Sadullah Çelik

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PERSONAL INFORMATION

- Name Surname: Sadullah Çelik
- Place of Birth: Türkiye

EDUCATION

- *Postdoctoral Fellow, Department of Mathematics The George Washington University, Washington, DC, USA 01/2025–09/2025*
- Associate Professor: 23 February 2023, Quantitative Decision Methods, Aydın Adnan Menderes University *2023 - ...*
- PhD in Econometrics, Bursa Uludağ University, Bursa, Türkiye *2013-2018*
  - Advisors: Mustafa Aytaç,
  - Title: Big Data and Application in Statistics
- MA in Mathematics, Ege University, İzmir, Türkiye *2011-2013*
  - Advisor: Emin Özyılmaz
  - Title: On the Blaschke Frames of the Line Congruences
- BA in Mathematics, Manisa Celal Bayar University, Manisa, Turkey, *2007-2012*

APPOINTMENTS

- Postdoctoral Research Department of Mathematics, George Washington University *01/2025 -.09/2025*
- Associate Professor Department of International Trade and Finance, Aydın Adnan Menderes University *02/2022 – 01/2025*
- Assistant Professor Department of International Trade and Finance, Aydın Adnan Menderes University *10/2022 - 02/2023*
- Research Assistant Dr. Department of International Trade and Finance, Aydın Adnan Menderes University *05/2021 - 9/2022*
- Research Assistant Dr. Department of Econometrics, Aydın Adnan Menderes University *03/2018 - 05/2021*
- Research Assistant, Department of Econometrics, Aydın Adnan Menderes University *04/2014 - 0 2/2018*
- Mathematics Teaching, Republic of Türkiye Ministry of National Education *10/2011 - 0 6/2012*

RESEARCH INTERESTS

- Statistical Data Analysis
- Linear Algebra
- Data Science
- Applied Econometrics
- Data Mining
- Text Mining
- Big Data, Synthetic Data
- Machine Learning
- Deep Learning
- Neural Network

PUBLICATIONS

Research Articles

1. Çelik, S., Yavan, S., & Çimen, G. (2026). *Unveiling structural patterns of global budget transparency using advanced machine learning and explainable artificial intelligence frameworks*. **Economics of Governance**. DOI: 10.1007/s10101-026-00365-3

2. Çelik, S., Köroğlu, M. A., & Köroğlu, C. Z. (2026). *An exploratory statistical modeling framework for national rule-of-law profiles*. **Entropy**. DOI: 10.3390/e28090942

3. Çelik, S., Köroğlu, C. Z., & Köroğlu, M. A. (2026). *Spectral–entropy network analysis of multidimensional poverty: An explainable AI framework for complex socioeconomic systems*. **Entropy**. DOI: 10.3390/e28070746

4. Çelik, S., Doğanlı, B., & Şaşmaz, E. (2026). *Comparative analysis of global education performances based on PISA 2022 results: An assessment with statistical and machine learning methods*. **Quality & Quantity**. DOI: 10.1007/s11135-026-02915-7

5. Çelik, S., Akkucuk, U., & Şaşmaz, M. Ü. (2026). *Beyond the black box: Nonlinear regimes and explainable AI in global innovation systems*. **Mathematics, 14**(9), 1491. DOI: 10.3390/math14091491

6. Çelik, S., & Şaşmaz, M. Ü. (2026). *Mapping latent environmental performance regimes: A spatial and explainable machine learning approach*. **Quality & Quantity**. DOI: 10.1007/s11135-026-02801-2

7. Çelik, S., Çimen, G., & Yavan, S. (2026). *Global cost of living patterns: Machine learning insights and structural economic interpretation*. **Quality & Quantity**. DOI: 10.1007/s11135-026-02752-8

8. Çelik, S., Doğanlı, B., & Cengiz, A. (2026). *Correction to: Citation classification and key phrase extraction in legal texts using machine learning: An examination of the legal text classification dataset*. **Quality & Quantity**. DOI: 10.1007/s11135-026-02632-1

9. Çelik, S., & Köroğlu, C. Z. (2026). *Global gender inequality through explainable AI: Machine learning, clustering, and SHAP insights*. **Social Science Computer Review**. DOI: 10.1177/08944393261419809

10. Çelik, S., Doğanlı, B., & Cengiz, A. (2026). *Citation classification and key phrase extraction in legal texts using machine learning: An examination of the legal text classification dataset*. **Quality & Quantity**. DOI: 10.1007/s11135-025-02548-2

11. Çelik, S., Gökdemir, T., & Çondur, F. (2025). *Statistical analysis of the World Happiness Index by regions*. **Quality & Quantity**. DOI: 10.1007/s11135-025-02158-y

12. Çelik, S., Öztürk, Ö. F., Akkucuk, U., & Şaşmaz, M. Ü. (2025). *Global sustainability performance and regional disparities: A machine learning approach based on the 2025 SDG Index*. **Sustainability, 17**(16), 7411. DOI: 10.3390/su17167411

13. Çelik, S., Doğanlı, B., Şaşmaz, M. Ü., & Akkucuk, U. (2025). *Accuracy comparison of machine learning algorithms on World Happiness Index data*. **Mathematics, 13**(7), 1176. DOI: 10.3390/math13071176

14. Çelik, S., & Menguaslan, H. (2023). *A network analysis approach to the Justice and Development Party's role performance in the Middle East between 2015 and 2020*. **Journal of Liberty and International Affairs, 9**(1), 48–72. DOI: 10.47305/jlia2391048m

15. Gürsakal, N., Çelik, S., & Özdemir, S. (2023). *High-frequency words have higher frequencies in Turkish social sciences article*. **Quality & Quantity, 57**, 1865–1887. DOI: 10.1007/s11135-022-01444-3

16. Çelik, S., & Özyılmaz, E. (2016). *On the Blaschke trihedrons of a line congruence*. **New Trends in Mathematical Science**. DOI: 10.20852/ntmsci.2016115659

Turkish Articles

1. Çelik, S., & Zeren, F. (2022). *The analysis of graduate studies on big-data on social media through text mining*. **Türkiye Araştırmaları Literatür Dergisi**. DOI: 10.55842/talid.1115782

2. Gürsakal, N., Çelik, S., & Batmaz, B. (2022). *Problems and opportunities of artificial intelligence*. **Akademik Yaklaşımlar Dergisi**. DOI: 10.54688/ayd.1104830

3. Gürsakal, N., Gürsakal, S., & Çelik, S. (2021). *Büyük veri şirketleri ve açık kaynak hareketi*. **European Journal of Science and Technology**. DOI: 10.31590/ejosat.822219

4. Çelik, S. (2021). *Kuantum kriptolojisi ve siber güvenlik*. **Bilişim Teknolojileri Dergisi**. DOI: 10.17671/gazibtd.733309

5. Çelik, S. (2021). *K-Means kümeleme ve diskriminant analizi ile ülkelerin mutluluk hallerinin incelenmesi*. **Journal of Current Researches on Business and Economics**. DOI: 10.26579/jocrebe.88

6. Çelik, S. (2021). *Öğrenci sınav başarısını etkileyen faktörlerin istatistiksel analizi*. **Journal of Current Researches on Educational Studies**. DOI: 10.26579/jocures.57

7. Çelik, S. (2020). *Metin madenciliği ile Shakespeare külliyatının incelenmesi*. **MANAS Sosyal Araştırmalar Dergisi**. DOI: 10.33206/mjss.561919

8. Çelik, S. (2019). *GDELT kullanarak toplumsal huzursuzlukların tahmin edilmesi: Tunus örneği*. **Selçuk Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi**. DOI: 10.29249/selcuksbmyd.594233

9. Çelik, S. (2019). *Dünyadaki çatışmaların sosyal ağ analizi yöntemiyle incelenmesi*. **Öneri Dergisi**. DOI: 10.14783/maruoneri.594947

10. Çelik, S. (2017). *Büyük veri teknolojilerinin işletmeler için önemi*. **Social Sciences Studies Journal**. DOI: 10.26449/sssj.119

BOOKS

Book

1. "Synthetic Data for Deep Learning: Generate Synthetic Data for Decision Making and Applications with Python and R", ***Apress***, (with Necmi Gürsakal and Esma Birişçi), (Editors: Celestin Suresh John, Laura Berendson, Mark Powers), 2022, ISBN: 978-1484285862.

2. An Introduction to the Metaverse: Applications with Python (with Necmi Gürsakal, Esma Birişçi) ***Cambridge Scholars Publishing,*** 2024**,** ISBN: 978-1036417352.

Turkish Books

1. "Büyük Veri ve Pazarlama", ***Dora Yayınevi,*** (with Necmi Gürsakal), 2021, Basım sayısı:1, Sayfa Sayısı 204, ISBN:978-605-247-345-0.
2. "Makine Öğrenmesi Derin Öğrenme için R Uygulamalı Doğrusal Cebir", ***Dora Yayınevi***, (with Necmi Gürsakal), 2020, Basım sayısı:1, Sayfa Sayısı 294, ISBN:978-605-247-207-1.
3. "Büyük Veri", ***Gece Kitaplığı*****,** Editör:Orhan Şanlı, Basım sayısı:1, ISBN:978-605-288-811-7.

Book Chapters

1. "Smart Cities Stupid Happiness", (with Necmi Gürsakal, Melih Fırat Yılmaz) **in New Perspectives and Research in Social Sciences**, (editor: Ayça Sarıalioğlu Hayali), **LAP LAMBERT Academic Publishing,** 2021, ISBN:978-620-3-85455-8.
2. "An Overview On GANs", (with Necmi Gürsakal) **in New Approaches in Operational Research**, (Editors: Ayça Aytekin and N. Tuba Yılmaz Soydan), **Ekin**, 2020, ISBN:978-625-7210-64-5,

Turkish Book Chapters

1. "Dünya Tarihindeki Benzer Desenlerin İncelenmesi: 15 Temmuz Öncesi ve Sonrasına İlişkin Büyük Veri Analizi", (with Emrah Akdamar), in ***Sosyal, Beşeri ve İdari Bilimlerde Yeni Arayışlar ve Çalışmalar***, (Editor: Ayşe Çatalcalı Ceylan), **Serüven**, 2021, ISBN:978-625-7721-26-4.
2. "Veri Ürünü: Öneri Sistemleri", in ***İktisadi ve İdari Bilimlerde Araştırma ve Değerlendirmeler,*** (Editor: Kemal Vatansever), **Gece Kitaplığı**, 2021, ISBN:978-625-7411-64-6.
3. "Veri Bilimi ve İstatistik", Bankacılık, in Muhasebe ve Veri Bilimi Araştırmaları, (Editör: Erkan Arı), ***LAP LAMBERT Academic Publishing,*** 2021, ISBN:978-620-3-84775-8.
4. "Kuantum Bilgisayarlar Teknolojik Anlamda Ne Getirecek", (with Necmi Gürsakal) in ***Küresel Ekonomiye Yön Veren Yeni Teknolojiler***, (Editors: Bekir Pakdemirli, Necmi Gürsakal, Zülfikar Bayraktar, Sefa Takmaz), ***Akçağ***, Ankara: 2020. ISBN: 6053424499.
5. "Dünya Ekonomisine Etkileri Bağlamında Endüstri 4.0", in ***21. Yüzyılda Dünya Ekonomisi***, (Editor: Aslı Yenipazarlı), ***Seçkin***, Ankara: 2019. ISBN: 978-975-02-5816-9.

Chapters in Conference Proceedings

ACTIVE WORKS

Submitted Papers (Book)

Submitted Papers (Article)

1. "Analysis of Skills and Qualifications Required in Data Scientist Job Posting Based on the Pareto Analysis Perspective Using Text Mining", Submit to: ***Journal of Econometrics and Statistics,*** (with Erkan Işığıçok, Dilek Özdemir Yılmaz).

Work-in Progress

CONFERENCES & WORKSHOPS & SEMINARS & TALKS

- **2023**
  - EU 2nd International Conference On Humanity And Social Sciences, Belgrad, Serbia' *08/2023*
- **2022**
  - ANADOLU 11th International Conference on Social Sciences, Diyarbakır, Turkey *12/2022*
- **2021**
  - International Cappadocia Scientific Research Congress, Nevşehir, Turkey *12/2021*
  - VI. International Battalgazi Scientific Studies Congress, Malatya, Turkey *05/2021*
- **2020 - ... -2018**
  - Middle-East Conference on Contemporary Sciences IV, Online, Beirut, Lebanon *11/2020*
  - Atlas 7th International Congress on Social Sciences, Online, Budapest, Hungary *10/2020*
  - I. International Applied Statistics Conference (UYIK), Tokat, Turkey *10/2020*
  - 3rd International EUREFE Congress, Aydın, Turkey *10/2019*
  - 1st International Congress of Political, Economic and Financial Analysis, Aydın, Turkey *04/2018*
- **2017 - ... -2013**
  - I. International Economics, Finance and Econometrics Student Symposium (EFEOS), Sakarya, Turkey *05/2017*
    15th International Symposium on Econometrics, Operations Research and Statistics, Isparta, Turkey *05/2014*

TEACHING

- **Graduate Courses**
- **Undergraduate Courses**

- *MLY206 - Econometrics (Turkish), Aydın Adnan Menderes University* *Spring/2024*
- *UTIF300 Professional English II (English), Aydın Adnan Menderes University* *Spring/2024*
- *UTIF416 International Trade and Finance Seminars (Turkish), Aydın Adnan Menderes University* *Spring/2024*
- *UTIF206 - Foreign Trade Transactions Management (Turkish), Aydın Adnan Menderes University* *Spring/2024*

- *UTIF322 - Data Science with Modern R Programming (Turkish), Aydın Adnan Menderes University* *Fall/2023*
- *UTIF103 Information Economy and E-Commerce (Turkish), Aydın Adnan Menderes University* *Fall/2023*
- *UTIF401 Foreign Trade Legislation (Turkish), Aydın Adnan Menderes University* *Fall/2023*
- *UTIF201 International Trade and Business (Turkish), Aydın Adnan Menderes University* *Fall/2023*

- *MLY206 - Econometrics (Turkish), Aydın Adnan Menderes University* *Spring/2023*
- *UTIF300 Professional English II (English), Aydın Adnan Menderes University* *Spring/2023*
- *UTIF306 - Foreign Trade Financing (Turkish), Aydın Adnan Menderes University* *Spring/2023*
- *UTIF206 - Foreign Trade Transactions Management (Turkish), Aydın Adnan Menderes University* *Spring/2023*

- *UTIF103 Information Economy and E-Commerce (Turkish), Aydın Adnan Menderes University* *Fall/2022*
- *UTIF401 Foreign Trade Legislation (Turkish), Aydın Adnan Menderes University* *Fall/2022*
- *UTIF305 International Marketing (Turkish), Aydın Adnan Menderes University* *Fall/2022*
- *UTIF201 International Trade and Business (Turkish), Aydın Adnan Menderes University* *Fall/2022*

- *UTIF201 International Trade and Business (Turkish), Aydın Adnan Menderes University* *Fall/2021*
- *UTIF307 Professional English I (English), Aydın Adnan Menderes University* *Fall/2021*
- *UTIF404 Research Techniques (Turkish), Aydın Adnan Menderes University* *Fall/2021*
- *UTIF103 Information Economy and E-Commerce (Turkish), Aydın Adnan Menderes University* *Fall/2021*

- *UTIF300 Professional English II (English), Aydın Adnan Menderes University* *Summer/2020*
- *UTIF406 Innovation Management (Turkish), Aydın Adnan Menderes University* *Summer/2020*
- *UTIF402 Taxation in Foreign Trade (Turkish), Aydın Adnan Menderes University* *Summer/2020*
- *ECON207 Information Economy (Turkish), Aydın Adnan Menderes University* *Summer/2020*

- *ECON415 Tourism Economics (Turkish), Aydın Adnan Menderes University* *Fall/2020*
- *UTIF406 Innovation Management (Turkish), Aydın Adnan Menderes University* *Fall/2020*
- *ECON312 Agricultural Economics and Policy (Turkish), Aydın Adnan Menderes University* *Fall/2020*
- *ECON207 Information Economy (Turkish), Aydın Adnan Menderes University* *Fall/2020*
- *UTIF103 Information Economy and E-Commerce (Turkish), Aydın Adnan Menderes University* *Fall/2020*

- *UTIF404 Research Techniques (Turkish), Aydın Adnan Menderes University* *Spring/2020*
- *UTIF300 Professional English II (English), Aydın Adnan Menderes University* *Spring/2020*
- *UTIF416 International Trade and Finance Seminars (Turkish), Aydın Adnan Menderes University* *Spring/2020*
- *MAT174 General Mathematics II (Turkish), Aydın Adnan Menderes University* *Spring/2019*
- *ECON40 English in Economics (Turkish), Aydın Adnan Menderes University* *Spring/2019*
-

COURSES & SUMMER SCHOOLS

- Artificial Neural Networks and Chaos for Economics and Finance, Yıldız Technical University, Istanbul *25/01/2016 - 28/01/2016*
- Time Series Analysis, Sakarya University, Sakarya *17/08/2015 - 21/08/2015*
- Multivariate Statistics I, Istanbul Technical University, Istanbul *10/08/2015 - 14/08/2015*
- Structural Equation Models, Istanbul Technical University, Istanbul *03/08/2015 - 07/08/2015*
- Time Series Analysis, Sakarya University, Sakarya *08/09/2014 - 12/09/2014*

- Data Analysis with SPSS, Sakarya University, Sakarya *25/08/2014 - 29/08/2014*
- Applied Econometrics with E-Views, Sakarya University, Sakarya *18/08/2014 - 22/08/2014*

EDITOR & REVIEWER SERVICES

- **Editorial Board Member & Review Editor & Associate Editor**
  - Journal of Intelligent Transportation System and Applications (Review Editor) *06/2023 - ...*
  - Bitlis Eren University Journal of Science (Review Editor) *06/2022 - ...*
  - Journal of Academic Approaches (Review Editor) *09/2021 - ..*
  - Journal of Academic Approaches (Review Editor) *09/2021 - ...*
  - *Administrative Sciences* (Review Editor) *09/2026 - ...*
  - *Computational Economics* (Review Editor) *09/2025 - ...*
  - *Quality & Quantity* (Review Editor) *09/2023 - ...*
  - *Social Sciences* (Review Editor) *09/2026 - ...*
  - *Studies in Educational Evaluation* (Review Editor) *09/2026 - ...*
  - *Entropy* (Review Editor) *09/2026 - ...*
  - *Frontiers in Psychology* (Review Editor) *10/2026 - ...*
  - *Frontiers in Public Health* (Review Editor) *09/2026 - ...*

OTHER ACADEMIC ACTIVITIES

- Erasmus Staff Mobility, Newton University - Sting Academy, Brno, Czech Republic *20/09/2023 - 21/09/2023*

LANGUAGE & COMPUTER SKILLS

- Turkish (native), English (fluent)
- MS Office, R, Python, Tableau, SPSS, EViews, Gephi

REFERECENCES

Available upon request