

## Res. Asst. PhD İsmail AYDOĞDU

### Personal Information

**Email:** iaydogdu@yildiz.edu.tr

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### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Turkey 2009 - 2014

Postgraduate, Balikesir University, Faculty Of Arts And Sciences, Department Of Mathematics, Turkey 2007 - 2009

Undergraduate, Balikesir University, Faculty Of Arts And Sciences, Department Of Mathematics, Turkey 2003 - 2007

### Foreign Languages

English, C1 Advanced

### Research Areas

Mathematics

### Academic and Administrative Experience

Bölüm Kalite Komisyonu Üyesi, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2014 - 2020

Ethics Committee Member, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2014 - 2016

### Courses

CALCULUS II, Undergraduate, 2020 - 2021

Lineer Cebir Gr.16, Undergraduate, 2020 - 2021

Lineer Cebir Gr.4, Undergraduate, 2020 - 2021

Lineer Cebir Gr.13, Undergraduate, 2020 - 2021

Linear Algebra Gr.31, Undergraduate, 2020 - 2021

Matematik 1 Gr:10, Undergraduate, 2019 - 2020

Linear Algebra Gr.30, Undergraduate, 2020 - 2021

Matematik 2 Gr:2, Undergraduate, 2019 - 2020

Lineer Cebir Gr:9, Undergraduate, 2019 - 2020

Matematik 2 Gr:6, Undergraduate, 2019 - 2020

Matematik 2 Gr:54, Undergraduate, 2019 - 2020

Calculus II, Undergraduate, 2018 - 2019

Matematiğin Temelleri-1 Gr:1, Undergraduate, 2019 - 2020

Linear Algebra Gr:30, Undergraduate, 2019 - 2020

Lineer Cebir Ve Kontrol Mühendisliği Uygulamaları Gr:2, Undergraduate, 2019 - 2020

Calculus 1 Gr:50, Undergraduate, 2019 - 2020

Calculus I, Undergraduate, 2018 - 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **On  $Z(2)Z(4)[xi]$ -skew cyclic codes**  
Gursoy F., Aydoğdu İ.  
JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, vol.68, no.3, pp.1613-1633, 2022 (SCI-Expanded)
- II. **Double skew cyclic codes over  $F-q$**   
AYDOĞDU İ., Hesari R. M., Samei K.  
COMPUTATIONAL & APPLIED MATHEMATICS, vol.41, no.3, 2022 (SCI-Expanded)
- III.  **$F-q^2$ -double cyclic codes with respect to the Hermitian inner product**  
AYDOĞDU İ., Abualrub T., Samei K.  
APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, 2022 (SCI-Expanded)
- IV. **On the number of  $Z(2)Z(4)$  and  $Z(p)Z(p^2)$ -additive cyclic codes**  
YILDIZ E., Abualrub T., AYDOĞDU İ.  
APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, 2021 (SCI-Expanded)
- V. **Optimal binary codes derived from  $F_2F_4$ -additive cyclic codes**  
Abualrub T., Aydin N., Aydoğdu İ.  
JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, vol.64, pp.71-87, 2020 (SCI-Expanded)
- VI.  **$Z_2 Z_4 Z_8$  -Cyclic codes**  
Aydoğdu İ., Gürsoy F.  
Journal of Applied Mathematics and Computing, vol.60, pp.327-341, 2019 (SCI-Expanded)
- VII. **On the structure of  $Z(2)Z(2)[u(3)]$ -linear and cyclic codes**  
Aydoğdu İ., Siap I., Ten-Valls R.  
FINITE FIELDS AND THEIR APPLICATIONS, vol.48, pp.241-260, 2017 (SCI-Expanded)
- VIII.  **$Z(2)Z(2)[u]$ -Cyclic and Constacyclic Codes**  
Aydoğdu İ., Abualrub T., Siap I.  
IEEE TRANSACTIONS ON INFORMATION THEORY, vol.63, pp.4883-4893, 2017 (SCI-Expanded)
- IX. **On  $Z(p)(r) Z(p)(s)$ -additive codes**  
Aydoğdu İ., Siap I.  
LINEAR & MULTILINEAR ALGEBRA, vol.63, pp.2089-2102, 2015 (SCI-Expanded)
- X. **On DOUBLE-STRUCK CAPITAL  $Z(2)$ DOUBLE-STRUCK CAPITAL  $Z(2)[u]$ -additive codes**  
Aydoğdu İ., Abualrub T., Siap I.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.92, pp.1806-1814, 2015 (SCI-Expanded)
- XI. **The Structure of  $Z(2)Z(2)s$ -Additive Codes: Bounds on the Minimum Distance**  
Aydoğdu İ., Siap I.  
APPLIED MATHEMATICS & INFORMATION SCIENCES, vol.7, pp.2271-2278, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Self-dual cyclic and quantum codes over  $Z(2) \times Z(2)$**   
Aydoğdu İ., Abualrub T.  
DISCRETE MATHEMATICS ALGORITHMS AND APPLICATIONS, vol.11, 2019 (ESCI)
- II. **Codes over  $Z_p[u]/u^r \times Z_p[u]/u^s$**   
Aydoğdu İ.  
Journal of Algebra Combinatorics Discrete Structures and Applications, vol.6, pp.39-51, 2019 (Scopus)
- III. **The structure of  $Z_2 Z_2 s$  -additive cyclic codes**

Aydoğdu İ., Abualrub T.

Discrete Mathematics, Algorithms and Applications, vol.10, 2018 (ESCI)

IV. **The structure of one weight linear and cyclic codes over  $Z_2^r \times (Z_2^s uZ_2^s)$**

AYDOĞDU İ.

An International Journal of Optimization and Control: Theories Applications (IJOCTA), vol.8, pp.92, 2018 (Peer-Reviewed Journal)

V. **On Self-Dual  $Z_2^2[u]$ -linear Codes**

Aydoğdu İ., Kaya A.

MATHEMATICAL SCIENCES AND APPLICATIONS E-NOTES, vol.5, pp.69-75, 2017 (Peer-Reviewed Journal)

VI. **Counting the Generator Matrices of  $Z_2^8$  Codes**

ŞİAP İ., AYDOĞDU İ.

Mathematical Sciences And Applications E-Notes, vol.1, pp.143-149, 2013 (Peer-Reviewed Journal)

## Books & Book Chapters

I.  **$Z_2^2[u]$ -Linear and  $Z_2^2[u]$ -Cyclic Codes**

Aydoğdu İ.

in: Coding Theory, Dr. Sudhakar Radhakrishnan, Prof. Muhammad Sarfraz, Editor, IntechOpen Limited, London, pp.1-12, 2020

## Refereed Congress / Symposium Publications in Proceedings

I. **Generator and parity-check matrices of  $Z_p[u^r, u^s]$ -linear codes**

AYDOĞDU İ.

New Trends in Rings and Modules I, NTRM 2018, Kocaeli, Turkey, 20 June 2018, pp.3

II. **Binary Codes Derived from Additive Cyclic Codes over Mixed Alphabets**

Abualrub T., AYDOĞDU İ., Aydın N.

The VI Congress of the Turkic World Mathematical Society, Astana, Kazakhstan, 02 October 2017, pp.347

III. **The structure of  $Z_2^4 Z_8$ -codes**

AYDOĞDU İ., GÜRSOY F.

International Conference on Mathematics and Engineering, 10 - 12 May 2017, pp.1

IV. **Notes on  $Z_2^2[u]$ -Cyclic Self-Dual and Quantum Codes**

AYDOĞDU İ., Abualrub T., ŞİAP İ.

7th International Conference on Modeling, Simulation and Applied Optimization, 4 - 06 April 2017, pp.1

V. **The structure of one weight linear and cyclic codes over  $Z_2 \times Z_2 uZ_2$**

AYDOĞDU İ.

International Congress on Fundamental and Applied Sciences, 22 - 26 August 2016

VI. **On  $Z_2^4$  xi Skew Cyclic Codes**

AYDOĞDU İ., GÜRSOY F., ŞİAP İ.

ANALYSIS, TOPOLOGY, ALGEBRA: THEORY AND APPLICATIONS (ATA 2016), 06 July 2016 - 09 July 2016

VII. **On  $Z_2^2$ s-additive Cyclic Codes**

AYDOĞDU İ., Abualrub T., ŞİAP İ.

International Conference on Coding and Cryptography (ICCC 2015), Cezayir, 2 - 05 November 2015

VIII. **Self dual  $Z_2^2[u]$ -linear Codes**

AYDOĞDU İ., Kaya A.

Noncommutative Rings and Their Applications, IV, Lens, Fransa, 8 - 11 June 2015

IX.  **$Z_2^2[u]$ -constacyclic codes**

AYDOĞDU İ., Abualrub T., ŞİAP İ.

The Second International Conference on Mathematics and Statistics, Sharjah, Birleşik Arap Emirlikleri, 2 - 05 April

2015

- X. **Bounds on the minimum distance of  $Z_{pr}Z_{ps}$  additive codes**  
AYDOĞDU İ., ŞİAP İ.  
Karatekin Mathematics Days 2014, Çankırı, Türkiye, 11 - 13 June 2014
- XI.  **$Z_2(Z_2 uZ_2)$  Linear Cyclic Codes**  
ABUALRUB T., ŞİAP İ., AYDOĞDU İ.  
International MultiConference of Engineers and Computer Scientists 2014, Hong Kong, 12 - 14 March 2014
- XII. **On  $Z_{pr}Z_{ps}$  additive Codes**  
AYDOĞDU İ., ŞİAP İ.  
International Workshop on Discrete Structures (IWODS), Islamabad, Pakistan., 5 - 07 March 2014
- XIII.  **$Z_2(Z_2 + Z_2 [u])$ -Linear Cyclic Codes**  
ŞİAP İ., AYDOĞDU İ.  
International MultiConference of Engineers and Computer Scientists 2014 (IMECS 2014), Hong Kong, 01 March 2014
- XIV. **On  $Z_pZ_{p^2}$  additive Codes**  
AYDOĞDU İ., ŞİAP İ.  
The Algerian-Turkish International days on Mathematics, 12 - 14 September 2013
- XV. **The Number of  $Z_2Z_2$ s Additive Codes and Some Combinatorial Relations**  
ŞİAP İ., AYDOĞDU İ., ÖZTAŞ E. S.  
2nd International Eurasian Conference on Mathematical Sciences and Applications, 26 - 29 August 2013
- XVI. **Counting the Generator Matrices of  $Z_2Z_8$  Codes**  
ŞİAP İ., AYDOĞDU İ.  
4th International Conference on Matrix Analysis and Applications, ICMAA, (2013), 2 - 05 July 2013
- XVII. **Generator and Parity check Matrices of  $Z_2rZ_2$ s additive Codes**  
AYDOĞDU İ., ŞİAP İ.  
4th International Conference on Matrix Analysis and Applications, ICMAA, (2013), 2 - 05 July 2013
- XVIII. **On  $Z_2Z_2 u$  Additive Codes**  
AYDOĞDU İ., ABUALRUB T., ŞİAP İ.  
International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2013, 24 - 27 June 2013
- XIX. **On  $Z_2Z_2(u)$ -additive Codes**  
AYDOĞDU İ.  
International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2013, 01 June 2013
- XX. **The Structure of  $Z_2Z_8$  additive cyclic codes**  
ABUALRUB T., AYDOĞDU İ., ŞİAP İ.  
International Congress in Honour of Professor Hari M. Srivastava, (2012), 23 - 26 August 2012
- XXI.  **$Z_2 Z_8$  Additive Cyclic Codes and their Algebraic Structures**  
AYDOĞDU İ., ŞİAP İ.  
International Congress in Honour of Professor Hari M. Srivastava, Bursa, Turkey, 01 August 2012, pp.132
- XXII. **Some Bounds on  $Z_2Z_2$ s additive Codes**  
AYDOĞDU İ., ŞİAP İ.  
10th Math Day, AUS, 14 April 2012
- XXIII. **The Structure of  $Z_2rZ_2$ s additive Codes**  
AYDOĞDU İ., ŞİAP İ.  
International Conference On Applied Analysis and Algebra, ICAAA, 29 June - 03 July 2011
- XXIV. **On Chaki Pseudo Symmetric Manifolds**  
AYDOĞDU İ.  
X. Geometri Sempozyumu, Balıkesir, Gonen., Turkey, 13 - 16 June 2011

## Memberships / Tasks in Scientific Organizations

American Mathematical Society, Member, 2017 - Continues, United States Of America

## Scientific Refereeing

Discrete Mathematics, Algorithms and Applications, Journal Indexed in ESCI, June 2022

DISCRETE MATHEMATICS, National Scientific Refreed Journal, April 2022

FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, April 2022

CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, SCI Journal, March 2022

Journal of Algebra Combinatorics Discrete Structures and Applications , Other Indexed Journal, March 2022

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, SCI Journal, January 2022

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, SCI Journal, January 2022

CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, SCI Journal, November 2021

ADVANCES IN MATHEMATICS OF COMMUNICATIONS, SCI Journal, November 2021

DISCRETE MATHEMATICS, SCI Journal, November 2021

JOURNAL OF MATHEMATICS, SCI Journal, November 2021

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, Journal Indexed in SCI-E, October 2021

Discrete Mathematics, Algorithms and Applications, Journal Indexed in ESCI, October 2021

TWMS J. App. Eng. Math., Journal Indexed in ESCI, September 2021

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, SCI Journal, September 2021

IEEE Transactions On Information Theory, SCI Journal, July 2021

Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, June 2021

DISCRETE MATHEMATICS, SCI Journal, May 2021

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, Journal Indexed in SCI-E, March 2021

Beiträge zur Algebra und Geometrie, Journal Indexed in ESCI, March 2021

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, Journal Indexed in SCI-E, March 2021

JOURNAL OF ALGEBRAIC COMBINATORICS, SCI Journal, January 2021

DISCRETE MATHEMATICS, SCI Journal, December 2020

CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, SCI Journal, December 2020

JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, SCI Journal, October 2020

ADVANCES IN MATHEMATICS OF COMMUNICATIONS, SCI Journal, August 2020

IEEE COMMUNICATIONS LETTERS, SCI Journal, July 2020

AFYON KOCATEPE ÜNİVERSİTESİ FEN VE MÜHENDİSLİK BİLİMLERİ DERGİSİ, National Scientific Refreed Journal, June 2020

FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, May 2020

IEEE COMMUNICATIONS LETTERS, SCI Journal, May 2020

ADVANCES IN MATHEMATICS OF COMMUNICATIONS, SCI Journal, March 2020

Advances In Mathematics Of Communications, SCI Journal, February 2020

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, Journal Indexed in SCI-E, January 2020

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, SCI Journal, November 2019

Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, October 2019

IEEE TRANSACTIONS ON INFORMATION THEORY, SCI Journal, September 2019

An International Journal of Optimization and Control: Theories & Applications, Other Indexed Journal, September 2019

Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, September 2019

Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, August 2019

IEEE Transactions On Information Theory, SCI Journal, June 2019

IEEE Transactions On Information Theory, SCI Journal, May 2019  
FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, May 2019  
CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, SCI Journal, March 2019  
Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, December 2018  
FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, September 2018  
COMPUTATIONAL & APPLIED MATHEMATICS, SCI Journal, June 2018  
FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, June 2018  
Journal of Algebra Combinatorics Discrete Structures and Applications, Other Indexed Journal, June 2018  
Journal of Applied Mathematics and Informatics, Other Indexed Journal, February 2018  
IEEE TRANSACTIONS ON INFORMATION THEORY, SCI Journal, January 2018  
DESIGNS CODES AND CRYPTOGRAPHY, SCI Journal, January 2017  
7th International conference on Modeling, Simulation, and applied Optimization, Conference Paper (Full Text), January 2017  
FINITE FIELDS AND THEIR APPLICATIONS, SCI Journal, September 2016  
JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, Journal Indexed in ESCI, May 2016

### **Tasks In Event Organizations**

Karaaslan M. F., Aydoğdu İ., International Congress on Fundamental and Applied Sciences, Scientific Congress, İstanbul, Turkey, Ağustos 2016  
Koroğlu M. E., Aydoğdu İ., Kriptoloji ve Cebirsel Kodlama Çalıştayı, Scientific Congress, İstanbul, Turkey, Eylül 2015  
Yüce S., Gürses N., Aydoğdu İ., Köklü K., 13. Geometri Sempozyumu-YTÜ, Scientific Congress, İstanbul, Turkey, Temmuz 2015  
Aydın Akgün F., Aydoğdu İ., International Conference on Applied Analysis and Algebra, Scientific Congress, İstanbul, Turkey, Temmuz 2012  
Aydın Akgün F., Koroğlu M. E., AYDOĞDU İ., International Conference on Applied Analysis and Algebra, Scientific Congress, İstanbul, Turkey, Temmuz 2011

### **Mobility Activity**

Research Scholarship Program, Research During Graduate Education, American University of Sharjah, United Arab Emirates, 2013 - 2013

### **Metrics**

Publication: 42  
Citation (WoS): 180  
Citation (Scopus): 193  
H-Index (WoS): 6  
H-Index (Scopus): 6

### **Congress and Symposium Activities**

IMBM Discrete Mathematics Days, Audience, İstanbul, Turkey, 2018  
Workshop on Finite Fields, Function Fields and Their Applications, Audience, İstanbul, Turkey, 2018  
6th International Conference on Modelling, Simulation and Applied Optimization, Audience, İstanbul, Turkey, 2015  
NATO ASI, Arithmetic of Hyper elliptic Curves, Audience, Ohrid, Macedonia, 2014

Open Problems in Mathematical and Computational Sciences Conference, Audience, İstanbul, Turkey, 2013

VI. Ulusal Geometri Sempozyumu, Attendee, Bursa, Turkey, 2008