

Utku Umur Acikalin

Research Interests: AI4Science, Combinatorial Optimization

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EDUCATION

Cornell University, Ithaca/NY/USA 2023–now

PhD, Computer Science

Advisor: Ronald C. and Antonia V. Nielsen Professor of Computing and Information Science Carla P. Gomes

TOBB University of Economics and Technology, Ankara/Turkey 2019–2022

Master of Science, Computer Engineering, GPA:4.00/4.00

Advisor: Asst. Prof. Bugra Caskurlu

TOBB University of Economics and Technology, Ankara/Turkey 2015–2019

Bachelor's Degree, Computer Engineering, GPA:3.74/4.00

PUBLICATIONS

C6. **Acikalin UU**, Ferber AM, Gomes CP. “Learning to Explore and Exploit with GNNs for Unsupervised Combinatorial Optimization”. To be apper in: The Thirteenth International Conference on Learning Representations , ICLR, 2025.

J4. Caskurlu B, Subramani K, **Acikalin UU**, Velasquez A, Wojciechowski P. “Models for test cost minimization in database migration”, *INFORMS Journal on Computing*. 2024.

C5. **Acikalin UU**, Caskurlu B & Abul O. “Solving Secluded Path Problem by Heuristics and Local Search”. In Proceedings of the Cognitive Models and Artificial Intelligence Conference (ACM AICONF '24), ACM. 2024.

J3. **Acikalin UU**, Caskurlu B, & Subramani K. “Security-aware database migration planning.” *Constraints*, 28(3), 472-505. 2023.

J2. **Acikalin UU**, Gorgun MK, Kutlu M, & Tas BKO. “How you describe procurement calls matters: Predicting outcome of public procurement using call descriptions.” *Natural Language Engineering*, 1-22. 2023.

J1. Caskurlu B, **Acikalin UU**, Kizilkaya FE, & Ekici O. “On approximate Nash equilibria of the two-source connection game”, *Turkish Journal of Electrical Engineering and Computer Sciences*, 30(6), 2206-2220. 2022.

W1. **Acikalin UU**, Kutlu M. “Patent Search Using Triplet Networks Based Fine-Tuned SciBERT”, 3rd Workshop on Patent Text Mining and Semantic Technologies at ACM SIGIR, 2022.

C4. **Acikalin UU** & Caskurlu B. “Multilevel memetic hypergraph partitioning with greedy recombination”. In Proceedings of the Genetic and Evolutionary Computation Conference Companion (ACM SIGEVO GECCO '22), ACM. 2022. (Presented Online)

C3. **Acikalin UU**, Caskurlu B, Wojciechowski P, Subramani K. “New Results on Test-Cost Minimization in Database Migration”, 2021, *International Symposium on Algorithmic Aspects of Cloud Computing (ALGO CLOUD)*, 2021.

C2. **Acikalin UU**, Bardak B, Kutlu M. “Turkish Sentiment Analysis Using BERT”, 28th *Signal Processing and Communications Applications Conference (SIU)*. IEEE, 2020.

C1. Subramani K, Caskurlu B, **Acikalin UU**. “Security-Aware Database Migration Planning”, *International Symposium on Algorithmic Aspects of Cloud Computing (ALGO CLOUD)*. 2019. (Presented in ALGO CLOUD2019)

WORKING PAPERS

Acikalin UU, Caskurlu T, Hoberg G, Phillips GM. “Intellectual Property Protection Lost and Competition: An Examination Using Machine Learning” (Submitted to Journal of Financial Economics)

Presented by coauthors at: NBER Big Data and High-Performance Computing for Financial Economics, NBER Summer Institute Innovation workshop, EFA 2022, (scheduled) AEA 2022, University of Alberta, University of Amsterdam, Columbia University, Harvard Business School, John Hopkins University, University of Minnesota, University of Maryland, and University of Notre Dame, Peking University, UCLA, Yeshiva University

Acikalin UU, Kutlu M, Palalic R & Tas BKO, “Performance of small firms in public procurement of innovation: Analysis of competition and success in the U.S. public procurement market”. (Submitted to Small Business Economics)

Caskurlu B, Ekici O, **Acikalin UU**. “Geometric hitting set problem for disks with a point in the center”, (Submitted to Turkish J Math)

ACHIEVEMENTS

2020-2022 TUBITAK 2210 M.S. Scholarship

2019-2021 TOBB Univ. of Economics and Technology Graduate Program Special Merit Scholarship

2019 TUBITAK Undergraduate Research Project Contest 2nd prize

2017 Android Academy Entrepreneurship Foundation Contest Semi-finalist

2017-2019 TOBB Univ. of Economics & Technology Undergraduate Program Merit Scholarship

2016-2017 Undergraduate TA (selected by the head of the department)

2011 Mersin University Math Contest for Elementary Schools - 1st place

2009 1. Turkish Child’s Right Congress Representative

2009 Mersin University Math Contest for Elementary Schools - 3rd place
2007 European Chess Festival U10 – 2nd place
2006 Republic of Turkey Ministry of National Education Chess Championship - 3rd place
2005 Republic of Turkey Ministry of National Education Chess Championship - 9th place
2004 Mersin Sisecam Soda Industry Painting Contest - 3rd place

TEACHING ASSISTANTSHIPS

Introduction to Computer Programming (4 Semesters)
Design and Analysis of Algorithms (4 Semesters)
Social Networks (2 Semesters)
Combinatorics (2 Semesters)

PROFESSIONAL SERVICE

Reviver for: IEEE Transactions on Circuits and Systems I

SKILLS

Programming Languages: (proficient) Java, Python, C++, (familiar) C, Javascript, Ruby
ML & Optimization Frameworks, Libraries : Pytorch, Sklearn, Transformers, Spacy, Lucene,
CPLEX, Minizinc, Google OR Tools

REFERENCES

Carla P. Gomes, Ronald C. and Antonia V. Nielsen Professor of Computing and Information
Science, Cornell University
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Gordon M. Phillips, Laurence F. Whittemore Professor of Finance,
Tuck School of Business, Dartmouth College,
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Gerard Hoberg, Charles E. Cook Community Bank Professor of Finance,
Marshall School of Business, University of Southern California,
Email: hoberg@marshall.usc.edu

Bugra Caskurlu, Assistant Professor, Head of Artificial Intelligence Engineering Department,
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