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Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Mathematics, Turkey 1995 - 1997 Postgraduate, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Mathematics, Turkey 1993 - 1995 Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1988 - 1993

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Character sums, algebraic function fields, curves with many rational points and geometric Goppa codes, Bilkent Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1997

Postgraduate, On lower brounds of character sums, Bilkent Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1995

Research Areas

Mathematics, Algebraic Geometry, Field Theory and Polynomials, General Algebraic Systems, Combinatorics, Number Theory, Natural Sciences

Academic and Administrative Experience

Middle East Technical University, Institute of Applied Mathematics, Cryptography, 2007 - Continues

Advising Theses

ÖZBUDAK F., Studies on almost perfect nonlinear functions, Postgraduate, G.BATMAZ(Student), 2022 ÖZBUDAK F., Some studies on CCZ-equivalence of the inverse function, Postgraduate, M.FİDAN(Student), 2021 ÖZBUDAK F., Studies on implementation of some mrd codes, Postgraduate, R.ÖZKERİM(Student), 2021

ÖZBUDAK F., Some studies on c-differential uniformity of the swappedinverse function, Postgraduate,

B.ÜNVER(Student), 2021

ÖZBUDAK F., Correlation of sequences and quadratic forms, Postgraduate, C.Genişel(Student), 2017

ÖZBUDAK F., On obtaining regular, weakly regular and non-weakly regular bent functions over finite fields and ring of integers modulo Pm, Doctorate, D.Çelik(Student), 2014

ÖZBUDAK F., Generalized bent functions with perfect nonlinear functions on arbitrary groups, Postgraduate,

E.Sercan(Student), 2012

ÖZBUDAK F., Drinfeld modular curves with many rational points over finite fields, Doctorate, V.Cam(Student), 2011

ÖZBUDAK F., On the expected value of the linear complexity of periodic sequences, Postgraduate, Ç.Özakın(Student), 2004

Published journal articles indexed by SCI, SSCI, and AHCI

I. On subfield subcodes obtained from restricted evaluation codes

Güneri C., ÖZBUDAK F., Sayıcı S.

Designs, Codes, and Cryptography, vol.92, no.3, pp.667-680, 2024 (SCI-Expanded)

II. Further constructions and characterizations of generalized almost perfect nonlinear functions Sălăgean A., ÖZBUDAK F.

Cryptography and Communications, vol.15, no.6, pp.1117-1127, 2023 (SCI-Expanded)

III. Quasi-Cyclic Perfect Codes in Doob Graphs and Special Partitions of Galois Rings

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V. Optimal Binary Linear Complementary Pairs of Codes

Choi W., GÜNERİ C., Kim J., ÖZBUDAK F.

CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, vol.15, no.2, pp.469-486, 2023 (SCI-Expanded)

VI. Classification of some quadrinomials over finite fields of odd characteristic

Özbudak F., Gulmez Temur B. o. T.

FINITE FIELDS AND THEIR APPLICATIONS, vol.87, pp.102158, 2023 (SCI-Expanded)

VII. On diamond products ensuring irreducibility of the associated composed product

İrimağzi C., ÖZBUDAK F.

Communications in Algebra, vol.51, no.7, pp.3134-3142, 2023 (SCI-Expanded)

VIII. EUCLIDEAN POLYNOMIALS FOR CERTAIN ARITHMETIC PROGRESSIONS AND THE MULTIPLICATIVE GROUP OF F-p2

Berktav K. I., ÖZBUDAK F.

QUAESTIONES MATHEMATICAE, vol.46, no.7, pp.1283-1292, 2023 (SCI-Expanded)

IX. Boomerang uniformity of power permutations and algebraic curves over F2n

Mesnager S., ÖZBUDAK F.

Advances in Geometry, vol.23, no.1, pp.107-134, 2023 (SCI-Expanded)

X. The c-differential uniformity of the perturbed inverse function via a trace function Tr(x2x+1) KAYTANCI K., ÖZBUDAK F.

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XI. Imprimitive symmetric association schemes of classes 5 and 6 arising from ternary non-weakly regular bent functions

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XII. Additive cyclic complementary dual codes over F4

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XIII. Classification of permutation polynomials of the form x3g(xq-1) of Fq2 where g(x) = x3 + bx + c and $b,c \in Fq*$

ÖZBUDAK F., Gülmez Temür B.

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XIV. Construction of self dual codes from graphs

Fellah N., Guenda K., ÖZBUDAK F., Seneviratne P.

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XV. Factorization of some polynomials over finite local commutative rings and applications to certain self-dual and LCD codes

Koese S., ÖZBUDAK F.

CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, vol.14, no.4, pp.933-948, 2022 (SCI-Expanded)

XVI. Covering Radius of Melas Codes

Shi M., Helleseth T., Özbudak F., Sole P.

IEEE Transactions on Information Theory, vol.68, no.7, pp.4354-4364, 2022 (SCI-Expanded)

XVII. Two or Three Weight Linear Codes from Non-Weakly Regular Bent Functions

Özbudak F., Pelen R. M.

IEEE Transactions on Information Theory, vol.68, no.5, pp.3014-3027, 2022 (SCI-Expanded)

XVIII. Complete b-symbol weight distribution of some irreducible cyclic codes

Zhu H., Shi M., ÖZBUDAK F.

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XIX. New constructions of entanglement-assisted quantum codes

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XX. LCD codes from tridiagonal Toeplitz matrices

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XXI. CORRELATION DISTRIBUTION OF A SEQUENCE FAMILY GENERALIZING SOME SEQUENCES OF TRACHTENBERG

ÖZBUDAK F., Tekin E.

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XXII. Geometric Approach to b-Symbol Hamming Weights of Cyclic Codes

Shi M., Özbudak F., Sole P.

IEEE Transactions on Information Theory, vol.67, no.6, pp.3735-3751, 2021 (SCI-Expanded)

XXIII. New generalized almost perfect nonlinear functions

ÖZBUDAK F., Salagean A.

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XXIV. On the Parity of Power Permutations

Comak P., ÖZBUDAK F.

IEEE Access, vol.9, pp.106806-106812, 2021 (SCI-Expanded)

XXV. Hermitian Rank Metric Codes and Duality

La Cruz J. D., Evilla J. R., ÖZBUDAK F.

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XXVI. Secondary constructions of (non)weakly regular plateaued functions over finite fields

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XXVIII. Subspace packings: constructions and bounds

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XXX. Strongly regular graphs arising from non-weakly regular bent functions

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EUROPEAN JOURNAL OF COMBINATORICS, vol.80, pp.71-81, 2019 (SCI-Expanded)

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JOURNAL OF THE KOREAN MATHEMATICAL SOCIETY, vol.56, no.2, pp.559-578, 2019 (SCI-Expanded)

XXXVII. SELF-DUALITY OF GENERALIZED TWISTED GABIDULIN CODES

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ADVANCES IN MATHEMATICS OF COMMUNICATIONS, vol.12, no.4, pp.707-721, 2018 (SCI-Expanded)

XXXVIII. On Linear Complementary Pairs of Codes

CARLET C., Guneri C., ÖZBUDAK F., Ozkaya B., SOLE P.

IEEE TRANSACTIONS ON INFORMATION THEORY, vol.64, no.10, pp.6583-6589, 2018 (SCI-Expanded)

XXXIX. New cubic self-dual codes of length 54, 60 and 66

Comak P., Kim J. L., Ozbudak F.

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XL. On the p-ary (cubic) bent and plateaued (vectorial) functions

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XLI. Additive cyclic codes over finite commutative chain rings

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XLII. Generalized nonbinary sequences with perfect autocorrelation, flexible alphabets and new periods

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XLIII. Explicit Full Correlation Distribution of Sequence Families Using Plateaued Functions

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XLIV. Some new non-additive maximum rank distance codes

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XLV. A new concatenated type construction for LCD codes and isometry codes

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XLVI. A SUPER-SET OF PATTERSON-WIEDEMANN FUNCTIONS: UPPER BOUNDS AND POSSIBLE NONLINEARITIES

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XLVII. Cyclic subspace codes via subspace polynomials

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LI. Additive Rank Metric Codes

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LII. Explicit maximal and minimal curves over finite fields of odd characteristics

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LIII. A minimum distance bound for quasi-nD-cyclic codes

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LIV. Switchings of semifield multiplications

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LV. EXPLICIT CONSTRUCTIONS OF SOME NON-GABIDULIN LINEAR MAXIMUM RANK DISTANCE CODES Otal K., Ozbudak F.

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LVI. Further results on rational points of the curve y(qn) - y = gamma xqh+1 - alpha over F-qm Cosgun A., ÖZBUDAK F., SAYGI Z.

DESIGNS CODES AND CRYPTOGRAPHY, vol.79, no.3, pp.423-441, 2016 (SCI-Expanded)

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LVIII. Classification of function fields with class number three

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JOURNAL OF PURE AND APPLIED ALGEBRA, vol.219, no.11, pp.5097-5116, 2015 (SCI-Expanded)

LIX. A construction of weakly and non-weakly regular bent functions over the ring of integers modulo CELİK D., ÖZBUDAK F.

APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, vol.26, no.6, pp.543-554, 2015 (SCI-Expanded)

LX. On some bounds on the minimum distance of cyclic codes over finite fields

ÖZBUDAK F., TUTDERE S., YAYLA O.

Designs, Codes, and Cryptography, vol.76, no.2, pp.173-178, 2015 (SCI-Expanded)

LXI. On the exact number of solutions of certain linearized equations

ÖZBUDAK F., SAYGI Z.

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COMMUNICATIONS IN ALGEBRA, vol.42, no.9, pp.3795-3810, 2014 (SCI-Expanded)

LXIII. Uniqueness of F-q-quadratic perfect nonlinear maps from F-q3 to F-q(2)

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LXIV. Hybrid classes of balanced Boolean functions with good cryptographic properties Khan M. A., ÖZBUDAK F.

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LXV. On the arithmetic operations over finite fields of characteristic three with low complexity AKLEYLEK S., ÖZBUDAK F., ÖZEL C. S.

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Metrics

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Non Academic Experience

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