

CONTACT

ELIF USKUPLU

✉ euskuplu@usc.edu

☎ 213-740-3761

📍 Los Angeles, CA

EDUCATION

Sep 2019 --

- **Ph.D. in Mathematics**
University of Southern California
3.67/4.00

Sep 2017 - Aug 2019

- **M.S. in Mathematics**
Koç University
3.99/4.00

Sep 2013 - July 2017

- **B.Sc. in Mathematics**
Istanbul Bilgi University
3.65/4.00

Sep 2011 - June 2013

- **Mathematical Engineering**
Istanbul Technical University
Left due to undergraduate transfer

PUBLICATIONS

- **QC-LDPC Codes from Difference Matrices and Difference Covering Arrays**
Diane Donovan, Asha Rao, Elif Uskuplu, Emine S. Yazıcı, in IEEE Access, vol. 11, pp. 52141-52157, 2023, doi: 10.1109/ACCESS.2023.3279327
- **High-rate LDPC codes from partially balanced incomplete block designs**
Diane Donovan, Aiden Price, Asha Rao, Elif Uskuplu, Emine S. Yazıcı, Journal of Algebraic Combinatorics, Jan 2022

ACHIEVEMENTS & AWARDS

- Summer 2022 support by NSF grant DMS-1902092, the Army Research Office W911NF-20-1-0075, and Simons Foundation
- Research Support by the Air Force Office of Scientific Research under award number FA9550-21-1-0009
- Outstanding Teaching Award, Koç University
- Turkish Math Society, Cahit Arf Scholarship
- Higher Education Student Student Loans and Dormitories Institution State Scholarship, Turkey
- İstanbul Bilgi University the Board of Trustee Scholarship

TALKS

- **Cofibrancy of The Exo-type of Natural Numbers**
2nd International Conference on Homotopy Type Theory, May 2023
- **Homotopy Type Theory vs Set Theory**

GSU Research Seminars, Dec 2022

- **Proof Assistants: Agda for Beginners**
SageDays Istanbul, August 2022
- **An Experiment with 2LTT Features in Agda**
Workshop on Homotopy Type Theory/Univalent Foundation, July 31 - August 1, 2022
- **Formalization of 2LTT in Agda**
MURI Meeting at CMU, July 2022
- **A Brief Introduction to Homotopy Type Theory**
USC Math Grad Colloquium, Feb 2022

PROJECTS

- **Formalization of 2LTT & Univalence Principle in Agda**
github.com/ElifUskuplu/2LTT-Agda
- **Univalent Mathematics in Agda (contributor)**
github.com/UniMath/agda-unimath

EXPERIENCES

Sep 2019 - ---

- **Teaching Assistant**
University of Southern California
Courses: Fundamental Principles of Calculus, Calculus I, Theory of Numbers, Fundamental Concepts of Modern Algebra, Graduate Algebra, Fundamental Concepts of Analysis, Graduate Topology

Sep 2017 - Aug 2019

- **Teaching Assistant**
Koc University
Courses: Intro to Symbolic Logic, Mathematics of Everyday Life, Finite Mathematics

Sep 2018 - Aug 2019

- **Teaching Assistant**
Istanbul Bilgi University
Courses: Intuitive Set Theory, Analytic Geometry and Linear Algebra I, Advanced Calculus I, Topology, Linear Algebra, Probability and Statistics for Engineers and Scientists

PARTICIPATIONS

- **Formalization of Mathematics (SLMATH)**
June 05 - June 16, 2023
- **HoTT '23 and MURI '23 (joint event)**
Carnegie Mellon University, 22-27 May, 2023
- **HoTTEST Summer School 2022**
July - August, 2022 (online participation)
- **MURI Meeting '22**
Carnegie Mellon University, June 2022
- **Logic and Higher Structures**
Centre International De Rencontres Mathematiques, Feb 2022 (online participation)

- **MURI Meeting**
Carnegie Mellon University, October 2021 (online participation)
- **Istanbul Design Theory Workshop**
Koc University, Sep 2018
- **Workshop on Graph Theory and its Applications**
Gebze Technical University, November 2017
- **Undergraduate and Graduate Summer School**
Nesin Mathematical Village, June 2017
- **TMD Analysis Summer School**
Feza Gursey Institute, July 2016
- **Logic Summer School**
Feza Gursey Institute, August 2015
- **Philosophy and Mathematics Symposium**
Yeditepe University, February 2014