CV

Ali Hamidoğlu

CONTACT INFORMATION	Mathematics Department Bahçeşehir University 34353, Çırağan Caddesi, No: 4-6 Beşiktaş, İstanbul/Türkiye	*Phone:* +90 212 381 05 47 *E-mail:* ali.hamidoglu@eng.bau.edu.tr *Office :* D405; D-Block 3th floor

PERSONAL INFORMATION

- *Date of Birth:* August 15, 1988
- *Nationality:* Turkish
- *Marital Status:* Married with 1 (one) daughter
- *Languages:* Turkish (native), English (fluent), French (moderate).

RESEARCH INTERESTS

- Discrete Systems
- Game Theory
- Optimization
- Operation Research
- Control Theory
- Nonlinear ODEs/PDEs

TEACHING INTERESTS

- Analysis
- Differential Equations
- Financial Mathematics
- Optimization
- Game Theory
- Control Theory
- Calculus of Variations
- Optimal Control Theory
- Operation Research

EDUCATION

Middle East Technical University (METU), Çankaya, Ankara/Turkey

Ph.D., Mathematics, 19th August, 2020 (2015-2020).
Ph.D. Thesis: Some Results on Controllability and Observability of Discrete Models
Ph.D. Advisors: Prof. Hurşit Önsiper & Prof. Elimhan N. Mahmudov

Boğaziçi University (BOUN), Bebek, İstanbul/Turkey

M.Sc., Mathematics , June, 2013 (2010-2013).
Msc. Thesis: Null Controllability of 1-d Heat Equation with Switching Controls
M.Sc. Advisor: Prof. Burak Gürel

Boğaziçi University (BOUN), Bebek, İstanbul/Turkey

B.Sc., Mathematics, June, 2010 (2005-2010).
Bsc. Thesis: Geometrical and Analytical Approaches to Some Variational Problems
B.Sc. Advisor: Prof. Burak Gürel

ACADEMIC POSITIONS	**BAU – Bahçeşehir University, Faculty of Engineering and Natural Sciences, Department of Mathematics**, İstanbul, Turkey.

ACADEMIC
POSITIONS

BAU – Bahçeşehir University, Faculty of Engineering and Natural Sciences, Department of Mathematics, İstanbul, Turkey.

Assistant Professor   **March, 2022 - present**

İTÜ – İstanbul Technical University, Intelligent Transportation Systems Research Laboratory, Department of Civil Engineering, İstanbul, Turkey.

Postdoctoral Researcher   **January, 2021 - January, 2022**

İTÜ – İstanbul Technical University, Department of Mathematics, İstanbul, Turkey.

Teaching Assistant   **February 2018 - August, 2020**

Sarıyer Akademi, Department of Mathematics, Yaşar Kemal Kültür Merkezi, İstanbul, Turkey.

Math Olympiad Lecturer   **September, 2017 - June, 2020**

İYTE – İzmir Institute of Technology, Department of Mathematics, İzmir, Turkey.

Ph.D. Researcher   **October, 2015 - June 2016**

PROJECTS

1. *Postdoctoral Researcher* in the project **TÜBİTAK 1001–120M576**: *Effects of Collaborative Vehicle Dynamics on Traffic Flow Modeling: Simulation and Control.*
From 28/01/2021 to 31/12/2022.

2. *Doctoral Researcher* in the project **TÜBİTAK 3501–115F055:** *Analysis of Solutions of Ginzburg-Landau Equations Under Dynamic Boundary Conditions.*
From 01/10/2015 to 17/06/2016.

PUBLICATIONS

1. A Hamidoğlu (2024). A game-theoretical approach on the construction of a novel agri-food supply chain model supported by the government, *Expert Systems with Applications.* 237(A):121353. https://doi.org/10.1016/j.eswa.2023.121353.

2. A Hamidoğlu (2023). Designing discrete-time control-based strategies for pursuit-evasion games on the plane, *Optimization.* 1-30. https://doi.org/10.1080/02331934.2023.2252840.

3. A Hamidoğlu, G Göksu (2023). ϵ-Controllability/ϵ-Observability of linear switched sampled-data systems with the non-equidistant time schedule, *ISA Transactions.* 139:167-178.
https://doi.org/10.1016/j.isatra.2023.04.030.

4. A Hamidoğlu (2022). A Game Theoretical Approach for Finding Near-Optimal Solutions of an Optimization Problem, *Optimization.* https://doi.org/10.1080/02331934.2022.2069024.

5. A Hamidoğlu, MH Taghiyev, GW Weber (2022). On Construction of Pursuit-Evasion Games in Discrete Control Models, *Applied and Computational Mathematics.* 21(1):52-60.
https://doi.org/10.30546/1683-6154.21.1.2022.52

6. A Hamidoğlu, EN Mahmudov (2022). On Construction of Sampling Patterns for Preserving Observability/Controllability of Linear Sampled-Data Systems, *International Journal of Control.* 95(1):206-217. https://doi.org/10.1080/00207179.2020.1787523.

7. A Hamidoğlu (2021). A Novel One Target Game Model in the Life Insurance Market, *International Journal of Management Science and Engineering Management*, 16(3):221-228.
https://doi.org/10.1080/17509653.2021.1941370.

8. A Hamidoğlu, MH Taghiyev (2021). On Construction of Almost Periodic Sequences and Applications to Some Discrete Population Models, *Journal of Difference Equations and Applications.* 27(1):118-131. https://doi.org/10.1080/10236198.2021.1876039.

9. A Hamidoğlu, MH Taghiyev, GW Weber (2021). On Building Two-Player Games with Treatment Schedules for the SIR Model, *Azerbaijan Journal of Mathematics.* 11(2):183-195. (https://www.azjm.org/volumes/1102/pdf/1102-14.pdf)

10. A Hamidoğlu, EN Mahmudov (2020). On Topology of Polynomial Type Sequences with Bounded Integer Coefficients, *Filomat.* 34(13):4575-4587. https://doi.org/10.2298/FIL2013575H.

11. A Hamidoğlu (2016). On general form of the Tanh method and its application to nonlinear partial differential equations, *Numerical Algebra, Control and Optimization (NACO).* 6(2):175-181. https://doi.org/10.3934/naco.2016007.

12. A Hamidoğlu (2016). Null Controllability of Heat Equation with Switching Controls under Robin's Boundary Condition, *Hacettepe Journal of Mathematics and Statistics.* 45(2):373-379. https://doi.org/10.15672/HJMS.20164512501.

13. A Hamidoğlu (2015). Switching Lumped Controls, *Proceedings of the Institute of Mathematics and Mechanics, National Academy of Sciences of Azerbaijan.* 41(2):83-90. (http://proc.imm.az/volumes/41-2/41-02-08.pdf).

14. A Hamidoğlu (2015). Null controllability of heat equation with switching pointwise controls, *Transactions of NAS of Azerbaijan, Issue Mathematics, Series of Physical-Technical and Mathematical Sciences.* 35(4):52-60. (http://trans.imm.az/volumes/35-4/35-04-04.pdf).

PAPERS IN REVIEW
& PREPARATION
PROCESS

1. *A Game-Theoretical Approach for the Adoption of Government-Supported Blockchain Application in the IoT-enabled Agricultural Supply Chain.* (2023).

2. *A Patient-Centered Equilibrium Strategy for Selecting Anti-Epileptic Drugs in Juvenile Myoclonic Epilepsy Management.* (2023).

3. *A Novel Nash-based Matching Approach for Multi-Robot Task Allocation in Distributed Robotic Networks.* (2023).

4. *A Survey on Task Scheduling and Optimization Techniques for IoT-enabled UAV with Edge / Fog Computing* (2023)

5. *A Novel Game Theoretical Approach in Blockchain Aided Secure Communication at Internet of Drones.* (2023).

6. *A Novel Low-Carbon Implementation in Agricultural Supply Chain Management: A Nash Game Approach.* (2023).

BOOK CHAPTERS

1. A Hamidoglu (2023). *Game Theory, Optimization Algorithms and Regularization Techniques using Deep Learning in Medical Imaging*, Machine Learning in Medical Imaging and Computer Vision", IET Publications (Accepted and Published on November).

2. A Hamidoglu, S Gütmen, GW Weber (2023). *Aggregate Production Planning: A Novel Game Model*, Operations Research New Paradigms and Emerging Applications: II, CRC Press (Accepted and Published on December).

3. A Hamidoglu, MH Taghiyev (2021). *On Discrete Game Models with Applications to Management.* In Proceedings of the Fifteenth International Conference on Management Science and Engineering Management. ICMSEM 2021. Lecture Notes on Data Engineering and Communications Technologies, vol 78, pp 195-207. Springer, Cham. https://doi.org/10.1007/978-3-030-79203-9_15.

4. A Hamidoğlu (2017). *On General Form of Tanh Method and Its Application to Medical Problems.* In Proceedings of the Tenth International Conference on Management Science and Engineering Management. Advances in Intelligent Systems and Computing, vol 502, pp. 269–278, Springer, Singapore. https://doi.org/10.1007/978-981-10-1837-4_23.

ACADEMIC
CONFERENCES

1. A Satouf, A Hamidoğlu, OM Gül and A Kuusik (2023). Grey Wolf Optimizer-based Task Scheduling for IoT-based Applications in the Edge Computing, *The 8th IEEE International Conference on Fog and Mobile Edge Computing* (FMEC 2023), 1-6, Tartu/Estonia.

2. A Hamidoğlu (2023). An Agricultural Supply Chain Decision-Making Procedure for Low-Carbon Application, *The 6th International Food, Agriculture and Veterinary Science Congress*, Ganja/Azerbaijan.

3. A Hamidoğlu (2023). Open-loop Control vs Closed-loop Control in Smart Irrigation: A Game Theoretical Perspective, *The 9th International IFS and Contemporary Mathematics and Engineering Conference*, 98, July 8, Tarsus, Mersin/Türkiye.

4. A Hamidoğlu (2022). A Discrete-time Pursuit-Evasion Game on the Free-way, *The 8th International Conference on Controls and Applications (COIA 2022)* Vol.2, pp.192-194, Baku/Azerbaijan.

5. A Hamidoğlu (2022). On Designing Discrete-time Games from Continuous-time Models, *The 4th International Conference on Pure and Applied Mathematics (ICPAM-VAN 2022)* Vol.1, pp.100, Van/Türkiye.

6. A Hamidoğlu, EN Mahmudov (2020). Guarding Problems in Discrete Control Models, *The 7th International Conference on Controls and Applications (COIA 2020)* Vol.1, pp. 191-193, Baku/Azerbaijan.

7. A Hamidoğlu (2019). Young Invited Speaker, A Strategy for Finding Integer Almost Periods in the Theory of Almost Periodic Functions, *3rd Caucasian Mathematics Conference (CMC-III)*, Rostov-Don/Russia.

8. A Hamidoğlu (2018). A New Strategy for Finding Switching Controls in Controllability Problems, *The 6th International Conference on Controls and Applications (COIA 2018)*, Vol.2, pp. 135-137, Baku/Azerbaijan.

9. A Hamidoğlu (2016). On Generalization of Tanh Method and Its Application to Non-linear Partial Differential Equations, *28th European Conference on Operational Research*, Poznan/Poland.

GRANTS, HONORS
AND AWARDS

- Graduated from Bsc. in Mathematics at Boğaziçi University with Honor Diploma 2010.
- National Mathematical Projects Competition organized by TÜBİTAK:
  First Prize and 1th in absolute ranking for project titled: On Proof Methods of Algebraic and Geometric Inequalities, 2004.
- 3th in absolute ranking in Marmara region from TÜBİTAK National Mathematical Olympiad (Seniors), 2004.
- 1th in absolute ranking in Marmara region from TÜBİTAK National Mathematical Olympiad (Juniors), 2002.
- Gold Medal from TÜBİTAK National Mathematical Olympiad (Juniors), 2002.

TEACHING
EXPERIENCE

- ITU–MAT 103/E Mathematics I (Calculus I):
  • 2017-2018 Spring • 2018-2019 Spring • 2019-2020 Fall
  • 2019-2020 Spring • 2019-2020 Summer.
- ITU–MAT 104/E Mathematics II (Calculus II), 2018-2019 Fall
- ITU–ULS604E Traffic Flow Theories, 2020-2021 Spring (Part-time).

- BAU–MAT1051 Calculus I:
  - 2021-2022 Spring ● 2021-2022 Summer ● 2022-2023 Fall
- BAU–MAT1052 Calculus II, 2021-2022 Spring.
- BAU–MAT1002 Analysis II:
  - 2021-2022 Spring ● 2022-2023 Spring
- BAU–MAT1001 Anaysis I, 2022-2023 Fall.
- BAU–MAT2008 Introduction to Optimization, 2022-2023 Spring.
- BAU–ARI5006 Game Theory for Engineers, 2022-2023 Spring.

COMPUTER &
PROGRAMMING
SKILLS

- LaTex (Advance)
- Beamer (Advance)
- MATLAB (Good)

MEMBERSHIP

Board Member of IEEE Turkey Young Professionals Affinity Group (YP-AG).

Control Systems Society & Blockchain Representative   **March, 2020 - present**
(https://site.ieee.org/turkey/chapters/ieee-turkey-gold-young-professional/)