

# Curriculum Vitae

## Özge Karanfil, PhD

### ACTIVE ACADEMIC APPOINTMENTS

Assistant Professor, Koç University College of Administrative Sciences and Economics, Department of Operations Management and Information Systems, Istanbul- Turkey  
Email: [okaranfil@ku.edu.tr](mailto:okaranfil@ku.edu.tr) Sept 2018- present

Assistant Professor, Koç University School of Medicine, Department of Public Health, Istanbul- Turkey  
Koç University July 2020- present

Lab website: <http://www.karanfillab.com/>

### EDUCATION

**Massachusetts Institute of Technology** Cambridge, MA

Ph.D., Management Science, System Dynamics Group, Sloan School of Management 2016

*Dissertation Title: Why Clinical Practice Guidelines Shift over Time: A Dynamic Model with Application to Prostate Cancer Screening*

**McGill University** Montreal, Canada

M.Sc., Physiology, Center for Nonlinear Dynamics in Physiology and Medicine 2008

**Boğazici University** Istanbul, Turkey

M.Sc. and B.Sc., Industrial Engineering 2002, 2005

Istanbul High School- German Education, German Sprachdiplom 2. Stufe 1997

### RESEARCH EXPERIENCE

**Assistant Professor**, Department of Operations Management, College of Administrative Sciences and Economics, Koç University (September 2018- Present)

**Assistant Professor**, Koç University School of Medicine, Department of Public Health, (July 2020- Present).  
Coordinator of the MSc. Program in Global Health. 2021-2022.

**Visiting Scientist**, Department of Global Health and Population, Harvard T. Chan School of Public Health (September 2018- Present)

**Fellow**, Center for Middle Eastern Studies, Faculty of Arts & Sciences, Harvard University July-Sept 2019

**Postdoctoral Fellow**, Health Systems Cluster, Department of Global Health and Population, Harvard T. Chan School of Public Health (September 2016-September 2018)

**Graduate Research Assistant**, System Dynamics Research Group, Massachusetts Institute of Technology (September 2010-September 2016)

**Graduate Research Assistant**, Department. of Biomedical Physiology and Kinesiology. Simon Fraser University. (September 2008– November 2009).

**Graduate and Undergraduate Senior Research Assistant**, Industrial Engineering Department. Socio-Economic System Dynamics Lab. Boğaziçi University (January 1998 – November 2005).

**RESEARCH AREAS/ KEYWORDS:** Dynamic modeling for policy analysis, system dynamics, systems thinking; health policy, global health; physiological disease modeling, disease biomarkers; interactive simulations & gaming; evidence-based medicine, early detection of disease, Policy decision thresholds, clinical practice guidelines, population screening; multicultural settings, qualitative stakeholder participation, mixed methods; chronic disease management; cancer, obesity, cardiovascular diseases, NCDs.

## RESEARCH AWARDS & HONORS

<i>TÜBİTAK 2232 International Fellowship for Outstanding Researchers</i>	2019-2021
<ul style="list-style-type: none"><li>Project No: 118C327: Changing Trends in Healthcare Management: Use of Simulation Models to Inform Health Policy and Evidence-Based Decision-Making <a href="#">Link: 2232 International</a></li></ul>	
<i>Koç -Harvard Visiting Scholar Fellowship, Awarded by the Center for Middle Eastern Studies (CMES) at Harvard University, academic appointment between July- September</i>	2019
<i>Lupina Young Researchers Award – Best paper in Health Applications, System Dynamics Society</i>	2017
<ul style="list-style-type: none"><li>\$5000 by Lupina Foundation</li></ul>	
Co-PI for the Grant submitted to HMS Center for Global Health Delivery-Dubai w/ Rifat Atun	2017
<i>Yerby Fellowship – Harvard T. Chan School of Public Health.</i>	2016- 2017
MIT Sloan School of Management Doctoral Program Fellowship	2010- 2016
<i>Ida M. Green Fellowship – Massachusetts Institute of Technology, Tuition Award</i>	2010
Graduate Scholarship– Modeling of Complex Social Systems, SFU, Vancouver	2009
<i>Dana Meadows Award –Best Student Paper at 24<sup>th</sup> Int. System Dynamics Conference, Palermo</i>	2006
<i>Alma Mater Student Research Grant – McGill University, Montreal.</i>	2006
<i>TUBİTAK – Scientific &amp; Technological Research Council of Turkey, PhD Scholarship</i>	2005
<i>Dean’s Honor Roll - Dept. of Industrial Engineering, Boğaziçi University</i>	2002
<i>Best Undergraduate Student Paper. 23<sup>rd</sup> National OR and IE Conference</i>	2002
Awarded the Turkish Government Scholarship for Studying Abroad	1997
Top 150 student in National University Entrance Examination among 1.5 million students	1997
Top 100 student in the Nationwide High school Examination among 150.000 students	1989

## TEACHING EXPERIENCE

### ***Koç University, Istanbul***

Instructor for GLBH 524 Systems Modeling for Health Policy Analysis	Spring 2022
upcoming Spring 2023 (new grad course for MBA Health Track students and MSc in Global Health)	
Instructor for TECH 517. Strategic Systems Modeling	Fall 2020-21-22
new grad course for GSB-GNAM-SNOC international MBA students only- around 25 students in Fall 2021, 16 in Fall 2022	
Instructor for QMBU301. Quantitative Methods for Business Administration	Spring 2019-2020-2021
required course for Business Administration undergraduates, 158 students in 2021	
Instructor for Independent Study. MEDI 390. Conducting Systematic Lit Reviews for Medical Research	
Elif Gokcen Bozkurt, Koç University School of Medicine, 3 <sup>rd</sup> year medical student	Spring 2021
Instructor for Independent Study. OPSM 490. Conducting Systematic Lit Reviews for Medical Research	
Ecesu Cetin, Koç University School of Medicine, 3 <sup>rd</sup> year medical student	Spring 2021
Instructor for Independent Study. CASE 490. Conducting Systematic Literature Reviews to Guide Evidence-Based Healthcare. Exchange Medical Student: Şafak Abdelrahman	Fall 2019

### ***Massachusetts Institute of Technology (MIT), Cambridge, MA***

Teaching Assistant for Sloan Executive MBA Program (TA evaluations: 6.06/7)	
15.736 Introduction to System Dynamics	Summer 2016, Summer 2014, Summer 2013
Teaching Assistant for Program in System Dynamics (TA evaluations: 5.9/7)	
15.871 Introduction to System Dynamics, 15.872 System Dynamics	Fall 2011, 2013, 2014, Spring 2013
Teaching Assistant for System Design and Management (SDM) Program	
ESD74 System Dynamics for Engineers	Summer 2011

### ***National Institutes of Health (NIH)***

1 <sup>st</sup> Annual Institute on Systems Science and Health, Track Assistant in System Dynamics	Spring 2009
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### ***Boğaziçi University, Istanbul***

Teaching Assistant for undergrad and graduate courses at the Department of Industrial Engineering:	
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IE 255-Probability for Industrial Engineers	
IE 306-Systems Simulation	
IE 484-Simulation Gaming & Decision Experiments	2002-2005
Graduate Research Assistant at Socio-Economic System Dynamics Lab (SESDYN)	2002-2005
Undergraduate Research Assistant, Department of Industrial Engineering, Istanbul	1996-1997

## PUBLICATIONS in PEER REVIEWED JOURNALS

1. **Özge Karanfil**, Jack Homer. Misperceptions and Feedback in Early Detection of Cancer: Anatomy of a Medical Decision. *Systems Journal*. (Invited Paper for the Special Issue in *Systems Journal*, to appear in Dec 2022).
2. Kayı İ, Madran B, Keske Ş, **Karanfil Özge**, Arribas JR, Pshenichnaya N, et al. The seroprevalence of SARS-CoV-2 antibodies among health care workers before the era of vaccination: a systematic review and meta-analysis. *Clinical Microbiology and Infection*. 2021. DOI: <https://doi.org/10.1016/j.cmi.2021.05.036>
3. **Özge Karanfil**, Hosseinichimeh N, Duggan J. System dynamics and bio-medical modeling. *System Dynamics Review* [Internet]. December 2020. DOI: <https://doi.org/10.1002/sdr.1675>
4. **Özge Karanfil** and John Sterman. 2020. “Saving Lives or Harming the Healthy? Overuse and Fluctuations in Routine Medical Screening. *System Dynamics Review*. October 6. DOI: [10.1002/SDR.1661](https://doi.org/10.1002/SDR.1661).
5. Verguet, Stephane; Feldhaus, Isabelle; ...**Karanfil, Özge**, et.al. 2019. Health system modelling research: towards a whole-health-system perspective for identifying good value for money investments in health system strengthening. *BMJ Global Health*.2019 Apr 1;4(2): e001311. DOI: [10.1136/BMJGH-2018-001311](https://doi.org/10.1136/BMJGH-2018-001311).
6. **Özge Karanfil**. 2019. The Making of Practice Guidelines: Endogenous Dynamics of Policy Formation in Population Screening. *Proceedings*. 2019 Aug 1;2019(1):18822. DOI: [10.5465/AMBPP.2019.18822ABSTRACT](https://doi.org/10.5465/AMBPP.2019.18822ABSTRACT).
7. **Özge Karanfil**. PhD thesis in *Management Science*. “Why clinical practice guidelines shift over time: a dynamic model with application to prostate cancer screening”, MIT, Cambridge, 2016.
8. **Özge Karanfil** and John Sterman. 2015. A Dynamic Model for Health Screening: Misperceptions, Feedback and Long-Term Trends in Screening Mammography. *Implementation Science*.10(Suppl1): A50. DOI: [10.1186/1748-5908-10-S1-A50](https://doi.org/10.1186/1748-5908-10-S1-A50).
9. Abdel Hamid; .... **Karanfil, Özge**, et.al *et al.*, 2014. Public and health professionals’ misconceptions about the dynamics of body weight gain/loss. *System Dynamics Review*. 30: 58-74. DOI: [10.1002/SDR.1517](https://doi.org/10.1002/SDR.1517).
10. Azadeh Alimadad, Carrie Matteson, Warren L. Hare, **Özge Karanfil**, Diane T. Finegood, 2012. A novel algorithm for describing population level trends in body weight. *Health Journal*. Vol.4, 1514-1521. DOI: [10.4236/HEALTH.2012.412A217](https://doi.org/10.4236/HEALTH.2012.412A217)
11. Luvdeep Malhi, **Özge Karanfil**, Tommy Merth, Molly Acheson, Amanda Palmer and Diane T. Finegood. 2009. Places to intervene to make complex food systems more healthy, green, fair and affordable. *Journal of Hunger and Environmental Nutrition*, 4: 3, 466 – 476. DOI: [10.1080/19320240903346448](https://doi.org/10.1080/19320240903346448).
12. Diane. T. Finegood, **Özge Karanfil** and Carrie L. Matteson. 2008. Getting from Analysis to Action: Framing Obesity Research, Policy and Practice with a Solution-Oriented Complex Systems Lens. *Healthcare Papers*, 9(1) 36-41. DOI: [10.12927/HCPAP.2008.20184](https://doi.org/10.12927/HCPAP.2008.20184). EID: 2-s2.0-58149394535. PMID: [18974663](https://pubmed.ncbi.nlm.nih.gov/18974663/)
13. **Özge Karanfil** and Yaman Barlas. 2008. A Dynamic Simulator for the Management of Disorders of the Body Water Homeostasis. *Operations Research*. 56: 1474-1492. DOI: [10.1287/OPRE.1080.0618](https://doi.org/10.1287/OPRE.1080.0618). EID: 2-s2.0-61449143639.
14. **Özge Karanfil**. MSc. Thesis in *Physiology (Center for Nonlinear Dynamics in Physiology and Medicine)*. “A Mathematical Model for Steady-State Aspects of B Lymphopoiesis in Mouse and Rat Bone Marrow”, McGill University, Montreal, 2007.
15. **Özge Karanfil**. MSc. Thesis in *Industrial Engineering*. “A Dynamic Simulator for the Management of Disorders of the Body Water Metabolism”, Boğaziçi University, Istanbul, 2005.

## PEER REVIEWED PROCEEDING and CONFERENCE PAPERS

1. Sanser Guz, Gonenc Yucel, **Özge Karanfil**. Exploring the Causal Mechanisms of the Challenges Facing Public Health Insurance Models: A Comparative Analysis. *Proceedings of the 39th International System Dynamics Conference*. Frankfurt, Germany.
2. **Özge Karanfil**, Gokcen Bozkurt, Hazal Can, F. Aydin, E. Keskin, E. Sever, E. Cetin, E. Nebioğlu, V. Mole, S. Sakarya A Systematic Review on Evolving Clinical Practice Guidelines (CPGs) for Population Screening; Evidence from last three decades (1991-2020), URNCST Journal (The Undergraduate Research in Natural and Clinical Science and Technology), June 2022.

3. Sema Comez, Mahdi Hashemian, **Özge Karanfil**. A Dynamic Simulator for Disorders of the Body Water Homeostasis for Medical Education. 39<sup>th</sup> Int System Dynamics Society, Virtually Chicago. 2021.
4. **Özge Karanfil**, S. Guz, O. Irsoy, Mahdi Hashemian. What is the Stakeholder Effect on Clinical Guideline Formation Process: An Experimental Study. 39<sup>th</sup> Int System Dynamics Society, Virtually Chicago. 2021.
5. **Özge Karanfil**, S. Guz, O. Irsoy, Mahdi Hashemian. Stakeholder Effect in the Formation of Policy/ Practice Guidelines: An Experimental Study for Medical Screening. 40<sup>th</sup> National Operations Research and Industrial Engineering Congress (ORIE2021 Congress) on July 4-7, 2021.
6. Emir Gürsel, Lerzan Örmeci, Zeynep Aksin, Evrim Gunes, **Özge Karanfil**, Zehra Önen. A Capacitated SEIR Model for COVID-19. 40<sup>th</sup> National Operations Research and Industrial Engineering Congress (ORIE2021 Congress). July 4-7, 2021.
7. Sema Comez, Mahdi Hashemian, **Özge Karanfil**. The Body Water Game: A Dynamic Simulator of Disorders of The Body Water Homeostasis for Medical Education. 40<sup>th</sup> National Operations Research and Industrial Engineering Congress (ORIE2021 Congress). July 4-7, 2021.
8. Hazal Can, F. Aydin, E. Gokcen Bozkurt, E. Keskin, E. Sever, E. Cetin, E. Nebioğlu, V. Mole, **Özge Karanfil**, S. Sakarya. A Systematic Review on Evolving Clinical Practice Guidelines (CPGs) for Prostate Cancer Screening-Evidence from last two decades (1991-2020). *KU Research Days*, Koc University. 2021.
9. **Özge Karanfil**, Hazal Can, Fatma Aydin, Elif Gokcen Bozkurt, Erkam Keskin, Egemen Sever, Ecesu Cetin, Ertac Nebioğlu, Vasiliki Mole, Sibel Sakarya. 2020. A Systematic Review on Evolving Clinical Practice Guidelines for Population Screening. *Proc. of the 38th Int. SD Conf.* Virtual Bergen/ Norway.
10. **Özge Karanfil**. 2020. The Making of Practice Guidelines, and the Pendulum of Population Screening. *Inform's Annual Conference*. Virtual Conference. Nov 7-13.
11. **Özge Karanfil**. 2019. The Making of Practice Guidelines: Dynamics of Selection Criteria in Population Screening. *Inform's Healthcare Conference, MSOM Healthcare SIG Session 4*. Boston.
12. **Özge Karanfil**, Hazhir Rahmandad, Jack Homer and John Sterman. 2017. A Dynamic Model for Understanding Long-Term Trends in Prostate Cancer Screening. *Proceed. of the 35<sup>th</sup> SD Conference*. [Link](#).
13. **Özge Karanfil** and John Sterman. 2017. Our Walk to the End of Cancer? Understanding Long-Term Trends in Medical Screening. *Proceedings of the 35<sup>th</sup> SD Conference*. [Link](#).
14. **Özge Karanfil**, John D. Sterman. 2017. Our Walk to the End of Cancer? Understanding Long-Term Trends in Medical Screening. *INFORMS Annual Conference*. Houston. Texas.
15. **Özge Karanfil**, Hazhir Rahmandad, Jack Homer, John D. Sterman. 2016. PSA Screening for Prostate Cancer: A Dynamic Feedback Model to Understand Long Term Trends. *INFORMS Annual Conference*.
16. **Özge Karanfil** and John Sterman. 2015. Dynamics of Routine Health Screening. *INFORMS Healthcare Conference. Cluster: Disease Modeling and Economic Evaluation*. Nashville. Tennessee.
17. **Özge Karanfil** and John Sterman. 2015. Why is PSA screening so common when evidence is so uncertain? *INFORMS Healthcare Conference. Cluster: Medical Decision Making*. Nashville. Tennessee.
18. **Özge Karanfil** and John D. Sterman 2015. "Risk Perception, Preferences and Behaviors in Cancer Screening: A System without Negative Feedback". *Proceedings of the 33<sup>rd</sup> SD Conf*, Cambridge.
19. **Özge Karanfil**, 2015. Dynamics of Routine Health Screening: Why Is Screening So Common for Some Diseases When Evidence Is So Uncertain. *Preventing Overdiagnosis Conference*. DC.
20. **Özge Karanfil**, 2015. Risk Perception, Preferences and Behaviors in Prostate Cancer Screening. *Preventing Overdiagnosis Conference*. DC.
21. **Özge Karanfil** and John D. Sterman. 2014. Developing a dynamic model for breast cancer screening misperceptions and feedback in screening mammography debate: Anatomy of a medical decision. *IIE Annual Conference and Expo*. Montreal, 31 May-June 3 2014. Pages 2512-2539. [Link](#).
22. **Özge Karanfil** and John Sterman. 2014. A Dynamic Model for Health Screening: Understanding Long Term Trends in Screening Mammography. *INFORMS Annual Conference*. San Francisco. U.S.
23. **Özge Karanfil** and John Sterman. 2014. Our Walk to the "End of Cancer": Understanding the Trade-Offs and Feedback in Mammography Screening Decision. *Proceed. of the 29<sup>th</sup> Int. SD Conference*. Nijmegen.
24. **Özge Karanfil**. 2012. "Revisiting the Dynamics of Collapse: Globalization, Economic Growth & Rising Inequalities in the 19<sup>th</sup> Century Ottoman Empire". *Proceedings of the 30<sup>th</sup> SD Conf*, St. Gallen
25. **Özge Karanfil**, Thomas Moore, P. Finley, T. Brown, Aldo Zagonel, Robert Glass. 2011. "A Multi-scale Paradigm to Design Obesity Policy: Exploring the Integration of Individual- Based Modeling and System Dynamics". *Proceedings of the 29<sup>th</sup> International System Dynamics Conference*, DC, USA. [Link](#).
26. Emily Edwards, **Özge Karanfil**, Alicia Pichard, Julia Stark. 2010. MIT Country report: India-culture.
27. **Özge Karanfil**, 2009. "A System Dynamics Model of Body Weight Regulation and Obesity", *Proceedings of the 27<sup>th</sup> System Dynamics Conference*, Albuquerque.

28. Ty A. Ridenour, **Özge Karanfil**, Mildred Maldonado-Molina. 2009. Demonstration of Systems Dynamics Methods for Public Health Research: Testing the Gateway Hypothesis for Development of Substance Use. *6<sup>th</sup> Biennial Meeting of the Society for the Study of Human Development (SSHD)*, Michigan, USA.
29. **Özge Karanfil**. 2006. “A Dynamic Simulator for the Management of Disorders of the Body Water Metabolism”, *Proceedings of the 24<sup>th</sup> Int. System Dynamics Conference*, Nijmegen, Netherlands.
30. Gokhan Doğan and **Özge Karanfil**. 2002. “Long Term Consequences of Genetically Modified Crops in Agriculture”, *Proceedings of the 21<sup>st</sup> International System Dynamics Conference*, Palermo, Italy.

## WORKING PAPERS

1. **Özge Karanfil**, Jack Homer, Dian Kusuma, Rifat Atun. 2020. “Chronic and Cardiovascular Disease Management and Policy in LMICs: A Simulation-based Analysis for Malaysia” (submission stage)
2. **Özge Karanfil**, Melike Hazal Can, Sema Comez, Rifat Atun. “A Review for Systems Thinking and Modeling in Health Systems Research”. Work-in-Progress (submission stage)
3. **Özge Karanfil**, Hazal Can, Fatma Aydin, Elif Gokcen Bozkurt, Erkam Keskin, Egemen Sever, Ecesu Cetin, Ertac Nebioglu, Vasiliki Mole, Sibel Sakarya. “A Systematic Review on Evolving Clinical Practice Guidelines for Population Screening”.
4. **Özge Karanfil**, Jack Homer, Hazhir Rahmandad, John Sterman..et al. “A Dynamic Model to Understand Long Term Trends in PSA Screening for Prostate Cancer, Risk Preferences and Behaviors”.
5. **Özge Karanfil**, Hazhir Rahmandad, John Sterman..et al. “Understanding the Dynamics of Cancer Over-Screening and Fluctuations in Screening Criteria”. An Empirical Study.

## INVITED EVENTS AND TALKS

1. **Özge Karanfil**. 2022. BWaterGame: An Interactive Simulator for Management of Body Water Homeostasis Disorders. Virtual Event. Invited by the Biomedical Special Interest Group (BIOSIG) of the International System Dynamics Society. March 22, 2022. Youtube Link: <https://www.youtube.com/watch?v=1RvoGsRTiYs&t=157s>
2. Z. Akşın, O. Demiray, Ö. Ergönül, E. Güneş, **Ö. Karanfil**, Z. Önen, L. Örmeci, B Tan. Teşhis Test Etkisi Modellemesi ile Salgın Tedbirleri Analizi (TEST). BİLİM AKADEMİSİ COVID-19 MODELLEME ÇALIŞTAYI (ÇEVİRİMİÇİ). June 22, 2020. Monday.
3. 2<sup>nd</sup> KU Medical and Health Humanities Initiative Meeting, July 2020. Virtual at Koc University.
4. **Özge Karanfil**. 2019. Invited Speaker. Leveraging health systems perspective and approaches to understand the impact of UHC. World Health Organization (WHO) Meeting. MRG 2019: Modeling the interplay of tuberculosis (TB) with primary/universal health care (UHC). Istanbul, October 3-4.
5. **Özge Karanfil**. 2019. Invited Discussant at Koç University Healthcare Operations Workshop. June 2019.
6. **Özge Karanfil**. 2019. Invited Speaker. National Nursing Week 2019. “Complex Systems Modelling & Interdisciplinary Research to promote “Health for All””. Koç University. Hemşirelik Haftası Sempozyumu / Divan Hotel İstanbul -Taksim. May 2019
7. **Özge Karanfil**. 2018. Koc University Medi Seminar Series: “Sistem yaklasimi ve dinamik modelleme nedir, nasıl uygulanır?” – 7 Aralık Cuma, 2018, Koç Üniversitesi Rumeli Kampusu (in Turkish)
8. Workshop on Determinants of Obesity & Diabetes in the Middle East. *Systems Thinking and Systems Change, HMS Center for Global Health Delivery, Dubai*. (Organizer: Ozge Karanfil and Rifat Atun). 2017.
9. **Özge Karanfil**. 2017. A System Dynamics Model for Understanding Long-Term Trends in Routine Population Screening. *Harvard Medical School. Department of Population Medicine*. Health Policy and Insurance Research Seminar Series. November 2017.
10. Health System Modeling Initiative: A Kick-off Meeting. Harvard T.H. Chan School of Public Health. (Organizer: Stephane Verguet). September 2017.
11. **Özge Karanfil**. 2015. A Dynamic Feedback Approach to Understand Long Term Trends in Population (Routine) Screening for Prostate Cancer. *Harvard Medical School. Dept of Population Medicine*. Boston.
12. **Özge Karanfil**. 2015. A Dynamic Feedback Approach to Understand Long Term Trends in Population (Routine) Screening. *MIT Behavioral and Policy Sciences Working Group*.
13. **Özge Karanfil** and John Sterman. 2013. Developing a Dynamic Model for Breast Cancer Screening: Misperceptions and Feedback in Screening Mammography Debate: Anatomy of a Medical Decision. *MIT Innovations in Healthcare Conference*, Boston, MA.
14. **Özge Karanfil**. 2011. Integrating Public Health Research with Complex Systems Science & Modeling for Obesity Prevention. *University of New Mexico, Prevention Research Center*. Albuquerque, New Mexico

15. **Özge Karanfil.** 2011. A Dynamic Simulator for the Management of Disorders of the Body Water Homeostasis. *Sandia National Laboratories*. Albuquerque, New Mexico.
16. **Özge Karanfil.** 2009. Building a System Dynamics Model of Body Weight Regulation and Obesity. *1<sup>st</sup> Annual Workshop on Dynamic Modeling for Health Policy*, Saskatoon, Canada.
17. **Özge Karanfil.** 2008. A Mathematical Model of Steady State B Lymphopoiesis in Mouse and Rat Bone Marrow. *Disease Dynamics Workshop*, Vancouver-BC, Canada.
18. **Özge Karanfil.** 2008. Understanding Diabetes Population Dynamics through Simulation Modeling and Experimentation. *Obesity Boot Camp*, Duchesnay, Québec, Canada.
19. Nadine Enright, Luju Liu, Chuncheng Wang, **Özge Karanfil.** 2008. Modeling Tuberculosis in Northern Canada. *Summer School on Mathematical Modeling of Infectious Diseases*. University of Alberta.
20. **Özge Karanfil.** 2006. A Dynamic Simulator for the Management of Disorders of the Body Water Homeostasis. *1<sup>st</sup> International Congress of Business Dynamics*, Brasilia, Brazil.
21. **Özge Karanfil** and Gokhan Doğan (co-presented). 2002. Long Term Consequences of Genetically Modified Crops in Agriculture”. *23<sup>rd</sup> National OR and Industrial Engineering Symposium*, Istanbul.

## PROFESSIONAL AFFILIATIONS

International System Dynamics Society (SDS)	2002 – present
• Healthcare Track Chair	2016 – 2017
• Policy Council Elected Member	2015 – 2017
• Health Policy Special Interest Group	2006 – present
• Socio-Economic System Dynamics Lab at Bogazici University	2002- present
Biomedical Special Interest Group	2008 – present
Institute for Operations Research and the Management Sciences (INFORMS)	2011 – present
Academy of Management (AOM)---Health Care Management Division Member	2019 – present
Society for Medical Decision Making (SMDM)	2014 – present
Academy Health (Academy Health)	2015 – present
Health Systems Global (HSG)	2017 – present
Egitimde System Dusuncesi Dernegi (ESD)	2021 – present
Yoneylem Arastirmasi Dernegi (YAD)	2020 – present
MIT Mezunlari Dernegi	2019 – present
Harvard Mezunlar Dernegi	2019 – present

## ADVISORY AND SUPERVISORY RESPONSIBILITIES

### Graduate Student Supervision:

- PhD. Student. 2232 PhD fellow.** Sema Çömez, Koç University, Industrial Engineering and Operations Management. 2020 – present
- PhD. Student. 2232 PhD fellow.** Bahar Madran, Koç University, Health Sciences Institute, 2020-2022.
- MSc. Student. Main Advisor.** Esra Bilir, Koç University, MSc in Global Health Program 2021 – present
- MSc. Student. Main Advisor.** Mehr-Un-Nisa Usman. **2232 fellow.** Koç University, MSc in Global Health Program 2022 – present
- MSc. Student. Committee Member. 2232 fellow.** Şanser Güz, Bogazici Uni., Industrial Eng. 2020 – 2022
- MSc. Student. Advisor. 2232 fellow.** Orkun Irsoy, Bouazizi University, Industrial Engineering 2020 – 2022
- MSc. Student. Main Advisor.** Başak Tavşanoğlu, Koç University, Industrial Engineering and Operations Management. 2020 – present
- Postdoctoral Fellow. Melike Hazal Can.** Northeastern University, Industrial Engineering. 2020 – 2021
- MSc. Thesis committee member.** Feyyaz Şentürk, “MODELING THE PHARMACODYNAMICS OF rHuEPO, A BLOOD DOPING DRUG”, Boğaziçi Üniversitesi. 2020.
- MSc. Thesis committee member.** Kazim Ozgün, Boğaziçi University, Industrial Engineering. MODELING THE DYNAMICS OF BLOOD PRESSURE UNDER THE SLEEP APNEA EFFECT”. 2019.
- Project Co-Supervisor.** A Capacitated SEIR Model for COVID-19. Emir Gursel, PhD student, Koç University, Industrial Engineering and Operations Management, CASE. 2020 – present
- Project Supervisor.** Complex Health Systems. Melike Hazal Can, PhD student, Northeastern University, Industrial Engineering, Healthcare Systems Engineering Institute. 2017 – present

### **Undergraduate student supervision:**

Elif Gokcen Bozkurt, Koç University School of Medicine, STAR fellow, 4<sup>th</sup> year medical student  
Adnan Dogan, Middle East Technical Uni, STAR fellow, 3<sup>rd</sup> year Comp. Science and Eng. student  
Emrullah Simsek, Istanbul University, STAR fellow, 3<sup>rd</sup> year student  
Muhammet Ali Karaca, 3<sup>rd</sup> year student, Hacettepe University School of Medicine, STAR fellow, 3<sup>rd</sup> year student

### **KU Operations Management:**

Abhishek Chandramouli, Computer Science and Engineering, Vellore Institute of Technology, India

Feb-June 2020

### **KU School of Medicine:**

Erkam Keskin, Koç University School of Medicine, 3<sup>rd</sup> year medical student  
Ecesu Cetin, Koç University School of Medicine, 3<sup>rd</sup> year medical student  
Elif Sever, Koç University School of Medicine, 3<sup>rd</sup> year medical student  
Hazal Can, Koç University School of Medicine, 3<sup>rd</sup> year medical student  
Fatma Aydin, Koç University School of Medicine, 3<sup>rd</sup> year medical student  
Elif Gokcen Bozkurt, Koç University School of Medicine, 3<sup>rd</sup> year medical student

### **Instructor for Independent Study. MEDI390. Conducting Systematic Lit Reviews for Medical Research**

Elif Gokcen Bozkurt, Koç University School of Medicine, 4<sup>th</sup> year medical student Spring 2021

### **Instructor for Independent Study. OPSM 490. Conducting Systematic Lit Reviews for Medical Research**

Ecesu Cetin, Koç University School of Medicine, 4<sup>th</sup> year medical student Spring 2021

### **Instructor for Independent Study. CASE 490. 'Conducting Systematic Literature Reviews to Guide**

Evidence-Based Healthcare'. Exchange Medical Student: Şafak Abdelrahman Fall 2019

**Undergraduate Advisor.** Burak Eroz. Koç University, Business Administration and Economics. Spring 2018.

**Undergraduate Advisor.** Ugurcan Isik. Koç University, Chemical and Biological Engineering. Spring 2019

**Undergraduate Advisor.** KOLT Program, Koç University: Iraz Kucuker, Oktay Keles, Alper Kaya. Spring 2019.

### **Harvard T.H. Chan School of Public Health:**

Hypercholesterolemia Review. Group of medical students and MD residents from HMS School of Mass General Hospital: Chelsea Jordan Messinger, Eric Li, Faith C Robertson, Angel Jung, Tuna Cem Hayirli, Emily Wu.

2017- 2018

### **EXECUTIVE SERVICES**

#### ***Editorial-Organizer Positions***

#### **Guest Editor for the Special Issue of the System Dynamics Review Journal**

2020-21

*Special Issue in Biomedical Modelling*, with James Duggan and Niyousha Hosseinichimeh

March 2021

Link: <https://onlinelibrary.wiley.com/toc/10991727/0/0>

#### **Workshop-Webinar on Biomedical Modelling**

June 2021

**Healthcare Workshop Co-Organizer** with Lerzan Ormeci and Evrim Didem Gunes: <https://healthcare.ku.edu.tr/>

#### **Workshop on Determinants of Obesity & Diabetes in the Middle East**

Feb 2017

*Systems Thinking and Systems Change, HMS Center for Global Health Delivery, Dubai*

*Co-PI for the Grant submitted to HMS Center for Global Health Delivery-Dubai w/ Rifat Atun*

**Reviewer** for System Dynamics Review (SDR), Social Science and Medicine, BMJ Global Health, Value in Health, PLOS ONE, Annals of the New York Academy of Sciences, Acta Biotheoretica, Health Systems, Int. J. of System of Systems Engineering, International Journal of Public Opinion Research (IJPOR), Health Systems, Quality of Life Research. 2011-

Reviewer for International SD Conference (ISDC), Society for Medical Decision-Making Conference (SMDM)

#### ***Board Memberships and Consulting***

Koç University Semahat Arsel Nursing Education, Application and Research Center (SANERC)-- VKV Nursing Fund Project Assessment Committee Member 2020-2023

Koç University School of Nursing: Faculty Member Search Committee 2021- present

Advisory Board Member, LARRY <https://www.meetlarry.io/> 2020- present

Advisory Board Member, Fortuna Healing [www.fortunahealing.com](http://www.fortunahealing.com) 2019-present

## Service

SDR Special Issue Editor	2020 – 2021
Co-Chair for the SD Track at IEOM 2019 conference, Pilsen, Czech Republic.	2019
Co-Chair for Health and Healthcare Thread at the International SD Conference	2016- 2017
Policy Council Member, System Dynamics Society	2015- 2017
Session Chair for INFORMS Annual Conference, Health Applications	2015-
Session Chair for INFORMS Healthcare Conference, Disease Modeling and Economic Evaluation	2015-
SD Society Newcomers Orientation (2014-2016), Organizer of System Dynamics Society PhD Colloquiums (Fall 2011, Spring 2012, Fall 2012), Organizer of Student Working Group/Journal Clubs at MIT (2014-2015)	
Summer School Organizational Team, McGill University, Montreal	June 2006
EURO/INFORMS Joint Int. Meeting, Local Organizational Team Member, Istanbul	July 2003
HABITAT-II city summit, Volunteer and full-time translator, Istanbul	June 1996

## MISCELLANEOUS

**Software:** VensimPLE, VensimDSS, Stella Architect (Simulation software), STATA, MATLAB, MAXQDA, C and C++ Arena, Siman, Design Expert, Systat, MS Project, Anylogic, Pajek.

**Citi Program Certificate** Social & Behavioral Research Investigators, Harvard University Nov 2016-2019

**Languages:** Turkish (native), English (fluent), German (Sprachdiplom- Istanbul High School)

## ACADEMIC PROFILES

Orcid ID: [0000-0002-2319-0818](https://orcid.org/0000-0002-2319-0818) Scopus Author ID: [25951423100](https://scopus.org/authid/25951423100)

Web of Science ResearcherID: [K-5103-2019](https://orcid.org/K-5103-2019) Publons ID: [1291381](https://publons.com/author/1291381)

[Linkedin:](#) [Mendeley:](#) [Researchgate:](#)

Academia Personal: <https://ozgekaranfil.academia.edu/>

Academia: <https://ozgekaranfil.academia.edu/>

HSPH Personal: <https://www.hsph.harvard.edu/ozge-karanfil/>

Harvard Catalyst: <https://connects.catalyst.harvard.edu/Profiles/display/Person/153042>

**Lab Website** [www.karanfillab.com](http://www.karanfillab.com)

## SELECTED GRADUATE COURSEWORK (w/Course Code)

### Simulations, Complex Systems and Dynamic Modelling:

- Introduction to System Dynamics w/ John D. Sterman ([15.871](#))
- System Dynamics II w/ John D. Sterman ([15.872](#))
- Dynamics of Socio-Economic Systems w/ Yaman Barlas ([IE 550](#))
- Dynamic Systems Modeling and Analysis w/ Yaman Barlas ([IE 602](#))
- Qualitative Reasoning w/ Cem Say ([CMPE 560](#))
- Systems Modeling for Environmental Dynamics w/ Ali Kerem Saysel ([ESC 594](#))
- Network Science and Models w/ Cesar A. Hidalgo ( 6.218 and [MAS961](#))
- Optimization Techniques w/ Kuban Altinel ([IE 501](#))

### Health Systems, Health Economics & Health Policy:

- Concepts and Methods in Global Health and Population Studies w/ Till Baernighausen ([HAP.G210](#))
- Health Economics w/ David Cutler ([EC 2465](#))
- Global Healthcare Delivery Lab w/ Anjali Sastry ([15.966](#))
- Epidemiology and Public Health Courses in Summer Schools and Workshops
- Fundamentals of Global Health (audited) ([GHP 557](#))
- Innovation and Global Health Systems (audited) ([ID 552](#))
- Advanced Endocrinology (McGill)
- Advanced Renal Physiology (McGill)

### Probability, Statistics & Stochastics:

- Statistical Data Analysis ([IE 506](#))



- Statistical Learning and Data Mining w/ Roy Welch ([15.077](#))
- Stochastic Processes and Applications w/ Gulay Barbarosoglu ([IE 505](#))
- Biostatistics Courses in Summer Schools and Workshops

**Other Graduate Courses:**

- Organizations and Environments w/ Ray Reagans MIT Sloan ([15.342](#))
- Microeconomic Theory, Harvard Kennedy School ([EC 2020a](#))
- Economic History of Turkey w/ Şevket Pamuk, Bogazici ([EC 516](#))
- Computational Science and Engineering I w/ Gilbert Strang, MIT ([18.085](#))