

Gizem Süngü

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Education

- 2018 – ····. **Ph.D. Computer Science** in Gebze Technical University, Kocaeli, Turkey.
Advisor: *Asst. Prof. Zafeirakis Zafeirakopoulos.*
- 2015 – 2018 **M.Sc. Computer Science and Engineering** in Marmara University, Istanbul, Turkey.
Thesis title: *A Heuristic Algorithm For Solving Graph Coloring Problem on Dynamic Graphs.*
Advisor: *Asst. Prof. Betül Boz.*
- 2011 – 2015 **B.Sc. Computer Science and Engineering** in Marmara University, Istanbul, Turkey.
Thesis title: *Solving Weighted Graph Coloring Problem by Using Evolutionary Algorithms.*
Advisor: *Asst. Prof. Betül Boz.*

Academic Employment

- May 2017 – Present **Research Assistant**
Gebze Technical University, Kocaeli, Turkey.
- Sep. 2019 – June 2020 **Teaching Assistant**
Gebze Technical University, Kocaeli, Turkey.
Courses Assisted:
*CSE 211–Discrete Mathematics (Fall 2019),
MATH 118–Probability and Statistics (Spring 2020),
CSE 321–Operating Systems (Spring 2020),
CSE 521–Algorithms and Design (Spring 2020).*
- Mar. 2013 – June 2014 **Lab Assistant**
Marmara University, Istanbul, Turkey.
Course: *Introduction to Computing.*
- July 2013 – Sep. 2013 **Undergraduate Research Assistant**
Hochschule Ostwesfalen Lippe, Lemgo, Germany.
Project: *Checker Game Simulation with BioRob*
Advisor: *Prof. Dr. Oliver Niggemann*

Research Projects

- Aug. 2018 – July 2019 **MATHDATA - Researcher**
Tubitak (The Scientific and Technological Research Council of Turkey) foundation project entitled: “MathData-A system for efficient representation of mathematical data and benchmarking of mathematical software and algorithms.”
PI: *Asst. Prof. Zafeirakis Zafeirakopoulos*
- June 2018 – Jan. 2020 **Algebraic Motion Path Planning - Researcher**
A project is for designing a motion path planning algorithm by using algebraic methods. This work was supported by the Gebze Technical University Bilimsel Araştırma Projeleri (BAP) Project under Grant G.T.U. BAP 2018-A-27.
PI: *Asst. Prof. Zafeirakis Zafeirakopoulos*

Research Publications

Journal Articles






- 1 Boz, B., & Süngü, G. (2020). Integrated crossover based evolutionary algorithm for coloring vertex-weighted graphs. *IEEE Access*, 8, 126743–126759.
<https://doi.org/10.1109/ACCESS.2020.3008886>

Conference Proceedings




- 1 Sungu, G., & Boz, B. (2017). Solving dynamic graph coloring problem using dynamic pool based evolutionary algorithm, In *European conference on the applications of evolutionary computation*. Springer. https://doi.org/10.1007/978-3-319-55792-2_13
- 2 Sungu, G., & Boz, B. (2015). An evolutionary algorithm for weighted graph coloring problem, In *Proceedings of the companion publication of the 2015 annual conference on genetic and evolutionary computation*. <https://doi.org/10.1145/2739482.2768488>

Academic Experience



Awards and Scholarships

- 2019  **AEC Summer School Scholarship**
Awarded by RISC: Research Institute for Symbolic Computation for Algorithmic and Enumerative Combinatorics Summer School.
-  **GRAAL Summer School Scholarship**
Awarded by GRAAL: GRaphes et Arbres ALéatoires for The Random Trees and Graphs Summer School
- 2017  **EvoStar Student Travel Award**
Awarded by SPECIES Society for the conference in Amsterdam, Holland.
- 2015  **The second best project of CSE497/CSE498 Engineering Project Course**
Awarded by Marmara University, Department of Computer Science and Engineering.
-  **ACM-Woman Scholarship**
Awarded by ACM-W, for Genetic and Evolutionary Computation Conference in Madrid, Spain.

Activities

- 2019  **Local Organizer** at MACIS 2019.
MACIS is a series of biennial conferences focusing on research in mathematical and computational aspects of computing and information science.
-  **Attendee** of The 5th Algorithmic and Enumerative Combinatorics Summer School.
Organized by RISC: Research Institute for Symbolic Computation at Hagenberg, Linz, Austria.
-  **Attendee** of The Random Trees and Graphs (GRAAL) Summer School.
Organized by GRAAL at Centre International de Rencontres Mathématiques (CIRM), Marseille, France.

Affiliation

- 2018 – Present  **Member** of ALCYON Lab.
ALCYON Lab: Algorithms for Combinatorics, Geometry, Optimization and Number Theory Laboratory is at Gebze Technical University, Kocaeli, Turkey.
- 2012 – 2014  **Member** of MUFE Robotics Team.