GÖKŞEN BACAK TURAN

PROF.

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International Researcher IDs
ScholarID: tRJy7RwAAAAJ
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Publons / Web Of Science ResearcherID: A-1637-2018
ScopusID: 53163097700
Yoksis Researcher ID: 109885

Education

Doctorate 2005 - 2010	Ege University, Turkey
Postgraduate 2002 - 2005	Izmir Institute Of Technology, Turkey
Undergraduate 1994 - 1999	Marmara University, Turkey

Dissertations

Doctorate, Graflarda zedelenebilirlik ölçümleri, Ege University, 2010
Postgraduate, Vertex coloring of a graph, Izmir Institute Of Technology, 2005

Academic Positions

Professor 2025 - Present	Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Matematik
Associate Professor 2019 - 2025	Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Matematik
Assistant Professor 2011 - 2019	Manisa Celal Bayar University, Fen-Edebiyat Fakültesi, Matematik
Assistant Professor 2010 - 2011	Yasar University
Lecturer 2006 - 2010	Yasar University

Research Assistant
2005 - 2006 Yasar University

Research Assistant
2003 - 2005 Izmir Institute Of Technology

Funded Projects

1. BACAK TURAN G., ASLAN E., ALTUNDAĞ F. N., Project Supported by Higher Education Institutions, BAP Research Project, Bulanık Çizgelerde Zedelenebilirlik Parametreleri, 2018 - 2021
2. BACAK TURAN G., Project Supported by Higher Education Institutions, BAP Other, Harary Grafların Komşu Rupture Derecesi, 2015 - 2016

Articles

1. **Fuzzy node rupture degree of some fuzzy graph families**
   Murater F. N., Bacak Turan G.
   RAIRO-OPERATIONS RESEARCH, vol.59, no.2, pp.985-998, 2025 (SCI-Expanded, Scopus)
2. **A New Graph Vulnerability Parameter: Fuzzy Node Integrity**
   Murater F. N., Bacak Turan G.
   Symmetry, vol.17, no.4, 2025 (SCI-Expanded, Scopus)
3. **Vulnerability Prameters in Fuzzy Graphs: Fuzzy Node Tenacity**
   Altundağ F. N., Turan G., aslan e.
   Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.15, no.1, pp.316-329, 2025 (TRDizin)
4. **Fuzzy Node Connectivity of Some Classes of Graphs**
   Murater F. N., Bacak Turan G.
   Journal of Modern Technology and Engineering, vol.9, no.2, pp.102-111, 2024 (Peer-Reviewed Journal)
5. **Computation of Gutman index of Some Transformation Graphs**
   Çakal M., Turan G. B.
   Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.14, no.2, pp.865-878, 2024 (TRDizin)
6. **Geodetic Domination Integrity of Thorny Graphs**
   Onur Ş., Turan G. B.
   Journal of New Theory, no.46, pp.99-109, 2024 (TRDizin)
7. **Domination integrity and efficient fuzzy graphs**
   Mariappan S., Ramalingam S., Raman S., Bacak Turan G.
   Neural Computing and Applications, vol.32, no.14, pp.10263-10273, 2020 (SCI-Expanded, Scopus)
8. **Feasible Sanitary Sewer Network Generation Using Graph Theory**
   Turan M. E., Bacak Turan G., Cetin T., Aslan E.
   Advances in Civil Engineering, vol.2019, 2019 (SCI-Expanded, Scopus)
9. **Neighbor Rupture Degree of Some Middle Graphs**
   BACAK TURAN G., ÜLKÜ ŞENOĞLU M., ALTUNDAĞ F. N.
   Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.22, no.1, pp.75-80, 2018 (TRDizin)
10. **Neighbor Rupture Degree of Gear Graphs**
    Turan G. B., DEMİRTEKİN E.
    Celal Bayar Üniversitesi Fen Bilimleri Dergisi, vol.13, no.2, pp.319-323, 2017 (TRDizin)
11. **Neighbor Rupture Degree of Transformation Graphs Gxy-**

Bacak Turan G., Oz E.
International Journal of Foundations of Computer Science, vol.28, no.4, pp.335-355, 2017 (SCI-Expanded, Scopus)

12. **Neighbor Rupture Degree of Harary Graphs**
Altundag F. N., BACAK TURAN G.
International Journal of Foundations of Computer Science, vol.27, no.6, pp.739-756, 2016 (SCI-Expanded, Scopus)
13. **Mean rupture degree of graphs**
ASLAN E., BACAK TURAN G.
UPB Scientific Bulletin, Series A: Applied Mathematics and Physics, vol.78, no.1, pp.233-242, 2016 (SCI-Expanded, Scopus)
14. **Neighbor Rupture Degree of Total Graphs and Their Complements**
Eskiizmirliler S., Bacak Turan G., Polat R.
Bulletin of The International Mathematical Virtual Institute, vol.6, no.1, pp.55-64, 2016 (Peer-Reviewed Journal)
15. **Graph operations and neighbor rupture degree**
Kandilci S., BACAK TURAN G., Polat R.
Journal of Applied Mathematics, vol.2013, 2013 (SCI-Expanded, Scopus)
16. **Neighbor integrity of transformation graphs**
BACAK TURAN G., KIRLANGIÇ A.
International Journal of Foundations of Computer Science, vol.24, no.3, pp.303-317, 2013 (SCI-Expanded, Scopus)
17. **On the rupture degree of a graph**
KIRLANGIÇ A., BACAK TURAN G.
Neural Network World, vol.22, no.1, pp.39-51, 2012 (SCI-Expanded, Scopus)
18. **Neighbor rupture degree and the relations between other parameters**
BACAK TURAN G., KIRLANGIÇ A.
Ars Combinatoria, vol.102, pp.333-352, 2011 (SCI-Expanded, Scopus)
19. **Applying *Mathematica* and *webMathematica* to graph coloring**
Ufuktepe U., Bacak G.
FUTURE GENERATION COMPUTER SYSTEMS-THE INTERNATIONAL JOURNAL OF ESCIENCE, no.5, pp.716-720, 2007 (SCI-Expanded, Scopus)

Books

1. **Super Domination Number of Some Transformation Graphs**
Güven Y. C., Bacak Turan G.
in: Nonlinear Dynamical Control, Computer Simulation and Optimization Systems Theory and Applications, Dumitru Baleanu,Necati Özdemir,Yeliz Karaca,Mukund N. Janardhanan,Fırat Evirgen,İbrahim Küçükkoç, Editor, World Scientific Publishing , New Jersey, pp.163-172, 2025

Papers Presented at Peer-Reviewed Scientific Conferences

1. **Genişletişmiş Transformasyon Grafların Mesafe Bazlı Topolojik İndeksleri Üzerine**
Elsıkma M., Bacak Turan G.
31. Ulusal Matematik Sempozyumu, Antalya, Turkey, 1 - 04 September 2025, pp.104, (Summary Text)
2. **Super Domination Number of Middle Graphs**
Güven Y. C., Bacak Turan G.
The 3rd International Conference on Applied Mathematics in Engineering (ICAME'24), Balıkesir, Turkey, 26 - 28 June 2024, pp.223, (Summary Text)
3. **Çizge Kuramında Topolojik İndeksler**
Elsıkma M., Bacak Turan G.
8th International Students Science Congress, İzmir, Turkey, 23 - 24 May 2024, pp.321-325, (Full Text)

4. **Geodetic Domination Integrity of Transformation Graphs**
   Onur Ş., Bacak Turan G.
   6th International Students Science Congress, İzmir, Turkey, 20 - 21 May 2022, pp.233-236, (Full Text)
5. **A study on vulnerability parameters of signed fuzzy graphs**
   Sundareswaran R., Sujatha R., BACAK TURAN G.
   International Conference on Intelligent and Fuzzy Systems, INFUS 2019, İstanbul, Turkey, 23 - 25 July 2019, vol.1029, pp.24-32, (Full Text)
6. **Group Closeness Centrality of Graphs**
   G B., Raman S., Ramalingam S., V M., Bacak Turan G.
   International Conference on Computational Mathematics and Engineering Sciences, Antalya, Turkey, 20 - 22 April 2019, (Full Text)
7. **Node Toughness of a Fuzzy Graph**
   Bacak Turan G., Altundağ F. N.
   International Conference on Computational Mathematics and Engineering Sciences, Antalya, Turkey, 20 - 22 April 2019, (Summary Text)
8. **Kanalizasyon Sistemi Optimizasyonunda Çizge Teorisi Kullanımı**
   Turan M. E., Bacak Turan G., Çetin T., Aslan E.
   International Symposium on Urban Water and Wastewater Management, Denizli, Turkey, 25 - 27 October 2018, pp.192-199, (Full Text)
9. **Çizgelerin Kategori Çarpımının Güvenli Kümesi**
   BACAK TURAN G.
   31. Ulusal Matematik Sempozyumu, Erzincan, Turkey, 12 - 15 September 2018, (Summary Text)
10. **Stability Measures of Sierpinski Fractal**
    BACAK TURAN G.
    16th International Geometry Symposium, Manisa, Turkey, 4 - 07 July 2018, (Summary Text)
11. **Neighbor Integrity of Harary Graphs**
    BACAK TURAN G., Altundag F. N.
    International Science and Technology Conference, Viyana, Austria, 13 - 15 July 2016, pp.740-743, (Full Text)
12. **Neighbor Rupture Degree of Harary Graphs**
    Altundağ F. N., Bacak Turan G.
    The Third Gdansk Workshop on Graph Theory, Gdansk, Poland, 16 - 18 September 2015, (Summary Text)
13. **Neighbor Rupture Degree of a Graph with Maximum Connectivity**
    ALTUNDAĞ F. N., BACAK TURAN G.
    13th Cologne-Twente Workshop on Graphs and Combinatorial Optimization, İstanbul, Turkey, 26 - 28 May 2015, (Summary Text)
14. **Neighbor Rupture Degree of Transformation Graphs**
    Öz E., BACAK TURAN G.
    Seventh Czech-Slovak International Symposium on Graph Theory, Combinatorics,Algorithms and Applications, Koshice, Slovakia, 7 - 13 July 2013, (Summary Text)
15. **Neighbor Rupture Degree of Graphs**
    BACAK TURAN G., KIRLANGIÇ A.
    1st International Symposium on Computing in Science and Engineering (ISCSE), Aydın, Turkey, 3 - 05 June 2010, (Full Text)
16. **Rupture Degree of Complete k ary Trees**
    BACAK TURAN G., KIRLANGIÇ A.
    1st Istanbul Design Theory and Combinatorics Conference, İstanbul, Turkey, 15 - 21 June 2008, (Summary Text)
17. **Applications of Graph Coloring**
    Ufuktepe Ü., Bacak G.
    Computational Science and Its Applications-ICCSA 2005, Singapore, Singapore, 9 - 12 May 2005, vol.3482, pp.522-528, (Full Text)
18. **Graph Coloring with webMathematica**

Ufuktepe Ü., Bacak G., Beşeri Sevim T.
The 4th International Conference on Computational Science - ICCS 2004, Krakow, Poland, 6 - 09 June 2004, vol.3039, pp.376-381, (Full Text)

Courses

Postgraduate
Graflar ve Matrisler, Postgraduate, 2024 - 2025
Graf Teorisi ve Uygulamaları, Postgraduate, 2024 - 2025
Graflarda Uzaklık, Postgraduate, 2023 - 2024, 2020 - 2021
İletişim Ağları ve Zedelenebilirlik Parametreleri, Postgraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021
Mühendislik Matematiği, Postgraduate, 2020 - 2021
Undergraduate
Mathematics II, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022
Bitirme Projesi II, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Graf Teorisine Giriş II, Undergraduate, 2024 - 2025
Sosyal Sorumluluk Projesi, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Differential Equations, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Bitirme Projesi I, Undergraduate, 2024 - 2025, 2022 - 2023, 2021 - 2022, 2020 - 2021
Mesleki Gelişim, Undergraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021
Graf Teorisine Giriş I, Undergraduate, 2024 - 2025, 2023 - 2024
Graflar ve Algoritmalar, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Yönlü Graflar, Undergraduate, 2021 - 2022, 2020 - 2021
Araştırma Projesi II, Undergraduate, 2020 - 2021
Numerical Methods in Engineering, Undergraduate, 2020 - 2021
Araştırma Projesi I, Undergraduate, 2021 - 2022, 2020 - 2021

Supervised Theses

Bacak Turan G., Boruzanlı Ekinci G., Postgraduate, M.Elsıkma(Student), in Progress
Bacak Turan G., Çizgelerde Süper Baskınlık Sayısının İncelenmesi, Postgraduate, Y.CEREN(Student), in Progress
BACAK TURAN G., Çizgelerde jeodezik baskın bütünlük değerinin incelenmesi, Postgraduate, Ş.ONUR(Student), 2024
Bacak Turan G., Doctorate, F.NİHAN(Student), 2021
BACAK TURAN G., Transformasyon grafların Gutman indeksi, Postgraduate, M.ÇAKAL(Student), 2021
BACAK TURAN G., İkinci mertebe kısmi diferansiyel denklemlerin nümerik çözümleri için Bernstein sıralama (collocation) metodu, Doctorate, H.HİLMİ(Student), 2019
BACAK TURAN G., Gear grafların komşu rupture derecesi üzerine, Postgraduate, E.DEMİRTEKİN(Student), 2017
BACAK TURAN G., Middle grafların komşu rupture derecesi üzerine, Postgraduate, M.ÜLKÜ(Student), 2017
BACAK TURAN G., Transformasyon Grafların Komşu Rupture Derecesi, Postgraduate, E.ÖZ(Student), 2015
BACAK TURAN G., Grafların komşu rupture derecesi, Postgraduate, F.NİHAN(Student), 2015
BACAK TURAN G., Vulnerability parameters on graph operations, Postgraduate, S.ESKİİZMİRLİLER(Student), 2012
BACAK TURAN G., The role of graph theory in logistics, Postgraduate, S.CERRAHOĞLU(Student), 2011
BACAK TURAN G., Game coloring of graphs, Postgraduate, M.ÇELİK(Student), 2011