Assoc. Prof. SELDA ÇALKAVUR

Personal Information

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International Researcher IDs
ORCID: 0000-0002-1502-123X
Publons / Web Of Science ResearcherID: F-4854-2018
Yoksis Researcher ID: 31414

Education Information

Doctorate, Istanbul Kultur University, Instıtute Of Scıence, Matematik (Dr), Turkey 2006 - 2010
Postgraduate, Istanbul Kultur University, Instıtute Of Scıence, Matematik-Bilgisayar (Yl) (Tezli), Turkey 2004 - 2006
Undergraduate, Dumlupınar Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1996 - 2000

Dissertations

Doctorate, Simetrik dizaynlar, kodlar ve sır paylaşım şemaları üzerine bir çalışma, İstanbul Kültür Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (Dr), 2010
Postgraduate, BCH kodları, İstanbul Kültür Üniversitesi, Fen Bilimleri Enstitüsü, Matematik-Bilgisayar (Yl) (Tezli), 2006

Research Areas

Computer Sciences, Mathematics, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2018 - Continues
Assistant Professor, Kocaeli University, Köseköy Meslek Yüksekokulu, Bilgisayar Teknolojileri, 2011 - 2018

Academic and Administrative Experience

Director of Vocational School, Kocaeli University, Köseköy Meslek Yüksekokulu, 2019 - 2022
Head of Department, Kocaeli University, Köseköy Meslek Yüksekokulu, Bilgisayar Teknolojileri, 2012 - 2020
Kocaeli Üniversitesi, Köseköy Meslek Yüksekokulu, 2013 - 2019

Courses

Matematik II, Undergraduate, 2020 - 2021

Kriptolojiye Giriş, Undergraduate, 2020 - 2021

Matematik I, Undergraduate, 2020 - 2021

Diferansiyel Denklemler, Undergraduate, 2020 - 2021

Kodlama Teorisi, Postgraduate, 2019 - 2020

Yüksek Lisans Seminer, Postgraduate, 2019 - 2020

Matematik I, Undergraduate, 2020 - 2021

Diferansiyel Denklemler, Undergraduate, 2020 - 2021

Kodlama Teorisine Giriş, Undergraduate, 2020 - 2021

Uzmanlık Alan Dersi, Postgraduate, 2019 - 2020

Lineer Cebir, Undergraduate, 2019 - 2020

Matematik II, Undergraduate, 2019 - 2020

Lineer Cebir, Undergraduate, 2019 - 2020

Matematik I, Undergraduate, 2018 - 2019

Lineer Cebir, Undergraduate, 2018 - 2019, 2017 - 2018

Diferensiyel Denklemler, Undergraduate, 2016 - 2017

Diferensiyel Denklemler, Undergraduate, 2016 - 2017

Diferensiyel Denklemler, Undergraduate, 2016 - 2017

Matematik I, Undergraduate, 2015 - 2016

Diferensiyel Denklemler, Undergraduate, 2015 - 2016

Diferensiyel Denklemler, Undergraduate, 2015 - 2016

Matematik I, Undergraduate, 2015 - 2016

Kesikli Matematik, Undergraduate, 2014 - 2015

Matematik I, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013

Kodlama Teorisi, Postgraduate, 2013 - 2014

Advising Theses

Çalkavur S., Sır Görüntü Paylaşım Şemaları Üzerine Bir Çalışma, Postgraduate, F.Molla(Student), 2018

Jury Memberships

Academic Staff Examination, Academic Staff Examination, Kocaeli Üniversitesi, July, 2024

Doctoral Examination, Doctoral Examination, Sakarya Üniversitesi, July, 2020

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Kocaeli Üniversitesi, June, 2020

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Kocaeli Üniversitesi, September, 2019

Post Graduate, Post Graduate, Kocaeli Üniversitesi, May, 2018

Doctoral Examination, Doctoral Examination, Sakarya Üniversitesi, April, 2018

Post Graduate, Post Graduate, Sakarya Üniversitesi, January, 2018

Published journal articles indexed by SCI, SSCI, and AHCI

I. **A New Code Based Signature Scheme for Blockchain Technology**
Alahmadi A., Çalkavur S., Solé P., Khan A. N., Raza M. A., Aggarwal V.
MATHEMATICS, vol.11, no.1177, pp.1-12, 2023 (SCI-Expanded)

II. **Public-Key Cryptosystems and Bounded Distance Decoding of Linear Codes**
Çalkavur S.
Entropy, vol.24, no.4, pp.498-508, 2022 (SCI-Expanded)

III. **Secret Sharing, Zero Sum Sets, and Hamming Codes**
Çalkavur S., Solé P.
MATHEMATICS, vol.8, pp.1644-1651, 2020 (SCI-Expanded)

IV. **A New Secret Sharing Scheme Based on Polynomials over Finite Fields**
Çalkavur S., Solé P., Bonnecaze A.
MATHEMATICS, vol.8, pp.1-5, 2020 (SCI-Expanded)

V. **Some multisecret-sharing schemes over finite fields,**
Çalkavur S., Solé P.
MATHEMATICS, vol.8, pp.272-278, 2020 (SCI-Expanded)

VI. **A Multisecret-Sharing Scheme Based on LCD Codes**
Alahmadi A., Altassan A., AlKenani A., ÇALKAVUR S., Shoaib H., Sole P.
MATHEMATICS, vol.8, no.2, 2020 (SCI-Expanded)

VII. **Self-dual codes and orthogonal matrices over large finite fields**
Shi M., Sok L., Sole P., ÇALKAVUR S.
FINITE FIELDS AND THEIR APPLICATIONS, vol.54, pp.297-314, 2018 (SCI-Expanded)

VIII. **Multisecret-sharing schemes and bounded distance decoding of linear codes**
ÇALKAVUR S., Sole P.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.94, no.1, pp.107-114, 2017 (SCI-Expanded)

IX. **A Study on Minimality of the Codewords in the Dual Code of the Code of a Symmetric $(v, k, \lambda) -$ Design**
Çalkavur S.
Applied Mathematics & Information Sciences, vol.9, no.6, pp.1-4, 2015 (SCI-Expanded)

X. **A Secret Sharing Scheme based on Residue Class Ring**
Çalkavur S.
Applied Mathematics & Information Sciences, vol.9, no.4, pp.1-3, 2015 (SCI-Expanded)

Articles Published in Other Journals

I. **Skew Cyclic and Skew Constacyclic Codes over aMixed Alphabet**
Gowdhaman K., Mohan C., Durairajan C., Çalkavur S., Solé P.
Axioms, vol.13, no.6, pp.1-13, 2024 (Peer-Reviewed Journal)

II. **Secure encryption over the ring F2 + uF2 + vF2 + uvF2**
Şolt N., Çalkavur S., Güzeltepe M.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.42, no.2, pp.529-533, 2024 (ESCI)

III. **Skew-cyclic codes based public-key cryptosystem approach**
Güzeltepe M., Çalkavur S.
SECURITY AND PRIVACY, vol.2, no.255, pp.1-9, 2022 (Peer-Reviewed Journal)

IV. **Secure encryption from cyclic codes**
Çalkavur S., Güzeltepe M.
Sigma Journal of Engineering and Natural Sciences, vol.40, no.2, pp.380-389, 2022 (ESCI)

V. **Some public-key cryptosystems over finite fields**
Çalkavur S.
WSEAS Transactions on Information Science and Applications , vol.19, pp.99-104, 2022 (Scopus)

VI. **A New Public-Key Cryptosystem Based on LCD Codes**
Çalkavur S.
European Journal of Science and Technology, no.28, pp.320-324, 2021 (Peer-Reviewed Journal)

VII. **The least-squares solutions in linear codes based multisecret-sharing approach**
Çalkavur S., Nauman S. K., Özel C., Zekraoui H.
International Journal of Information and Coding Theory, vol.5, no.3, pp.290-302, 2020 (Peer-Reviewed Journal)

VIII. **A study on multisecret-sharing schemes based on linear codes**

ÇALKAVUR S.

Emerging Science Journal, vol.4, no.4, pp.263-271, 2020 (Scopus)

IX. **The Blakley based secret sharing approach**

Çalkavur S., Molla F.

Sigma Journal of Engineering and Natural Sciences, vol.37, no.2, pp.489-494, 2019 (ESCI)

X. **Linear Multisecret-Sharing Schemes**

ÇALKAVUR S.

The Online Journal of Science and Technology, vol.9, no.2, pp.209-214, 2019 (Peer-Reviewed Journal)

XI. **A New Approach to Construct Secret Sharing Schemes Based on Field Extensions**

Molla F., Calkavur S.

EUROPEAN JOURNAL OF PURE AND APPLIED MATHEMATICS, vol.11, no.2, pp.468-475, 2018 (Peer-Reviewed Journal)

XII. **Secret sharing schemes based on extension fields**

Çalkavur S.

EUROPEAN JOURNAL OF PURE AND APPLIED MATHEMATICS, vol.11, no.2, pp.410-416, 2018 (Peer-Reviewed Journal)

XIII. **Some Algebraic (n, n)-Secret Image Sharing Schemes**

Çalkavur S.

Applied Mathematical Sciences, vol.11, no.56, pp.2807-2815, 2017 (Peer-Reviewed Journal)

XIV. **Some Secret Sharing Schemes Based on the Finite Fields**

ÇALKAVUR S.

Computer Technology and Application, vol.7, pp.269-272, 2016 (Peer-Reviewed Journal)

XV. **Secret Sharing Schemes and Syndrome Decoding**

ÇALKAVUR S.

Journal of Mathematics and Statistical Science, vol.2, no.12, pp.741-750, 2016 (Peer-Reviewed Journal)

XVI. **A New Method to Construct Secret Sharing Schemes Based on Linear Codes**

ÇALKAVUR S.

Journal of Computer Technology and Application, vol.5, no.2, 2015 (Peer-Reviewed Journal)

XVII. **Secret Sharing Schemes Based on the Dual Code of the Code of a Symmetric , (v k, λ) − Design and Minimal Access Sets**

Çalkavur S.

Journal of Computer Technology and Application,, vol.2, no.5, pp.1-7, 2015 (Peer-Reviewed Journal)

XVIII. **A Secret Sharing Scheme Based on a Symmetric v k lambda Design**

ÇALKAVUR S.

International Journal of Engineering Science and Innovative Technology (IJESIT), vol.3, no.4, pp.512-514, 2014 (Peer-Reviewed Journal)

XIX. **A Secret Sharing Scheme Based on the Cyclic Groups**

ÇALKAVUR S.

International Journal of Engineering Science and Innovative Technology (IJESIT), vol.3, no.3, pp.320-323, 2014 (Peer-Reviewed Journal)

XX. **The Relation Between the Secret Sharing Schemes Based on Linear Codes and Syndrome Decoding**

Çalkavur S.

Pensee Journal, vol.76, no.4, pp.292-295, 2014 (Peer-Reviewed Journal)

XXI. **Binary Cyclic Codes and Minimal Codewords**

Çalkavur S.

Computer Technology and Application, vol.4, no.9, pp.486-489, 2013 (Peer-Reviewed Journal)

XXII. **A Relationship Between the Weight Enumerators and Minimal Codewords**

Çalkavur S.

Journal of Mathematics and System Science, vol.3, no.8, pp.409-411, 2013 (Peer-Reviewed Journal)

XXIII. **A Study on Minimal Codewords in the Hamming Codes**

Çalkavur S.,

Journal of Mathematics and System Science, vol.3, no.6, pp.279-281, 2013 (Peer-Reviewed Journal)

Books & Book Chapters

I. **Code Based Secret Sharing Schemes**
Çalkavur S., Bonnecaze A., Cruz R. D., Solé P.
World Scientific Publishing , Singapore, 2022

Refereed Congress / Symposium Publications in Proceedings

I. **A ramp secret sharing scheme from finite fields**
Çalkavur S., Solé P.
1st International Conference on Pioneer and Innovative Studies, Konya, Turkey, 5 - 07 June 2023, pp.107-110

II. **Vector space multisecret-sharing scheme based on Blakley's method**
Çalkavur S., Solé P.
1st International Conference on Frontiers in Academic Research, Konya, Turkey, 18 - 21 February 2023, vol.1, pp.1-4

III. **The McEliece Based Public-key Cryptosystem Approach**
Çalkavur S., Akıntürk M. K.
5. International Conference on Life and Engineering Sciences, Antalya, Turkey, 19 - 22 May 2022, pp.98

IV. **The polynomials over finite fields based public-key encryption approach**
Çalkavur S.
1st International Conference on Engineering and Applied Natural Sciences , Konya, Turkey, 10 - 13 May 2022, pp.185-189

V. **Secure Encryption over the Ring F2+uF2+vF2+uvF2**
Şolt N., Çalkavur S., Güzeltepe M.
2nd International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 - 13 March 2022, pp.50-54

VI. **A new public-key cryptosystem based on LCD codes**
Çalkavur S.
1st International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 1 - 03 November 2021, vol.1, no.1, pp.320-324

VII. **Multisecret-Sharing Schemes with Symmetric Designs**
Çalkavur S., Özel C.
InternationalScience and Technology Conference, Praha, Czech Republic, 2 - 05 July 2019

VIII. **Linear Multisecret-Sharing Schemes**
ÇALKAVUR S.
International Science and Technology Conference, Paris, France, 18 - 21 July 2018

IX. **A Study on Multisecret-Sharing Schemes**
ÇALKAVUR S.
5th International Conference on Pure and Applied, Sciences:Sustainable, Dubai, United Arab Emirates, 28 - 30 June 2018

X. **Secret Sharing Schemes Based on Extension Fields**
ÇALKAVUR S.
IECMSA 2017 (International Eurasian Conference on Mathematical Sciences and Applications, Budapest, Hungary, 15 - 18 August 2017

XI. **Secret Sharing Schemes and Syndrome Decoding**
Çalkavur S.
The 5th International Conference on Control and Optimization with Industrial Applications, Baku, Azerbaijan, 27 -

29 August 2015, vol.5, pp.400

XII. **Some algebraic n n threshold schemes**
ÇALKAVUR S., PATRICK S.
Sixth International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'15), İstanbul, Turkey,
27 - 29 May 2015

XIII. **A New Method to Construct Secret Sharing Schemes Based on Linear Codes**
ÇALKAVUR S.
Third International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2014), VİYANA,
Austria, 25 - 28 August 2014, vol.3, pp.297

XIV. **A Study on the Number of Minimal Access Set in the Secret Sharing Scheme Based on the Dual Code
of the Code of a Symmetric (v, k, λ) – Design**
Çalkavur S., Balkanay E.
Second International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2013), Sarajevo,
Bosnia And Herzegovina, 26 - 29 August 2013

XV. **A Study on Minimal Codewords of the Codes Associated with the Symmetric v k lambda Designs**
Balkanay E., Çalkavur S.
First International Eurasian Conference on Mathematical Sciences and Applications, Priştine, Kosova, 3 - 07
September 2012

Memberships / Tasks in Scientific Organizations

5) International Engineering and Technology Institute (IETI), Honorary Member, 2015 - Continues, Turkey
David Publishing Company, Member of Science Committee, 2013 - Continues, United States Of America
Türk Matematik Derneği, Member, 2006 - Continues, Turkey
International Transactions on InformationScience (IEICE),, Member, 2015 - 2017, United States Of America

Scientific Refereeing

INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, Journal Indexed in SCI-E, July 2024
SECURITY AND PRIVACY, Journal Indexed in ESCI, January 2024
MATHEMATICAL COMMUNICATIONS, Journal Indexed in SCI-E, December 2023
SECURITY AND PRIVACY, Journal Indexed in ESCI, August 2023
SECURITY AND PRIVACY, Journal Indexed in ESCI, August 2023
SECURITY AND PRIVACY, Journal Indexed in ESCI, July 2023
SIGNAL PROCESSING: IMAGE COMMUNICATION, Journal Indexed in SCI-E, April 2023
CMC-COMPUTERS MATERIALS & CONTINUA, Journal Indexed in SCI-E, March 2023
SECURITY AND PRIVACY, Journal Indexed in ESCI, January 2023
THE COMPUTER JOURNAL, SCI Journal, December 2022
CMC-COMPUTERS MATERIALS & CONTINUA, Journal Indexed in SCI-E, August 2022
Sigma Journal of Engineering and Natural Sciences, Journal Indexed in ESCI, July 2022
European Journal of Pure and Applied Mathematics, Journal Indexed in ESCI, July 2022
COMPUTER JOURNAL, Journal Indexed in SCI-E, May 2022
Security and Privacy, Journal Indexed in ESCI, May 2022
JOURNAL OF MATHEMATICS, SCI Journal, March 2022
Security and Privacy, Journal Indexed in ESCI, March 2022
SIGNAL PROCESSING-IMAGE COMMUNICATION, SCI Journal, February 2022
SIGNAL PROCESSING-IMAGE COMMUNICATION, SCI Journal, September 2021
DISCRETE APPLIED MATHEMATICS, SCI Journal, June 2021
SIGNAL PROCESSING-IMAGE COMMUNICATION, SCI Journal, May 2021

European Journal Of Pure and Applied Mathematics, Journal Indexed in ESCI, April 2021

Düzce University Journal of Science & Technology, Other Indexed Journal, March 2021

SIGNAL PROCESSING-IMAGE COMMUNICATION, SCI Journal, March 2021

Punjab University Journal of Mathematics, Journal Indexed in ESCI, February 2021

Sigma Journal of Engineering and Natural Sciences, Journal Indexed in ESCI, January 2021

European Journal Of Pure and Applied Mathematics, Journal Indexed in ESCI, December 2020

European Journal of Pure And Applied Mathematics, Journal Indexed in ESCI, September 2020

IEEE COMMUNICATIONS LETTERS, SCI Journal, September 2020

TURKISH JOURNAL OF MATHEMATICS, SCI Journal, April 2020

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, February 2020

European Journal of Pure and Applied Mathematics, Journal Indexed in ESCI, October 2018

SIGNAL PROCESSING-IMAGE COMMUNICATION, SCI Journal, May 2018

Sigma Journal of Engineering and Natural Sciences, Journal Indexed in ESCI, June 2016

APPLIED MATHEMATICS & INFORMATION SCIENCES, Journal Indexed in SCI-E, October 2015

Journal of Computer Technology and Applications, Other Indexed Journal, November 2013

Tasks In Event Organizations

Çalkavur S., Congress on Smart Computing Technologies (CSCT 2022), Scientific Congress, India, Aralık 2022

Çalkavur S., 1) ISAS 2018 (International Symposium on Recent Advances in Vocational Sciences), Scientific Congress, Antalya, Turkey, Nisan 2018

Metrics

Publication: 50
Citation (WoS): 53
Citation (Scopus): 61
H-Index (WoS): 3
H-Index (Scopus): 4

Scholarships

Doktora Başarı Bursu, University, 2006 - 2010
Yüksek Lisans Başarı Bursu, University, 2004 - 2006

Awards

Çalkavur S., Yayın Teşvik, Tübitak, January 2023
Çalkavur S., Yayın Teşvik Ödülü, Tübitak, January 2021
Çalkavur S., Yayın Teşvik Ödülü, Tübitak, October 2017
Çalkavur S., Teşekkür Belgesi, Milli Eğitim Bakanlığı, September 2001

Non Academic Experience

Miili Eğitim Bakanlığı/İHKİB Yenibosna Kız Teknik ve Meslek Lisesi