Şanser Güz

Ph.D. Canditate

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EDUCATION

Doctor of Engineering, The University of Tokyo   *expected* **2026**
Technology Management for Innovation, Advisor: Shinsuke Murakami   GPA: 4.00 / 4.00

Master of Science, Boğaziçi University   **2022**
Industrial Engineering, Advisor: Gönenç Yücel, Özge Karanfil   GPA: 3.93 / 4.00

Bachelor of Science, Boğaziçi University   **2020**
Industrial Engineering, Advisor: Gönenç Yücel   GPA: 3.10 / 4.00
Minor in Film Studies from Department of Western Languages and Literatures

RESEARCH AREAS

Themes and topics: Socio-economic systems; Complex systems; Computational social sciences; Economics; Public policy; Complex adaptive systems; Energy transitions, Circular economy, Dynamic decision-making

Methodologies and approaches: Simulation; System dynamics; Agent-based modeling; Network science; Model integration; Coupling; Scenario analysis; Policy testing; Statistics; Forecasting

ACADEMIC EMPLOYMENT

Research Assistant   2024 - ongoing
The University of Tokyo
Graduate School of Engineering, Murakami Lab

Research Associate   2022 - 2023
Bogazici University
Institute of Environmental Sciences

Graduate Teaching Assistant, Lab Assistant   2020 - 2022
Bogazici University
Department of Industrial Engineering, Socio-economic System Dynamics Laboratory

Graduate Teaching Assistant, Research Assistant   2020 - 2022
Koc University
College of Administrative Sciences and Economics, KaranfilLab

PUBLICATIONS

Journal Articles

1. **Ş. Güz**, I.Uygur, A.K. Saysel, N. Copty, (n.d.), A coupled dynamic model for sustainable groundwater management in irrigated agricultural regions. Submitted to Water Resources Research in February 2025.

2. O. İrsoy, **Ş. Güz**, N.B. Akan, and G. Yücel, (2021), Dynamic trade-offs in granulocyte colony-stimulating factor (G-CSF) administration during chemotherapy. System Dynamics Review, 36: 397-446.

Working Papers

1. **Ş. Güz**, G. Yücel, Ö. Karanfil, Dynamic analysis of public health insurance programmes. Book Chapter.

2. **Ş. Güz**, S. Murakami, Critical Minerals in Energy Transitions and Approaches to Modeling: A Literature Review. Journal Article.

Conference Papers and Presentations

1. **Ş. Güz**, S. Murakami, (2024), Critical minerals in energy transitions and approaches to modeling: a literature review, The 16th Biennial International Conference Ecobalance, Sendai, Japan.

2. **Ş. Güz**, I.Uygur, A.K. Saysel, N. Copty, (2024), Coupling of system dynamics and hydrogeological Models for sustainable groundwater management for Konya Basin, Türkiye, Sustain Istanbul 2024, Istanbul, Turkey.
   - Presented in Session VI: Governance and policy towards sustainable groundwater management

3. **Ş. Güz**, G. Yücel, Ö. Karanfil, (2022), Dynamic analysis of public health insurance programmes, Proceedings of the 40th International Conference of the System Dynamics Society, Frankfurt, Germany.
   - Presented in Parallel session: Health Finance
   - Awarded with Lupina Young Researchers Award – Honorable Mention

4. Ö. Karanfil, **Ş. Güz**, O. İrsoy, M. Hashemian, (2021), What is the stakeholder effect on clinical guideline formation process: an experimental study, Proceeding of the 39th International Conference of the System Dynamics Society, Chicago, IL.
   - Presented in Parallel session: Clinical Care Improvement

5. Ö. Karanfil, **Ş. Güz**, O. İrsoy, M. Hashemian, (2021), Stakeholder effect in the formation of policy/practice guidelines: an experimental study for medical screening, Abstracts for the 40th Congress on Operations Research / Industrial Engineering, Istanbul, Turkey.
   - Presented in Parallel session: System Dynamics Applications in Healthcare

6. **Ş. Güz**, O. İrsoy, N.B. Akan, G. Yücel, (2020), Managing chemotherapy-induced neutropenia using exogenous granulocyte colony-stimulating factor, Proceedings of the 38th International Conference of the System Dynamics Society, Bergen, Norway.
   - Presented in Plenary session: Scientific Advances
   - Awarded with Lupina Young Researchers Award – Honorable Mention

AWARDS and SCHOLARSHIPS

MEXT Research and Ph.D Scholarship   2022 - 2026
(2022 - 2023: Research Student Scholarship, 2023 - 2026: Ph.D. Scholarship)
Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT)
The University of Tokyo, Tokyo, Japan

Lupina Young Researchers Award Honorable Mention   2022
Lupina Foundation
2022 International System Dynamics Conference, Frankfurt, Germany

Lupina Young Researchers Award Honorable Mention   2020
Lupina Foundation
2020 International System Dynamics Conference, Bergen, Norway

TUBITAK 2210-A National MSc/MA Scholarship   2020 - 2022
The Scientific and Technological Research Council of Turkey (TUBITAK)
Bogazici University, Istanbul, Turkey

JASSO Student Scholarship   2017 - 2018
The Scientific and Technological Research Council of Turkey (JASSO)
University of Tsukuba, Ibaraki, Japan

TEACHING EXPERIENCE

GLBH 524: Systems Modeling for Health Policy Analysis   Spring 22, Fall 23
Koc University, School of Medicine
Graduate Teaching Assistant for Dr. Özge Karanfil

IE 533: Systems Theory Spring 22

Boğaziçi University, Department of Industrial Engineering

Graduate Teaching Assistant for Dr. Gönenç Yücel

TECH 517: Strategic Systems Modeling Fall 21, Spring 22, Fall 22

Koc University, College of Administrative Sciences and Economics

Graduate Teaching Assistant for Dr. Özge Karanfil and Dr. Mahdi Hashemian

RESEARCH EXPERIENCE

The University of Tokyo, Graduate School of Engineering

Research Assistant since 2024, PI: Shinsuke Murakami

Modeling and simulation of global Lithium supply chain with a focus on EU region to test the feasibility and potential impacts of European Commissions new lithium-ion battery regulation.

Bogazici University, Institute of Environmental Sciences

Research Associate in 2022 - 2023, PI: Ali Kerem Saysel, Nadim Copty

Development of a python-based coupling program for integrating system dynamics and MODFLOW based modules to provide a better representation of socio-ecological agricultural systems. Part of the InTheMED (Innovative and Sustainable Groundwater Management in the Mediterranean) research project supported by PRIMA.

Koc University, College of Administrative Sciences and Economics

Research Assistant in 2020 - 2022, PI: Özge Karanfil, Mahdi Hashemian

Design and development of computer simulation aided human subject dynamic decision making (DDM) experiments for evaluation of stakeholder effect on formation of clinical practice guidelines (CPGs) in the context of prostate cancer screening. Project was supported by TUBITAK.

PROFESSIONAL SKILLS

Software

STELLA, Vensim, NetLogo, RStudio, ARENA.

Computer skills

Python, C, C++, CMPL, HTML, GAMS, SIMAN, LaTeX.

Languages

Turkish (Native), English (Fluent), Japanese (Fluent).

REFERENCES

Gönenç Yücel

Associate Professor and Department Vice-Chair

Faculty of Engineering, Boğaziçi University

gonenc.yucel@boun.edu.tr

Shinsuke Murakami

Professor

Graduate School of Engineering, The University of Tokyo

smurakam@tmi.t.u-tokyo.ac.jp

Ali Kerem Saysel

Professor

System Dynamics Group, University of Bergen

gonenc.yucel@boun.edu.tr

Özge Karanfil

Assistant Professor

College of Administrative Sciences and Economics, Koç University

okaranfil@ku.edu.tr