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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. Construction of self dual codes from graphs
 Fellah N., Guenda K., ÖZBUDAK F., Seneviratne P.
 APPLICABLE ALGEBRA IN ENGINEERING COMMUNICATION AND COMPUTING, vol.35, no.4, pp.545-556, 2024 (SCI-Expanded)

 II. The a differential uniformity of the perturbed inverse function via a trace function Tr(v2v + 1)
- II. The c-differential uniformity of the perturbed inverse function via a trace function Tr(x2x+1) KAYTANCI K., ÖZBUDAK F.

Periodica Mathematica Hungarica, vol.88, no.2, pp.384-395, 2024 (SCI-Expanded)

- III. 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)
- IV. 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)

V. Quasi-Cyclic Perfect Codes in Doob Graphs and Special Partitions of Galois Rings Shi M., Li X., Krotov D. S., ÖZBUDAK F.

IEEE Transactions on Information Theory, vol.69, no.9, pp.5597-5603, 2023 (SCI-Expanded)

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- VII. 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)
- VIII. 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)

IX. EUCLIDEAN POLYNOMIALS FOR CERTAIN ARITHMETIC PROGRESSIONS AND THE MULTIPLICATIVE GROUP OF F-p2 Berktav K. I., ÖZBUDAK F.

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X. 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)

XI. 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)

XII.	Imprimitive symmetric association schemes of classes 5 and 6 arising from ternary non-weakly
	regular bent functions
	ÖZBUDAK F., Pelen R. M.
	JOURNAL OF ALGEBRAIC COMBINATORICS, vol.56, no.3, pp.635-658, 2022 (SCI-Expanded)
XIII.	Additive cyclic complementary dual codes over F4
	Shi M., Liu N., OZBUDAK F., Solé P.
	Finite Fields and their Applications, vol.83, 2022 (SCI-Expanded)
XIV.	Classification of permutation polynomials of the form $x3g(xq-1)$ of Fq2 where $g(x) = x3 + bx + c$ and
	b,c∈Fq*
	OZBUDAK F., Gülmez Temür B.
	Designs, Codes, and Cryptography, vol.90, no.7, pp.1537-1556, 2022 (SCI-Expanded)
XV.	Factorization of some polynomials over finite local commutative rings and applications to certain
	Self-dual and LCD codes
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XVII.	Two or Three Weight Linear Codes from Non-Weakly Regular Bent Functions
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	IEEE Transactions on Information Theory, vol.68, no.5, pp.3014-3027, 2022 (SCI-Expanded)
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XXI.	CORRELATION DISTRIBUTION OF A SEQUENCE FAMILY GENERALIZING SOME SEQUENCES OF
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AAII .	Shi M. Özbudak F. Sala P.
	IEEE Transactions on Information Theory, vol.67, no.6, np.3735-3751, 2021 (SCI-Expanded)
XXIII.	New generalized almost perfect nonlinear functions
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XXIV.	On the Parity of Power Permutations
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	IEEE Access, vol.9, pp.106806-106812, 2021 (SCI-Expanded)
XXV.	Hermitian Rank Metric Codes and Duality
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XXVI.	Secondary constructions of (non)weakly regular plateaued functions over finite fields
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XXVII.	Counting Boolean functions with faster points
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	Etzion T., Kurz S., Otal K., ÖZBUDAK F.
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XXXVIII.	On Linear Complementary Pairs of Codes
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XL.	On the p-ary (cubic) bent and plateaued (vectorial) functions
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XLV.	A new concatenated type construction for LCD codes and isometry codes
	CARLET C., Guneri C., ÖZBUDAK F., SOLÉ P.
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	IEEE TRANSACTIONS ON INFORMATION THEORY, vol.63, no.1, pp.164-168, 2017 (SCI-Expanded)
LII.	Explicit maximal and minimal curves over finite fields of odd characteristics
	OZBUDAK F., Saygi Z.
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LIII.	A minimum distance bound for quasi-nD-cyclic codes
	ÖZBUDAK F., Ozkaya B.
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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.
	ADVANCES IN MATHEMATICS OF COMMUNICATIONS, vol.10, no.3, pp.589-600, 2016 (SCI-Expanded)
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.
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LVII.	FURTHER RESULTS ON FIBRE PRODUCTS OF KUMMER COVERS AND CURVES WITH MANY POINTS
	OVER FINITE FIELDS
	ÖZBUDAK F., Temur B. G., YAYLA O.
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LVIII.	Classification of function fields with class number three BİLHAN M., Buyruk D., ÖZBUDAK F.
	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
	ÇELİK D., ÖZBUDAK F.
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LXI.	On the exact number of solutions of certain linearized equations
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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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LXXIV. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics): Preface ÖZBUDAK F., Rodríguez-Henríquez F. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2012 (SCI-Expanded) LXXV. On the Polynomial Multiplication in Chebyshev Form Akleylek S., Cenk M., ÖZBUDAK F. IEEE TRANSACTIONS ON COMPUTERS, vol.61, no.4, pp.584-587, 2012 (SCI-Expanded) LXXVI. Quadratic forms of codimension 2 over finite fields containing F-4 and Artin-Schreier type curves ÖZBUDAK F., SAYGI E., Savgi Z. FINITE FIELDS AND THEIR APPLICATIONS, vol.18, no.2, pp.396-433, 2012 (SCI-Expanded) LXXVII. Modified Redundant Representation for Designing Arithmetic Circuits with Small Complexity AKLEYLEK S., ÖZBUDAK F. IEEE TRANSACTIONS ON COMPUTERS, vol.61, no.3, pp.427-432, 2012 (SCI-Expanded) LXXVIII. A new class of quaternary LCZ sequence sets ÖZBUDAK F., SAYGI E., SAYGI Z. DESIGNS CODES AND CRYPTOGRAPHY, vol.62, no.2, pp.189-198, 2012 (SCI-Expanded) LXXIX. A BOUND ON THE MINIMUM DISTANCE OF QUASI-CYCLIC CODES Gueneri C., Oezbudak F. SIAM JOURNAL ON DISCRETE MATHEMATICS, vol.26, no.4, pp.1781-1796, 2012 (SCI-Expanded) LXXX. A relation between quasi-cyclic codes and 2-D cyclic codes Guneri C., ÖZBUDAK F. FINITE FIELDS AND THEIR APPLICATIONS, vol.18, no.1, pp.123-132, 2012 (SCI-Expanded) LXXXI. Quadratic forms of codimension 2 over certain finite fields of even characteristic ÖZBUDAK F., SAYGI E., Savgi Z. CRYPTOGRAPHY AND COMMUNICATIONS-DISCRETE-STRUCTURES BOOLEAN FUNCTIONS AND SEQUENCES, vol.3, no.4, pp.241-257, 2011 (SCI-Expanded) LXXXII. Efficient multiplications in F(5)5n and F(7)7n CENK M., ÖZBUDAK F. JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.236, no.2, pp.177-183, 2011 (SCI-Expanded) LXXXIII. Multiplication of polynomials modulo x(n) CENK M., ÖZBUDAK F. THEORETICAL COMPUTER SCIENCE, vol.412, no.29, pp.3451-3462, 2011 (SCI-Expanded) LXXXIV. APPROXIMATION OF BOUNDS ON MIXED-LEVEL ORTHOGONAL ARRAYS SEZER A. D., ÖZBUDAK F. ADVANCES IN APPLIED PROBABILITY, vol.43, no.2, pp.399-421, 2011 (SCI-Expanded) LXXXV. A class of authentication codes with secrecy OZBUDAK E. K., ÖZBUDAK F., SAYGI Z. DESIGNS CODES AND CRYPTOGRAPHY, vol.59, pp.287-318, 2011 (SCI-Expanded) LXXXVI. Probabilities for absolute irreducibility of multivariate polynomials by the polytope method Koyuncu F., ÖZBUDAK F. TURKISH JOURNAL OF MATHEMATICS, vol.35, no.3, pp.367-373, 2011 (SCI-Expanded) LXXXVII. On Feedback Functions of Maximum Length Nonlinear Feedback Shift Registers ÇALIK C., Turan M. S., ÖZBUDAK F. IEICE TRANSACTIONS ON FUNDAMENTALS OF ELECTRONICS COMMUNICATIONS AND COMPUTER SCIENCES, no.6, pp.1226-1231, 2010 (SCI-Expanded) LXXXVIII. On multiplication in finite fields Cenk M., ÖZBUDAK F. JOURNAL OF COMPLEXITY, vol.26, no.2, pp.172-186, 2010 (SCI-Expanded)

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Non Academic Experience

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