

CONTACT INFORMATION	Yıldız Technical University, Department of Mathematical Engineering, 34220, Esenler, Istanbul, Türkiye	☎ (TR): +90 (533) 477 58 69 ✉: <a href="mailto:gokhan.goksu@yildiz.edu.tr">gokhan.goksu@yildiz.edu.tr</a> 🌐: <a href="https://gokhangoksu.github.io">gokhangoksu.github.io</a>
RESEARCH INTERESTS	Dynamical systems with a particular emphasis to switched systems and time-delay systems Robust stability with a particular emphasis to “input-to-state stability” related properties	
PROFESSIONAL EXPERIENCE	<p><b>Department of Mathematical Engineering</b> <b>Yıldız Technical University</b></p> <ul style="list-style-type: none"> <li>• Associate Professor July 2024 till now</li> <li>• Associate Chair April 2024 till now</li> <li>• Application Unit Lecturer February 2022 till July 2024</li> </ul> <p><b>Intelligent Transportation Systems Research Laboratory</b> <b>Istanbul Technical University</b></p> <ul style="list-style-type: none"> <li>• Postdoctoral Scholar May 2020 till December 2021</li> </ul> <p><b>Laboratoire des Signaux et Systèmes (L2S)</b> <b>CentraleSupélec - Université Paris-Saclay</b></p> <ul style="list-style-type: none"> <li>• Scientific Visitor February 2019 till April 2020</li> </ul> <p><b>NBC Defence Corps, Konya, Türkiye</b> <b>Turkish Armed Forces</b></p> <ul style="list-style-type: none"> <li>• Compulsory Military Training February 2016 till July 2016</li> </ul> <p><b>Department of Mathematical Engineering,</b> <b>Istanbul Technical University</b></p> <ul style="list-style-type: none"> <li>• Research Assistant December 2013 till January 2020</li> </ul> <p><b>Non-Academic Experience as Data Scientist</b> July 2011 till December 2013</p>	
EDUCATION	<p><b>Istanbul Technical University (ITU), Istanbul, Türkiye</b></p> <p>Ph.D., Mathematical Engineering, January 2020</p> <p>M.Sc., Transportation Engineering, July 2013</p> <p>B.Sc., Mathematical Engineering (Major), June 2011</p> <ul style="list-style-type: none"> <li>• <i>Honor List</i></li> <li>• Physics Engineering (Minor), June 2015</li> <li>• Erasmus Exchange Student at University of Stuttgart, Summer 2010</li> </ul>	
JOURNAL PAPERS (INT’L)	<ol style="list-style-type: none"> <li>1. <b>Göksu, G.</b> (2026) “Exponential stability of switched nonlinear time-delay systems combining Lyapunov–Krasovskii, Halanay and Razumikhin approaches”, <i>Automatica</i>, 185, 112788.</li> <li>2. <b>Göksu, G.</b> (2024) “Input-to-State Exponential Stability of Switched Nonlinear Time-Delay Systems Having Stable/Unstable Subsystems”, <i>Systems&amp;Control Letters</i>, 184, 105724.</li> <li>3. Hamidoğlu, A. and <b>Göksu, G.</b> (2023) “<math>\epsilon</math>-Controllability/<math>\epsilon</math>-Observability of Linear Switched Sampled-Data Systems with the Non-Equidistant Time Schedule”, <i>ISA Transactions</i>, 139, 167-178.</li> </ol>	

4. **Göksu, G.** and Chaillet, A. (2022) “Integral Input-to-State Stable Time-Delay Systems in Cascade”, *Automatica*, 139, 110175.
5. Chaillet, A., **Göksu, G.** and Pepe, P. (2022). “Lyapunov-Krasovskii Characterizations of Integral Input-to-State Stability of Delay Systems with Non-Strict Dissipation Rates”, *IEEE Transactions on Automatic Control*, 67(7), 3259-3272.
6. Silgu, M. A., Erdağı, İ. G., **Göksu, G.** and Çelikoğlu, H. B. (2022). “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*, 23(8), 11011-11025.
7. **Göksu, G.** and Başer, U. (2021). “Finite-Time Stability for Switched Linear Systems by Jordan Decomposition”, *Applied Mathematics and Computation*, 395, 125853.
8. **Göksu, G.** and Başer, U. (2019). “Observer-Based  $H_\infty$  Finite-Time Control for Switched Linear Systems with Interval Time-Delay”, *Transactions of the Institute of Measurement and Control*, 41(5), 1348-1360.

#### BOOK CHAPTERS

1. **Göksu, G.** (2024) “Constrained Switching of Exponentially Stable Time-Delay Systems: Perspectives and Open Questions”, *Analysis and Applied Mathematics*, In *Trends in Mathematics* (Editors: Ashyralyev, A., Ruzhansky, M. and Sadybekov, M.A.), 6, 231-239. Birkhäuser, Cham.

#### CONFERENCE PUBLICATIONS (SELECTED)

1. Doğukan, S. N. and **Göksu, G.** “Sonsuz Boyutlu Optimizasyon Problemleri için Regülerizasyon Yöntemi”, *24<sup>th</sup> National Mathematics Symposium*, Akdeniz University, Antalya, Türkiye, 01.09.2025-04.09.2025. [**Abstract Submission**]
2. Gürler, M., **Göksu, G.** and Chaillet A. “Lyapunov-Krasovskii Conditions for Strong Integral Input-To-State Stable in Time-Delay Systems”, *19<sup>th</sup> IFAC Workshop on Time Delay Systems*, Gif-sur-Yvette, France, 30.06.2025-02.07.2025. [**Extended Abstract Submission**]
3. Moreschini, A., **Göksu, G.** and Parisini T. “Fréchet Discrete Gradient and Hessian Operators on Infinite-Dimensional Spaces”, *7<sup>th</sup> IFAC Conference on Analysis and Control of Nonlinear Dynamics and Chaos*, London, UK, 05.06.2024-07.06.2024 (IFAC-PapersOnLine 58 (5), 78-83). [**Full Paper Submission**]
4. Kara, Ö. and **Göksu, G.** “Bozucu Girdisi Altında Bir Uçağın Dayanıklı Kontrolü”, *24<sup>th</sup> Automatic Control National Congress 2023 (TOK 2023)*, İstanbul Technical University, İstanbul, Türkiye, 14.09.2023-16.09.2023. [**Full Paper Submission**]
5. **Göksu, G.**, Chaillet, A. and Pepe, P. “Zaman Gecikmeli Sistemlerin İntegral Girdiden Duruma Kararlılığının Lyapunov-Krasovskii Karakterizasyonları”, *34<sup>th</sup> National Mathematics Symposium*, Dokuz Eylül University, İzmir, Türkiye, 31.08.2022-03.09.2022. [**Abstract Submission**]
6. **Göksu, G.** and Mahmudov, E. N. “Time Optimal Control Problem for Second Order LTI Systems”, *8<sup>th</sup> International Conference on Control and Optimization with Industrial Applications (COIA 2022)*, Baku, Azerbaijan, 24.08.2022-26.08.2022. [**Extended Abstract Submission**]
7. Silgu, M. A., Erdağı, İ. G., Akti, S., Hulagu, S., Akova, H., **Göksu, G.** and Çelikoğlu H. B. “A Methodology to Consider Explicitly Emissions in Dynamic User Equilibrium Assignment”, *18<sup>th</sup> International Conference on Computer Aided Systems Theory (EUROCAST 2022)*, Las Palmas de Gran Canaria, Canary Islands, Spain, 20.02.2022-25.02.2022. [**Extended Abstract Submission**]

8. **Göksu, G.**, Silgu, M. A., Erdağı, İ. G. and Çelikoğlu H. B. “Integral Input-to-State Stability of Traffic Flow with Variable Speed Limit”, *16<sup>th</sup> IFAC Symposium on Control in Transportation Systems*, Lille, France, 08.06.2021-10.06.2021 (IFAC-PapersOnLine 54 (2), 31-36). [**Full Paper Submission**]
9. Silgu, M. A., Erdağı, İ. G., **Göksu, G.** and Çelikoğlu H. B. “ $H_\infty$  State Feedback Controller for ODE Model of Traffic Flow”, *16<sup>th</sup> IFAC Symposium on Control in Transportation Systems*, Lille, France, 08.06.2021-10.06.2021 (IFAC-PapersOnLine 54 (2), 19-24). [**Full Paper Submission**]
10. **Göksu, G.** and Chaillet, A. “Analysis of Integral Input-to-State Stable Time-Delay Systems in Cascade”, *21<sup>st</sup> IFAC World Congress*, Berlin, Germany, 11.07.2020-17.07.2020 (IFAC-PapersOnLine, 53(2), 6404-6409). [**Full Paper Submission**]
11. **Göksu, G.** and Başer, U. “Finite Time Control for Switched Linear Systems with Interval Time Delay”, *14<sup>th</sup> IFAC Workshop on Time Delay Systems*, Pesti Vigadó, Budapest, Hungary, 26.06.2018-30.06.2018 (IFAC-PapersOnLine, 51(14), 130-135). [**Full Paper Submission**]

#### ORGANIZATION OF SCIENTIFIC EVENTS

- Organizer of “Istanbul Nonlinear Dynamics & Integrability Workshop”, Prof. Dr. Şevket Erk Conference Hall, Davutpaşa Campus, Yıldız Technical University, Istanbul, Türkiye, 31.10.2025.
- Co-organizer of the invited session “Stability and stabilization of nonlinear time-delay systems” with Antoine Chaillet and Epiphane Loko, 19th IFAC Workshop on Time Delay Systems (TDS), Gif-sur-Yvette, France, 30.06.2025-02.07.2025.

#### PROJECTS, GRANTS AND FELLOWSHIPS

- Co-Principal Investigator of the 2509-TÜBİTAK-French Ministry of Foreign Affairs Bilateral Cooperation Project “Characterizations of Input-to-State Stability Related Properties for Time-Delay Systems” with Prof. Antoine Chaillet (French Side Co-Principal Investigator)
  - Period: 15 May 2024-15 November 2025
  - Covers travel, scholarship and dissemination expenses
  - Turkish Side Budget: 660190 TRY ( $\approx$  13450 EUR)
  - French Side Budget: 5500 EUR
- 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, August 2022, June 2024).
- Istanbul Technical University Travel Grant (July 2014).

#### GRADUATE STUDENTS

Mertcan Gürler, M.Sc. Student, *July 2025*

- Thesis Title: “Güçlü İntegral Girdiden Duruma Kararlı Zaman Gecikmeli Sistemler için Lyapunov-Krasovskii Teoremleri”

Birce Serenay Orhan, M.Sc. Student, *December 2025*

- Thesis Title: “Lyapunov-Krasovskii Theorem for Output-to-State Stable Time-Delay Systems”

Sude Naz Doğukan, M.Sc. Student, *Ongoing*

- Thesis Title: “Sonsuz Boyutlu Kötü Tanımlı Varyasyonel Problemlerin Regülasyonu”

REVIEW  
SERVICES

- **Journals:** Automatica, IEEE Transactions on Automatic Control, Systems & Control Letters, International Journal of Control, Asian Journal of Control, Nonlinear Analysis: Hybrid Systems, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Fuzzy Systems, IEEE Intelligent Transportation Systems Magazine, IEEE/CAA Journal of Automatica Sinica, IEEE Access, International Journal of Control, Transportation Research: Part C, Transactions of the Institute of Measurement and Control, Journal of Optimization Theory and Applications, Expert Systems with Applications, Advances in Continuous and Discrete Models: Theory and Applications, ISA Transactions, International Journal of Robust and Nonlinear Control, Mathematics of Control, Signals, and Systems, Zeitschrift für angewandte Mathematik und Physik, International Journal of Bifurcation and Chaos, The European Physical Journal Special Topics
- **Conferences:** IFAC World Congress, IEEE Conference on Decision and Control (CDC), European Control Conference (ECC), Automatic Control National Congress (TOK), IEEE International Intelligent Transportation Systems Conference (ITSC), IEEE Intelligent Vehicles Symposium (IV), IFAC Workshop on Time Delay Systems (TDS)
- **Research Project:** Deutsche Forschungsgemeinschaft (German Research Foundation) Research Grant

TALKS AND  
SEMINARS

1. “Recent Results on Input-to-State Stability Framework for Time-Delay Systems”, Istanbul Integrability and Stringy Topics Initiative Seminars, Department of Physics, Boğaziçi University, Istanbul, Türkiye, 19.12.2025.
2. “Recent Results on Input-to-State Stability Framework for Time-Delay Systems”, Department of Mathematics, Koç University, Istanbul, Türkiye, 21.03.2025.
3. “Zaman Gecikmeli Sistemler için Girdiden Duruma Kararlılığa İlişkin Özellikler Üzerine Yeni Sonuçlar”, Department of Mathematical Engineering, Gebze Technical University, Kocaeli, Türkiye, 21.03.2025.
4. “Zaman Gecikmeli Sistemler için Girdiden Duruma Kararlılığa İlişkin Özellikler Üzerine Yeni Sonuçlar”, Department of Mathematical Engineering, Istanbul Technical University, Istanbul, Türkiye, 12.03.2025.
5. “Integral Input-to-State Stability of Time-Delay Systems: Recent Results and Open Questions”, Bahçeşehir University, Istanbul, Türkiye, 09.05.2023.
6. “Input-to-State Stability of Time-Delay Systems”, Department of Mathematics, Galatasaray University, Istanbul, Türkiye, 03.02.2021.
7. “Zaman Gecikmeli Sistemlerin Girdiden Duruma Kararlılığı”, Department of Mathematics, Istanbul Technical University, Istanbul, Türkiye, 13.01.2021.
8. “Zaman Gecikmeli ve Anahtarlama Doğrusal Sistemlerin Gözlemci Tabanlı Sonlu Zaman Sınırlılığı Üzerine”, Department of Mathematics, Mimar Sinan Fine Arts University, Istanbul, Türkiye, 19.10.2017.
9. “Zaman Gecikmeli ve Anahtarlama Doğrusal Sistemlerin Gözlemci Tabanlı Sonlu Zaman Sınırlılığı Üzerine”, Department of Mathematics, Istanbul Technical University, Istanbul, Türkiye, 20.10.2017.

TEACHING  
EXPERIENCE

**Yıldız Technical University Courses**

- MTM 3502 - Partial Differential Equations
- MTM 3691 - Linear Programming Theory
- MTM 4501 - Operations Research
- MTM 4502 - Optimization Techniques
- MTM 5135 - Nonlinear Dynamical Systems (Graduate)

**National Defense University - Turkish Air Force Academy**

- TEM 210 - Numerical Methods

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