

Prof. YAMAN BARLAS

Personal Information

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Publons / Web Of Science ResearcherID: R-5788-2019

ScopusID: 66029048136602904813

Biography

Yaman Barlas received his B.S. in Industrial Engineering from Middle East Technical University in Ankara and M.S. in Industrial and Systems Engineering from Ohio University. Upon receiving his Ph.D. from Georgia Institute of Technology in 1985, he joined Miami University of Ohio, where he eventually received his tenure. He returned home to Boğaziçi University in Istanbul in 1993, where he has been a faculty member in Industrial Engineering until his retirement in 2021. Barlas is currently a retired (part-time) professor at Boğaziçi University and founding (emeritus) director of SESDYN research laboratory (sesdyn.ie.bogazici.edu.tr). He has also spent sabbatical visits at different European and American universities. In 2024, Prof. Barlas joined Acibadem University in Istanbul as a fulltime faculty member. His interest areas include credibility and testing of simulation models, system dynamics method, systems sciences, modeling of social, environmental and medical/health problems, and simulation as a learning platform. Dr. Barlas has several teaching excellence and research awards, and has received the 'Outstanding Service' and 'Lifetime Achievement' Awards from the international System Dynamics Society. He is a founding member and a former President of the System Dynamics Society, and has had various professional roles, including Executive Editor of *System Dynamics Review*.

Education Information

Doctorate, Georgia Institute of Technology, United States Of America 1980 - 1985

Postgraduate, Ohio University, United States Of America 1978 - 1980

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 1972 - 1978

Foreign Languages

French, B2 Upper Intermediate

English, C1 Advanced

Academic Titles / Tasks

Professor, Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering And Natural Sciences, Industrial and Systems Engineering, 2024 - Continues

Professor, Bogazici University, Engineering, Industrial Engineering, 1997 - 2021

Associate Professor, Bogazici University, Engineering, Industrial Engineering, 1993 - 1997

Associate Professor, Miami University of Ohio, Applied Science and Engineering, Systems Analysis, 1990 - 1993

Assistant Professor, Miami University of Ohio, Applied Science and Engineering, Systems Analysis, 1985 - 1990

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Circadian clock crosstalks with autism**
Yurdakul E., Barlas Y., Ulgen K. O.
Brain and Behavior, vol.13, no.12, 2023 (SCI-Expanded)
- II. **Modeling the pharmacodynamics of nandrolone doping drug and implications for anti-doping testing**
Sahin Ö., Senturk F., Barlas Y., Yasarcan H.
System Dynamics Review, vol.36, no.4, pp.467-496, 2020 (SSCI)
- III. **Editorial: On System Dynamics Review**
Barlas Y.
System Dynamics Review, vol.36, no.3, pp.243-246, 2020 (SSCI)
- IV. **Queuing systems in a feedback environment: Continuous versus discrete-event simulation**
Barlas Y., Özgün O.
Journal of Simulation, vol.12, no.2, pp.144-161, 2018 (SCI-Expanded)
- V. **Sensitivity analysis for models with multiple behavior modes: a method based on behavior pattern measures**
Hekimoğlu M., Barlas Y.
System Dynamics Review, vol.32, no.3-4, pp.332-362, 2016 (SSCI)
- VI. **'Meeting Jay W. Forrester'**
Barlas Y.
System Dynamics Review, vol.32, no.3-4, pp.183-184, 2016 (SSCI)
- VII. **Editorial**
Barlas Y.
System Dynamics Review, vol.32, no.1, pp.3-5, 2016 (SSCI)
- VIII. **Effects of systemic complexity factors on task difficulty in a stock management game**
Özgün O., Barlas Y.
System Dynamics Review, vol.31, no.3, pp.115-146, 2015 (SSCI)
- IX. **Dynamic Consequences of Performance-Based Payment Systems in Public Hospitals**
Meker T., Barlas Y.
Systems Research and Behavioral Science, vol.32, no.4, pp.459-480, 2015 (SSCI)
- X. **Health, Demographic Change and Well-Being: The European Union's Horizon 2020 Programme and System Dynamics**
Lane D. C., Pala Ö., Barlas Y.
Systems Research and Behavioral Science, vol.32, no.4, pp.407-413, 2015 (SSCI)
- XI. **Modeling and simulation of the endogenous dynamics of housing market cycles**
Özbaş B., Özgün O., Barlas Y.
JASSS, vol.17, no.1, 2014 (SSCI)
- XII. **Automated parameter specification in dynamic feedback models based on behavior pattern features**
Yücel G., Barlas Y.
System Dynamics Review, vol.27, no.2, pp.195-215, 2011 (SSCI)
- XIII. **Demand forecasting and sharing strategies to reduce fluctuations and the bullwhip effect in supply chains**
Barlas Y., Gunduz B.
Journal of the Operational Research Society, vol.62, no.3, pp.458-473, 2011 (SCI-Expanded)
- XIV. **Dynamics of the North-South welfare gap and global sustainability**
Yücel G., Barlas Y.
Technological Forecasting and Social Change, vol.77, no.4, pp.594-614, 2010 (SSCI)

- XV. **A dynamic simulator for the management of disorders of the body water homeostasis**
Karanfil Ö., Barlas Y.
Operations Research, vol.56, no.6, pp.1474-1492, 2008 (SCI-Expanded)
- XVI. **Leverage points to march "upward from the aimless plateau" [2]**
Barlas Y.
System Dynamics Review, vol.23, no.4, pp.469-473, 2007 (SSCI)
- XVII. **Model simplification and validation with indirect structure validity tests**
Saysel A. K., Barlas Y.
System Dynamics Review, vol.22, no.3, pp.241-262, 2006 (SSCI)
- XVIII. **Goal setting, evaluation, learning and revision: A dynamic modeling approach**
Barlas Y., Yasarcan H.
Evaluation and Program Planning, vol.29, no.1, pp.79-87, 2006 (SSCI)
- XIX. **A generalized stock control formulation for stock management problems involving composite delays and secondary stocks**
Yasarcan H., Barlas Y.
System Dynamics Review, vol.21, no.1, pp.33-68, 2005 (SSCI)
- XX. **Analysis of stock management gaming experiments and alternative ordering formulations**
Barlas Y., Özevin M. G.
Systems Research and Behavioral Science, vol.21, no.4, pp.439-470, 2004 (SSCI)
- XXI. **Dynamic modelling of a shallow freshwater lake for ecological and economic sustainability**
Güneralp B., Barlas Y.
Ecological Modelling, vol.167, no.1-2, pp.115-138, 2003 (SCI-Expanded)
- XXII. **Environmental sustainability in an agricultural development project: a system dynamics approach.**
Saysel A. K., Barlas Y., Yenigün O.
Journal of environmental management, vol.64, no.3, pp.247-260, 2002 (SCI-Expanded)
- XXIII. **A dynamic model of salinization on irrigated lands**
Saysel A. K., Barlas Y.
Ecological Modelling, vol.139, no.2-3, pp.177-199, 2001 (SCI-Expanded)

Articles Published in Other Journals

- I. **A dynamic simulation game (UNIGAME) for strategic university management**
Barlas Y., Diker V. G.
Simulation and Gaming, vol.31, no.3, pp.331-358, 2000 (Scopus)
- II. **Formal aspects of model validity and validation in system dynamics**
Barlas Y.
System Dynamics Review, vol.12, no.3, pp.183-210, 1996 (Scopus)
- III. **Effects of patch connectivity and arrangement on animal metapopulation dynamics: a simulation study**
Wu J., Vankat J. L., Barlas Y.
Ecological Modelling, vol.65, no.3-4, pp.221-254, 1993 (Scopus)
- IV. **Comments on "On the very idea of a system dynamics model of Kuhnian science"**
Barlas Y.
System Dynamics Review, vol.8, no.1, pp.43-47, 1992 (Scopus)
- V. **Philosophical roots of model validation: Two paradigms**
Barlas Y., Carpenter S.
System Dynamics Review, vol.6, no.2, pp.148-166, 1990 (Scopus)
- VI. **An autocorrelation function test for out put validation**
Barlas Y.
Simulation, vol.55, no.1, pp.7-16, 1990 (Scopus)

VII. **Multiple tests for validation of system dynamics type of simulation models**

Barlas Y.

European Journal of Operational Research, vol.42, no.1, pp.59-87, 1989 (Scopus)

Books & Book Chapters

I. Pattern Recognition for Model Testing, Calibration, and Behavior Analysis

YÜCEL G., BARLAS Y.

in: Analytical Methods for Dynamic Modelers, Hazhir Rahmandad, Rogelio Oliva, Nathaniel D. Osgood, Editor, The MIT Press, pp.173-206, 2015

II. System Dynamics: Systemic Feedback Modeling for Policy Analysis – Volume I

BARLAS Y.

Eolss Publishers, Paris, 2009

Refereed Congress / Symposium Publications in Proceedings

I. Modeling the epidemics of the internet gaming disorder with system dynamics approach

Kırlı Y. E., Barlas Y.

international system dynamics conference, Bergen, Norway, 3 - 08 August 2024

II. Early Diagnosis of Prostate Cancer by Dynamic Modeling and Data Science Tools

Kepçen E., Hoban O., Şenel Ö., Barlas Y.

international system dynamics conference, Illinois, United States Of America, 23 - 27 July 2023

III. Modeling long-term dynamic effects of brain injury on biological mechanisms of potential Parkinson's disease.

Gül N. N., Barlas Y.

international system dynamics conference, Illinois, United States Of America, 23 - 27 July 2023

IV. Dynamic Modelling of Circadian Rhythm Disorder and its Connections to Autism in Fetus

Yurdakul E., Ülgen Ş. K., Barlas Y.

international system dynamics conference, Illinois, United States Of America, 23 - 27 July 2023

V. Dynamic Analysis of False Information Spread Over Social Media: 5G-COVID 19 Conspiracy Theory

İrsoy O., Barlas Y.

international system dynamics conference, Frankfurt, Germany, 19 - 22 July 2022

VI. An epidemiological compartmental model of malaria with host-vector interactions

BARLAS Y., YAŞARCAN H., Tozan Y., Kim S., Rocklöv J., Sjödin H., Carlton J. M.

international system dynamics conference, United States Of America, 26 - 30 July 2021

VII. Modeling The Pharmacodynamics of rHuEPO, a Blood Doping Drug

ŞENTÜRK F., YAŞARCAN H., BARLAS Y.

international system dynamics conference, Norway, 19 - 24 July 2020

VIII. From Generic to Optimally Calibrated System Dynamics Models: An Application in Agricultural Value Chains

Atamer Balkan B., MERAL F. S., BARLAS Y.

international system dynamics conference, Norway, 19 July 2020

IX. Automated Discovery of Polarity from Data in System Dynamics Context

TELLİOĞLU N., BARLAS Y.

international system dynamics conference, Norway, 19 July 2020 - 24 July 2024

X. Modeling the Dynamics of Vicious Cycles Involved in Heart-Respiratory Failure

Çömez S., KORUGAN A., BARLAS Y.

international system dynamics conference, Norway, 19 - 24 July 2020

XI. Estimating Causal Relations of Dynamic Models from Real-Life Data

TELLİOĞLU N., BARLAS Y.

International system dynamics conference, 7 - 09 August 2018

- XII. **Modeling the Biological Mechanisms That Determine the Dynamics of Stress Response of the Human Body**
aktaş g., BARLAS Y.
International system dynamics conference, reykjavik, Iceland, 7 August - 07 September 2018
- XIII. **Modeling the Pharmacodynamics of Doping Drugs and Analysis of False Negative Tests**
Şahin Ö., ŞENTÜRK F., BARLAS Y., YAŞARCAN H.
36th International Conference of the System Dynamics Society, Reykjavik, Iceland, 7 - 09 August 2018, vol.1, pp.741-743
- XIV. **Credibility, Validity and Testing of Dynamic Simulation Models**
Barlas Y.
6th International Conference on Simulation and Modeling Methodologies, Technologies and Applications, SIMULTECH 2016, Lisbon, Portugal, 29 - 31 July 2016, vol.676, pp.3-15
- XV. **Modeling and Analysis of the Speculative Dynamics of Currency Exchange Rates: A Case Study from Turkey**
Çehreli C., DURSUN İ., BARLAS Y.
International system dynamics conference, boston, United States Of America, 16 - 20 July 2017
- XVI. **Belediye Atığı ve Düzenli Depolama Alanı Dinamikleri**
İLBAHAR E., BARLAS Y.
37. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Turkey, 5 - 07 July 2017
- XVII. **Evaluation of Chronic Disease Prevention Interventions with a Dynamic Simulation Model**
ÖNSEL N., BARLAS Y., YÜCEL G.
38th Annual North American Meeting of Society for Medical Decision Making, 23 - 26 October 2016
- XVIII. **Evaluating the Preventive Treatments for Aging Populations in terms of Financial Sustainability of Health Systems**
ÖNSEL N., BARLAS Y., YÜCEL G.
International Conference of the System Dynamics Society, 17 - 21 July 2016
- XIX. **Modeling the Long Term Dynamics of Obesity as a Societal Epidemic**
aktaş g., Tellioglu N., BARLAS Y., YAŞARCAN H.
International Conference of the System Dynamics Society, 17 - 21 July 2016
- XX. **The Feedback Dynamics between Poverty, Education Opportunity: Vicious Circle of Poverty**
BARLAS Y., Bacaksızlar G. N.
international system dynamics conference, United States Of America, 19 - 23 July 2015
- XXI. **Cost Escalation in Health Systems Dominated by Private Health Insurance**
ÖNSEL N., BARLAS Y., YÜCEL G.
INFORMS Annual Meeting 2015, 1 - 04 November 2015
- XXII. **Financial Sustainability of Health Systems Dominated by Private Health Insurance**
ÖNSEL N., BARLAS Y.
33rd International Conference of the System Dynamics Society, Boston, 19 - 23 July 2015
- XXIII. **The Feedback Dynamics between Poverty and Education Opportunity Vicious Circle of Poverty**
Bacaksızlar G., BARLAS Y.
33rd International Conference of the System Dynamics Society, Boston, United States Of America, 19 - 23 July 2015
- XXIV. **Dynamic Modeling of Peritoneal Dialysis and Its Implementation in Children with Chronic Kidney Failure**
Gökalp E., Başar G., Tekin D., BARLAS Y.
international system dynamics conference, Netherlands, 20 July 2014
- XXV. **2014 Dynamic Modeling of Peritoneal Dialysis and Its Implementation in Children with Chronic Kidney Failure**
Gökalp E., BARLAS Y., Başar G., Tekin D.
international system dynamics conference, Netherlands, 20 - 24 July 2014

- XXVI. **Interactive Dynamic Modeling For The Passenger Flow Bottleneck and Security Checkpoint Management at an Airport**
BARLAS Y., Çakaciaslan S.
international system dynamics conference, Netherlands, 20 - 24 July 2014
- XXVII. **A Dynamic Simulation Model for Insulin Resistance and Type II Diabetes in the Context of Obesity**
Can M., BARLAS Y., KORUGAN A.
international system dynamics conference, United States Of America, 21 July 2013
- XXVIII. **Systemic Complexity of a Growth Management Game: Comparative Analysis of Decision Heuristics and Experimental Results**
Özgün O., BARLAS Y.
international system dynamics conference, Switzerland, 22 July 2012
- XXIX. **Effects of Delay, Nonlinearity and Feedback on the Overall Complexity of a Stock Management Game**
ÖZGÜN O., BARLAS Y.
international system dynamics conference, Switzerland, 22 July 2012
- XXX. **Modeling The Dynamics Of Thyroid Hormones And Related Disorders. Proceedings of 29th international system dynamics conference**
ŞEKER O., BARLAS Y.
international system dynamics conference, United States Of America, 24 July 2011
- XXXI. **Modeling The Dynamics Of Academic Publications And Citations. Proceedings of 29th international system dynamics conference**
Önsel N., BARLAS Y.
international system dynamics conference, United States Of America, 24 July 2011
- XXXII. **Sensitivity analysis of system dynamics models by behavior pattern measures**
HEKİMOĞLU M., BARLAS Y.
international system dynamics conference, South Korea, 25 July 2010
- XXXIII. **A simulation model for blood cholesterol dynamics and related disorders**
Demirezen E., BARLAS Y.
international system dynamics conference, United States Of America, 26 July 2009
- XXXIV. **Sensitivity analysis of real estate price oscillations model**
Özbaş B., Özgün O., BARLAS Y.
international system dynamics conference, Greece, 20 July 2008
- XXXV. **Testing dynamic decision making under real-time pressure: A scuba diving simulator**
Dalkıran E., BARLAS Y.
international system dynamics conference, Greece, 20 - 24 July 2008
- XXXVI. **Pattern-based system design and optimization**
YÜCEL G., BARLAS Y.
international system dynamics conference, United States Of America, 29 July - 02 August 2007
- XXXVII. **Modeling of real estate price oscillations in Istanbul**
Özbaş B., ÖZGÜN O., BARLAS Y.
international system dynamics conference, United States Of America, 29 July 2007
- XXXVIII. **Stable stock management heuristics when the outflow is proportional to the control stock**
YAŞARCAN H., BARLAS Y.
international system dynamics conference, United States Of America, 17 - 21 July 2005
- XXXIX. **Automated dynamic pattern testing, parameter calibration and policy improvement**
Boğ S., BARLAS Y.
international system dynamics conference, United States Of America, 17 - 21 July 2005
- XL. **Model simplification and Validation: Illustration with Indirect structure tests**
SAYSEL A. K., BARLAS Y.
international system dynamics conference, England, 25 July 2004
- XLI. **A generalized stock control formulation for stock management problems involving composite delays and secondary stocks**

YAŞARCAN H., BARLAS Y.

international system dynamics conference, England, 25 July 2004

- XLII. **A general stock control formulation for stock management problems involving delays and secondary stocks**
BARLAS Y., YAŞARCAN H.
international system dynamics conference, United States Of America, 20 July 2003
- XLIII. **Information sharing to reduce fluctuations in supply Chains**
BARLAS Y., Gündüz B.
international system dynamics conference, United States Of America, 20 - 24 July 2003
- XLIV. **System dynamics and systems thinking for educational issues**
BARLAS Y.
Nordic Conference on Decision Support, Germany, 01 January 2003
- XLV. **Dynamic Analysis of the Viability of Alternative Energy Sources in Meeting the Electricity Demand**
BARLAS Y., Özdemir E., Öner A.
international system dynamics conference, Italy, 28 July - 01 August 2002
- XLVI. **Modeling a Wetland through Sustainable Development: Uluabat Lake**
BARLAS Y., Güneralp B.
international system dynamics conference, United States Of America, 23 July 2001
- XLVII. **A method for finding the equilibrium points of a nonlinear dynamic model**
BARLAS Y., YAŞARCAN H.
international system dynamics conference, United States Of America, 23 July 2001
- XLVIII. **Testing the decision rules used in stock management models**
BARLAS Y., Özevin M. G.
international system dynamics conference, United States Of America, 23 July 2001
- XLIX. **A Dynamic Pattern-oriented Test for Model Validation**
BARLAS Y., Kanar K.
Proceedings of 4th Systems Science European Congress, Spain, 20 - 24 September 1999
- L. **Systemic Modeling of a Wetland for Sustainable Development**
Güneralp B., BARLAS Y.
Proceedings of 4th Systems Science European Congress, Spain, 20 - 24 September 1999
- LI. **Long-term Comprehensive Environmental Analysis of GAP: A System Dynamics Approach**
SAYSEL A. K., BARLAS Y.
Proceedings of The Kriton Curi International Symposium on Environmental Management in the Mediterranean Region, Turkey, 11 June 1998
- LII. **A Behavior Validity Testing Software**
BARLAS Y., Topaloğlu H., Yılkaya S.
international system dynamics conference, Turkey, 19 - 22 August 1997
- LIII. **System Dynamics Approach to Problem Solving in an Insurance Company**
BARLAS Y., Duman E., Çırak K., Uzunosmanoğlu G.
international system dynamics conference, Turkey, 19 August 1997
- LIV. **A Dynamic Feedback Model for Strategic Management of an Insurance Company**
BARLAS Y., Duman E., Balibek E., Fırat A.
international system dynamics conference, Turkey, 19 August 1997
- LV. **Product Diversification and Quick Response Order Strategies in Supply Chain Management**
BARLAS Y., Aksoğan A.
international system dynamics conference, United States Of America, 21 - 25 July 1996
- LVI. **An Interactive Dynamic Simulation Model of University Management System**
BARLAS Y., Diker V.
Symposium on Applied Computing, United States Of America, 17 February 1996
- LVII. **An interactive dynamic simulation model of a university management system**
Barlas Y., Diker V. G.

1996 ACM Symposium on Applied Computing, SAC 1996, Pennsylvania, United States Of America, 17 - 19 February 1996, vol.Part F128723, pp.120-128

- LVIII. Simulation and Dynamic Analysis of Alternative Quality Management Systems**
BARLAS Y., Özgökmen A.
Proceedings of The Ninth World Productivity Congress, Turkey, 4 - 07 June 1995
- LIX. Fundamental Aspects and Tests of Model Validity in Simulation**
BARLAS Y.
SMC Simulation Multiconference, United States Of America, 9 - 13 April 1995
- LX. Output Behavior Validation in System Dynamics**
BARLAS Y., Erdem A.
Proceedings of the European Simulation Symposium, Turkey, 09 October 1994
- LXI. Partial Mathematical Analysis of Non-linear Simulation Models of Socio-economic Systems**
BARLAS Y., Çivi H., Özgökmen A.
Proceedings of the European Simulation Symposium, Turkey, 9 - 12 October 1994
- LXII. Formal System Dynamics Education in Universities**
BARLAS Y.
international system dynamics conference, Mexico, 20 July 1993
- LXIII. An Interactive Simulation Game for Software Project Management**
BARLAS Y., Bayraktutar İ.
international system dynamics conference, Netherlands, 20 - 24 July 1992
- LXIV. Model Validation in System Dynamics**
BARLAS Y.
international system dynamics conference, İSKOÇYA, 20 - 22 July 1994
- LXV. Interactive Dynamic Simulation Games: An Application in Software Project Management**
BARLAS Y., Bayraktutar İ.
Advances in Simulation, Turkey, 6 - 07 July 1992
- LXVI. Modeling Patchy Ecological Systems Using System Dynamics Approach**
Wu J., BARLAS Y., Vankat J.
international system dynamics conference, United States Of America, 20 - 24 July 1990
- LXVII. Tests of Model Behavior That Can Detect Structural Flaws: Demonstration with Simulation Experiments**
BARLAS Y., Milling P. M., Zahn K., O E.
Computer-Based Management of Complex Systems, Germany, 10 - 14 July 1989
- LXVIII. Simulating the Dynamics of Natural Populations Using the System Dynamics Approach**
BARLAS Y., Wu J.
SCS Western Multiconference (System Dynamics Volume), United States Of America, 4 - 06 January 1989
- LXIX. A Fundamental Philosophy of Science Question and Validation of System Dynamics Models**
BARLAS Y., Carpenter S.
international system dynamics conference, China, 09 June 1987
- LXX. Comparing the Observed and Model-generated Behavior Patterns to Validate System Dynamics Models**
BARLAS Y.
international system dynamics conference, United States Of America, 02 July 1985

Metrics

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