Assoc. Prof. Emre KOLOTOĞLU

Personal Information

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International Researcher IDs
ScholarID: x1hXT1kAAAAJ
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Yoksis Researcher ID: 136941

Education Information

Doctorate, Florida Atlantic University, The Charles E. Schmidt College Of Science, Mathematical Sciences, United States Of America 2007 - 2013
Postgraduate, Koc University, Faculty Of Scıence, Matematik, Turkey 2005 - 2007
Undergraduate, Bilkent Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 1999 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Construction of Combinatorial Designs with Prescribed Automorphism Groups, Florida Atlantic University, The Charles E. Schmidt College Of Science, Mathematical Sciences, 2013
Postgraduate, A New Algorithm for Finding the Complete List of Minimal Defining Sets of t-Designs, Koç Üniversitesi, Graduate School Of Sciences & Engineering, Mathematics, 2007

Research Areas

Mathematics, Combinatorics, Natural Sciences

Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2017 - Continues
Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2014 - 2017
Lecturer, Florida Atlantic University, The Charles E. Schmidt College Of Science, Mathematical Sciences, 2008 - 2013
Research Assistant, Florida Atlantic University, The Charles E. Schmidt College Of Science, Mathematical Sciences, 2007 - 2013

Research Assistant, Koc University, Faculty Of Science, Matematik, 2005 - 2007

Academic and Administrative Experience

Courses

Advanced Algebra, Postgraduate, 2019 - 2020
Mathematics 2, Undergraduate, 2019 - 2020
Introduction to Coding Theory, Undergraduate, 2019 - 2020
Character Theory of Finite Groups, Doctorate, 2018 - 2019
Introduction to Computer Programming, Undergraduate, 2019 - 2020
Abstract Mathematics, Undergraduate, 2019 - 2020
Linear Algebra and Applications to Control Engineering, Undergraduate, 2018 - 2019
Linear Algebra, Undergraduate, 2018 - 2019

Advising Theses

Kolotoğlu E., Tasarım etiketlemeleri, Doctorate, D.ERDEMİR(Student), 2023
Kolotoğlu E., A survey on the existence of G-factorizations of λKN, Postgraduate, E.ÇELİK(Student), 2020
Kolotoğlu E., Sabit Devirli Kodlardan Maksimum Uzaklığa Ayrışabilen Kuantum Kodların İnşası, Doctorate, M.SARI(Student), 2019
Kolotoğlu E., Mac Williams identity of complete M-spotty Rosenbloom-Tsfasman weight enumerators, Postgraduate, T.ARABACI(Student), 2017
Kolotoğlu E., On t-Spontaneous Emission Error Designs and Related Quantum Jump Codes, Postgraduate, E.Ersoy(Student), 2017
Kolotoğlu E., İkili Dengeli Tasarımlar ve Uygulamaları, Postgraduate, Z.Tekin(Student), 2016

Jury Memberships

Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, June, 2020
Doctorate, Doctorate, Koç Üniversitesi, September, 2019
Post Graduate, Post Graduate, Koç Üniversitesi, August, 2019
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, July, 2019
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, September, 2018
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, June, 2018
Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, İstanbul Üniversitesi, February, 2018
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, November, 2017
Post Graduate, Post Graduate, İstanbul Üniversitesi, November, 2017
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, June, 2017
Post Graduate, Post Graduate, Yıldız Teknik Üniversitesi, May, 2017
Post Graduate, Post Graduate, Yıldız Teknik Üniversitesi, November, 2016
Doctoral Examination, Doctoral Examination, Koç Üniversitesi, November, 2016
Doctorate, Doctorate, Gebze Teknik Üniversitesi, February, 2016

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Block-Graceful Designs**
Erdemir D., Kolotoğlu E.
Journal of Mathematics, vol.2023, pp.1-8, 2023 (SCI-Expanded)

II. **A complete solution to the spectrum problem for graphs with six vertices and up to nine edges**
Kolotoğlu E.
Contributions to Discrete Mathematics, vol.15, no.3, pp.1-24, 2020 (SCI-Expanded)

III. **An application of constacyclic codes to entanglement-assisted quantum MDS codes**
Sarı M., Kolotoğlu E.
COMPUTATIONAL & APPLIED MATHEMATICS, vol.38, 2019 (SCI-Expanded)

IV. **QUANTUM CODES WITH IMPROVED MINIMUM DISTANCE**
Kolotoğlu E., Sarı M.
BULLETIN OF THE KOREAN MATHEMATICAL SOCIETY, vol.56, pp.609-619, 2019 (SCI-Expanded)

V. **Optimal Groomings with Grooming Ratios Six and Seven**
Ge G., Kolotoğlu E., Wei H.
JOURNAL OF COMBINATORIAL DESIGNS, vol.23, pp.400-415, 2015 (SCI-Expanded)

VI. **A Complete Solution to Spectrum Problem for Five-Vertex Graphs with Application to Traffic Grooming in Optical Networks**
Ge G., Hu S., Kolotoglu E., Wei H.
JOURNAL OF COMBINATORIAL DESIGNS, vol.23, pp.233-273, 2015 (SCI-Expanded)

VII. **On the Possible Automorphism Groups of a Steiner Quintuple System of Order 21**
Kolotoglu E., Magliveras S. S.
JOURNAL OF COMBINATORIAL DESIGNS, vol.22, pp.495-505, 2014 (SCI-Expanded)

VIII. **Decomposition of Complete Graphs into Isomorphic Complete Bipartite Graphs**
Kolotoglu E.
JOURNAL OF COMBINATORIAL DESIGNS, vol.21, pp.524-530, 2013 (SCI-Expanded)

IX. **On large sets of projective planes of orders 3 and 4**
Kolotoglu E., Magliveras S. S.
DISCRETE MATHEMATICS, vol.313, pp.2247-2252, 2013 (SCI-Expanded)

X. **The Existence and Construction of (K-5\e)-Designs of Orders 27, 135, 162, and 216**
Kolotoglu E.
JOURNAL OF COMBINATORIAL DESIGNS, vol.21, pp.280-302, 2013 (SCI-Expanded)

XI. **On Minimal Defining Sets of Full Designs and Self-Complementary Designs, and a New Algorithm for Finding Defining Sets of t-Designs**
Kolotoglu E., Yazici E. S.
GRAPHS AND COMBINATORICS, vol.26, pp.259-281, 2010 (SCI-Expanded)

Articles Published in Other Journals

I. **A Different Construction for Some Classes of Quantum MDS Codes**
Sari M., Kolotoğlu E.
MATHEMATICS IN COMPUTER SCIENCE, vol.14, pp.35-44, 2020 (ESCI)

II. **Related decompositions and new constructions of the Higman-Sims and Hall-Janko graphs**
Kolotoğlu E., Pace N., Magliveras S. S.
AUSTRALASIAN JOURNAL OF COMBİNATORICS, vol.54, pp.217-230, 2012 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. **A Survey on the Existence of G-factorizations of λKn**
Çelik E., Kolotoğlu E.

8th ISPEC International Conferences on Engineering and Natural Sciences, Ankara, Turkey, 12 - 14 June 2020, pp.155

II. **An application of constacyclic codes to entanglement-assisted quantum codes**
Sarı M., Kolotoğlu E.
International Conference on Mathematics and Mathematics Education, Ordu, Turkey, 27 - 29 June 2018, pp.29-30

III. **On large sets of projective planes of orders 3 and 4**
Kolotoğlu E., Magliveras S.
Antalya Algebra Days XVI, Antalya, Turkey, 9 - 13 May 2014, pp.20-21

IV. **On the possible automorphism groups of a Steiner quintuple system of order 21**
KOLOTOĞLU E., Magliveras S.
44th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Boca Raton / Florida, United States Of America, 04 March 2013, pp.1

V. **The existence and construction of K5\e-designs of orders 27, 135, 162 and 216**
KOLOTOĞLU E.
43rd Southeastern International Conference on Combinatorics, Graph Theory and Computing, Boca Raton / Florida, United States Of America, 05 March 2012, pp.1

VI. **Decomposing the Higman-Sims Graph into Double Petersen Graphs**
Pace N., KOLOTOĞLU E., Magliveras S.
2nd Istanbul Designs Theory, Graph Theory and Combinatorics Conference, İstanbul, Turkey, 27 June 2011, pp.52

VII. **On minimal defining sets of self-complementary designs**
Kolotoğlu E., Yazıcı E. Ş.
39th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida, United States Of America, 03 March 2008, pp.1

VIII. **A new Algorithm for Finding the Full Set of Minimal Defining Sets of Full Designs**
Yazıcı E. Ş., Kolotoğlu E.
21st British Combinatorial Conference, Reading, United Kingdom, 08 July 2007, pp.68

IX. **A new algorithm for finding the complete list of minimal defining sets of t-designs**
Kolotoğlu E., Yazıcı Yuret E. Ş.
Design Theory of Alex Rosa, Bratislava, Slovakia, 2 - 06 July 2007, pp.1

Supported Projects

Yazıcı Yuret E. Ş., TUBITAK Project, Tübitak Kariyer Desteği 106T574 Bir Şifre Paylaşımı Metodu Kombinatoriyel Tasarımlarda Belirleyici Kümeler, 2007 - 2009

Memberships / Tasks in Scientific Organizations

Kamu Kurumu, Consultant, 2016 - Continues
American Mathematical Society, Member, 2007 - 2013

Scientific Refereeing

Mathematical Advances in Pure and Applied Sciences, Other journals, June 2018
Sakarya Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, February 2017
Turkish Journal of Mathematics, SCI Journal, March 2016
Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, November 2015
Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, May 2015

Scientific Consultations

Kamu Kurumu, Scientific Consultancy, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, Turkey, 2015 - Continues

Metrics

Publication: 23
Citation (WoS): 33
Citation (Scopus): 36
H-Index (WoS): 4
H-Index (Scopus): 4

Congress and Symposium Activities

International Congress on Fundamental and Applied Sciences, Attendee, İstanbul, Turkey, 2016
3rd Istanbul Design Theory, Graph Theory and Combinatorics Workshop, Session Moderator, İstanbul, Turkey, 2016
3rd Istanbul Design Theory, Graph Theory and Combinatorics Workshop, Attendee, İstanbul, Turkey, 2016
Antalya Algebra Days XVI, Attendee, Antalya, Turkey, 2014
44th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2013
43rd Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2012
42nd Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2011
41st Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2010
40th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2009
1st İstanbul Design Theory and Combinatorics Conference, Attendee, İstanbul, Turkey, 2008
39th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Attendee, Florida, United States Of America, 2008
The Chat Yin Ho Memorial Conference on Combinatorics and Groups, Attendee, Florida, United States Of America, 2008
Design Theory of Alex Rosa, Attendee, Bratislava, Slovakia, 2007
Antalya Algebra Days VIII, Attendee, Antalya, Turkey, 2006

Scholarships

Arthur Cayley Graduate Scholarship, Official Institutions of Foreign Countries, 2012 - Continues
Isaac Shur Graduate Scholarship, Official Institutions of Foreign Countries, 2011 - Continues
Full Scholarship, University, 2007 - Continues
Tam burs, University, 2005 - Continues
Tam burs, University, 1999 - Continues