Level

Semester (Evaluations): Spring 2017(9.1/10), Fall 2016 (8.9/10), Spring 2016 (9.4/10), Fall 2015 (8.6/10), Spring 2015 (9.8/10), Fall 2014 (8.0/10 and 7.8/10)

Instructor - PUAD705 (On-campus) - Special Topics: Introduction to Predictive Analytics - Graduate Level

Semester (Evaluations): Fall 2016 (9.9/10)

Instructor - PUAD626 (Online) - Information Resource Management - Graduate Level

Semester (Evaluations): Spring 2017(8.3/10), Fall 2016 (7.1/10), Spring 2016 (8.7/10), Fall 2015 (7.2/10), Spring 2015 (7.7/10)

Instructor - PUAD630 (On-campus) - Analytical Techniques - Graduate Level

Semester (Evaluations): Spring 2016 (9.2/10), Fall 2015 (8.0/10)

Instructor - Co-taught - PUAD705 (On-campus) - Special Topics: Predictive Analytics - Graduate Level

Semester (Evaluations): Spring 2015 (9.5/10)

University of Texas at Dallas

Instructor - MIS3300 - Introduction to Management Information Systems - Undergraduate Level
Semester (Evaluations): Spring 2014 (4.58/5.00)

Teaching Assistant - HMGT6323 - Healthcare Informatics - Fall 2012, Summer 2012, Spring 2012, Summer 2011, Spring 2011

Guest Lecturer - MIS6323 - Object Oriented Programming - Fall 2012

Teaching Assistant - MIS6323 - Object Oriented Programming - Fall 2012

Teaching Assistant - MIS6326 - Database Management - Fall 2012

Teaching Assistant - HMGT6327 - Information and Knowledge Management in Healthcare - Spring 2012

Teaching Assistant - MIS6204 - Information Technology and MIS Fundamentals - Summer 2014

Teaching Assistant - MIS6330 - Information Technology Security - Spring 2012, Spring 2010

Teaching Assistant - MIS6302 - Information Technology Strategy and Management - Fall 2010

WORK EXPERIENCE and PROJECTS

Faculty Fellow, Schaefer Center for Public Policy, University of Baltimore **Spring 2015 - Fall 2015**

Project Title: Maryland Million Hearts Evaluation for Maryland Department of Health and Mental Hygiene, Center for Chronic Disease Prevention and Control

Tasks Included: Designed interview questions to evaluate the county health departments' initiatives based on the grants received for Million Hearts Program ◊ Conducted interviews at various Maryland county health departments ◊ Created partner profiles of Maryland Million Hearts program ◊ Delivered report on the assessment of Maryland Million Hearts program to Maryland Department of Health and Mental Hygiene, Center for Chronic Disease Prevention and Control.

Senior Project for The Coca Cola Company - Turkey, Bilkent University. **Fall 2006 - Spring 2007**

Project Title: Market Analysis and Distribution Network Design for HOD-Demijohn Water.

Tasks Included: Demand forecasting for a brand new HOD-Demijohn water product of The Coca Cola Company - Turkey in Ankara ◊ Mathematical formulation of the distribution network design problem to determine retailer locations, labor and infrastructure requirements of the retailers ◊ Case analysis for different objectives of the company ◊ Solving mathematical formulations for different cases and determining the best distribution network design (Express is used in the solutions).

Implementation: The result of this project is implemented by The Coca Cola Company - Turkey in Ankara.

Internship at Halkbank Corporate Branch, Ankara, Turkey. **Summer 2006**

Department: Foreign Trade and Marketing.

Tasks Included: Observed the process of depositing through a bank teller ◊ Simulated depositing process and made improvements on the process flow.

Internship at Vestel Electronics, Manisa, Turkey. **Summer 2005**

Department: Central Purchasing.

Tasks Included: Organized the information flow between side industry and central purchasing ◊ Optimized the design of PCB cards and selected the suppliers of PCB among the ones in China and Turkey ◊ Became familiar with SAP and ERP.

PROFESSIONAL ACTIVITIES and SOCIETIES

Reviewed articles/papers for

Information Systems Research ◊ Production and Operations Management ◊ MIS Quarterly ◊ Management Science ◊ Journal of Strategic Information Systems ◊ Production Planning and Control ◊ Decision Sciences ◊ Interfaces ◊ Information Technology and Management ◊ Electronic Commerce Research and Applications ◊ Business & Information Systems Engineering - Wirtschaftsinformatik ◊ Public Administration Quarterly ◊ International Conference on Information Systems (ICIS) Proceedings in 2018, 2017, 2016, 2015, 2014, 2013, 2012 ◊ European Conference on Information Systems (ECIS) Proceedings in 2019, 2018, 2017 ◊ INFORMS Conference on Information Systems and Technology (CIST) 2015 ◊ Workshop on Information Technology and Systems (WITS) 2013 ◊ Hawaii International Conference on System Sciences (HICSS) 2014, 2017

Member of

Association for Information Systems (AIS) ◊ Institute for Operations Research and the Management Science (INFORMS) ◊ Information Systems Society of INFORMS ◊ Health Information Management Systems Society (HIMSS)

Attended

Workshop on Information Systems and Economics (WISE) - San Francisco/CA 2018, Ft Worth/TX 2015
International Conference on Information Systems (ICIS) - Seoul/Korea 2017, Dublin/Ireland 2016, Ft Worth/TX 2015, Milan/Italy 2013, Orlando/FL 2012
INFORMS Annual Meeting - Phoenix/AZ 2018, Houston/TX 2017, Nashville/TN 2016, Philadelphia/PA 2015, San Francisco/CA 2014, Minneapolis/MN 2013, Phoenix/AZ 2012, Austin/TX 2010
INFORMS Conference on Information Systems and Technology (CIST) - Phoenix/AZ 2018, Houston/TX 2017, Nashville/TN 2016, Philadelphia/PA 2015, San Francisco/CA 2014, Minneapolis/MN 2013
INFORMS Conference on Business Analytics & OR - Baltimore/MD 2018
Conference on Health IT and Analytics (CHITA) - Washington DC 2017, 2014, 2013
INFORMS Healthcare - Nashville/TN 2015, Chicago/IL 2013
S.M.A.R.T. Workshop - Pittsburgh/PA 2014
Big Analytics Workshop - Dallas/TX 2013
Big XII+ MIS Symposium - Stillwater/OK 2013, Dallas/TX 2012

This CV is last updated: August, 2019