Gökhan Göksu

CONTACT INFORMATION	Yıldız Technical University, Department of Mathematical Engineering, 34220, Esenler, Istanbul, TÜRKİYE	☎ (TR): +90 (533) 477 58 69 ✉: ggoksu@yildiz.edu.tr https://www.ggoksu.com

RESEARCH INTERESTS

Input-to-State Stability, Time-Delay Systems, Finite-Time Stability, Switched Linear Systems, Traffic Modelling and Simulation, Freeway Traffic Control

EDUCATION

Istanbul Technical University (ITU), Istanbul, TÜRKİYE

Ph.D., Mathematical Engineering, January 2020
- Thesis Title: *Finite-Time Control for Switched Linear Systems with Interval Time-Delay.*
- Supervisor: Prof. Ulviye Başer Ilgaz

B.Sc., Mathematical Engineering (Major), June 2011
- *Honor List*
- Physics Engineering (Minor)
- Erasmus Exchange Student at University of Stuttgart, Summer 2010
- One year English Prep. Class, September 2006 to June 2007

WORK EXPERIENCE

Lecturer　　　　　　　　　　　　　　　　　　　January 2022 till now
Department of Mathematical Engineering
Yıldız Technical University

Postdoctoral Researcher　　　　　　　　May 2020 till December 2021
Intelligent Transportation Systems Research Laboratory
Istanbul Technical University

Scientific Visitor　　　　　　　　　　February 2019 till April 2020
Laboratoire des Signaux et Systèmes (L2S) - CentraleSupélec
Universitè Paris-Sud 11 - Universitè Paris-Saclay

Research Assistant　　　　　　　　December 2013 till January 2020
Department of Mathematics, Istanbul Technical University

Search Engine Marketing Specialist　　　　　August 2011 to May 2013
ÇiçekSepeti İnternet Hizmetleri A. Ş.

JOURNAL PAPERS

1. Chaillet, A., **Göksu, G.** and Pepe, P. (2021). "Lyapunov-Krasovskii Characterizations of Integral Input-to-State Stability of Delay Systems with Non-Strict Dissipation Rates", IEEE Transactions on Automatic Control, *Early Access.* [DOI: 10.1109/TAC.2021.3099453]

2. Silgu, M. A., Erdağı, İ. G., **Göksu, G.** and Çelikoğlu, H. B. (2021). "Combined Control of Freeway Traffic Involving Cooperative Adaptive Cruise Controlled and Human Driven Vehicles Using Feedback Control Through SUMO", IEEE Transactions on Intelligent Transportation Systems, *Early Access.* [DOI: 10.1109/TITS.2021.3098640]

3. **Göksu, G.** and Başer, U. (2021). "Finite-Time Stability for Switched Linear Systems by Jordan Decomposition", Applied Mathematics and Computation, 395, 125853.

4. **Göksu, G.** and Başer, U. (2019). "Observer-Based H_∞ Finite-Time Control for Switched Linear Systems with Interval Time-Delay", Transactions of the Institute of Measurement and Control, 41(5), 1348-1360.

CONFERENCE PUBLICATIONS	1. **Göksu, G.**, Silgu, M. A., Erdağı, İ. G. and Çelikoğlu H. B. "Integral Input-to-State Stability of Traffic Flow with Variable Speed Limit", 16th *IFAC Symposium on Control in Transportation Systems*, Lille, France, 08.06.2021-10.06.2021 (IFAC-PapersOnLine 54 (2), 31-36). [**Full Paper Submission**]

2. Silgu, M. A., Erdağı, İ. G., **Göksu, G.** and Çelikoğlu H. B. "H_∞ State Feedback Controller for ODE Model of Traffic Flow", 16th *IFAC Symposium on Control in Transportation Systems*, Lille, France, 08.06.2021-10.06.2021 (IFAC-PapersOnLine 54 (2), 19-24). [**Full Paper Submission**]

3. **Göksu, G.** and Chaillet, A. "Analysis of Integral Input-to-State Stable Time-Delay Systems in Cascade", 21st *IFAC World Congress*, Berlin, Germany, 11.07.2020-17.07.2020 (IFAC-PapersOnLine, 53(2), 6404-6409). [**Full Paper Submission**]

4. **Göksu, G.** and Başer, U. "Finite Time Control for Switched Linear Systems with Interval Time Delay", 14th *IFAC Workshop on Time Delay Systems*, Pesti Vigadò, Budapest, Hungary, 26.06.2018-30.06.2018 (IFAC-PapersOnLine, 51(14), 130-135). [**Full Paper Submission**]

5. Adaköy E., Mumcuoğlu M., Şengül S., **Göksu, G.** and Oruçoğlu K. "Mixed Integer Quadratic Programming and an Application in Workload Assignment", *Optimization 2017*, University of Lisbon, Lisbon, Portugal, 06.09.2017-08.09.2017. [**Abstract Submission**]

6. **Göksu, G.** and Başer, U. "Zaman Gecikmeli ve Anahtarlamalı Doğrusal Sistemlerin Gözlemci Tabanlı Sonlu Zaman Sınırlılığı Üzerine", 30th *National Mathematics Symposium*, Atilim University, Ankara, Türkiye, 06.09.2017-09.09.2017. [**Abstract Submission**]

7. **Göksu, G.**, Silgu, M. A. and Çelikoğlu H. B. "A Nouvelle Feedback Control Design using the ODE Model of Ramp Metering", 3rd *International Conference on Symmetries, Differential Equations and Applications*, Istanbul Technical University, Istanbul, Türkiye, 14.08.2017-17.08.2017. [**Abstract Submission**]

8. **Göksu, G.** and Demiralp, M. "Partial Separation of Unknowns in Cubic Array Decomposition", 14th *International Conference Computational and Mathematical Methods in Science and Engineering*, Rota, Cadiz, Spain, 03.07.2014-07.07.2014. [**Full Paper Submission**]

9. Kesten, A. S., **Göksu, G.** and Akbaş, A. "Dynamic Ramp Metering Approach for an Urban Highway using Microscopic Traffic Simulation Software PTV VISSIM", *IEEE* 13rd *International Conference on ITS Telecommunications*, Tampere, Finland, 05.11.2013-07.11.2013. [**Full Paper Submission**]

GRANTS AND FELLOWSHIPS	• TÜBİTAK Research Fellowship 2214-A (01 July 2019-31 December 2019).

• French Embassy/CampusFrance Research Fellowship (01 May 2019-31 June 2019).

• TÜBİTAK Travel Grant 2224-A (July 2018).

• ITU Travel Grant (July 2014).

INVITED TALKS AND SEMINARS	1. "Input-to-State Stability of Time-Delay Systems", Department of Mathematics, Galatasaray University, Istanbul, Türkiye, 03.02.2021.
	2. "Zaman Gecikmeli Sistemlerin Girdiden Duruma Kararlılığı", Department of Mathematics, Istanbul Technical University, Istanbul, Türkiye, 13.01.2021.
	3. "Zaman Gecikmeli ve Anahtarlamalı Doğrusal Sistemlerin Gözlemci Tabanlı Sonlu Zaman Sınırlılığı Üzerine", Department of Mathematics, Mimar Sinan Fine Arts University, Istanbul, Türkiye, 19.10.2017.
	4. "Zaman Gecikmeli ve Anahtarlamalı Doğrusal Sistemlerin Gözlemci Tabanlı Sonlu Zaman Sınırlılığı Üzerine", Department of Mathematics, Istanbul Technical University, Istanbul, Türkiye, 20.10.2017.

REFEREED JOURNALS

- IEEE Transactions on Automatic Control,
- IEEE Transactions on Intelligent Transportation Systems,
- IEEE Transactions on Fuzzy Systems,
- IEEE Intelligent Transportation Systems Magazine,
- IEEE Access,
- Transportation Research: Part C,
- Transactions of the Institute of Measurement and Control,
- Journal of Optimization Theory and Applications,
- Expert Systems with Applications

LANGUAGE SKILLS

German
- Deutsches Sprachdiplom Stufe II   March 2006
(German Language Diploma-CEFR Level C1)
Look for Common European Framework of Reference for Languages (CEFR).

English
- e-YDS   June 2021
Score: 87.5/100

French, Italian
- Self-assessment: Limited

ASSISTED COURSES

Istanbul Technical University Courses
- MAT 103 - Mathematics I
- MAT 104 - Mathematics II
- BIL 104E - Introduction to Scientific Computing (C)
- MAT 116E - Advanced Scientific & Engineering Computing (MATLAB)
- MAT 210 - Engineering Mathematics (Diff. Eqns. and Lin. Alg.)
- MAT 261 - Linear Algebra
- MAT 335E - Programming Algorithms (Java)
- MAT 337E - Web Programming (PHP)

University of Stuttgart Courses
- Programming Course C

MILITARY SERVICE

Turkish Armed Forces NBC Defence Corps in Konya, TÜRKİYE
Discharge Date: 01.08.2016