

Res. Asst. PhD Ömer Küsmüş

Personal Information

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Address: Yüzüncü Yıl Üniversitesi İİBF Binası Zemin Kat Matematik Bölümü

Education Information

Doctorate, Van Yüzüncü Yıl University, Fen Edebiyat Fakültesi, Matematik, Turkey 2014 - 2019

Postgraduate, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik, Turkey 2012 - 2014

Undergraduate, Istanbul University, Fen Edebiyat Fakültesi, Matematik, Turkey 2008 - 2012

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Grup Halkalarında Nilpotent, İdempotent ve Birimsel Elemanlar, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik, 2019

Postgraduate, Bazı Direkt Çarpım Gruplarının İntegral Grup Halkalarındaki Birimsellerin Belirlenmesi, Van Yüzüncü Yıl University, Fen Bilimleri Enstitüsü, Matematik, 2014

Research Areas

Computer Sciences, Information Security and Reliability, Cryptography, Mathematics, Field Theory and Polynomials, Commutative Rings and Algebras, Group Theory and Generalizations, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Research Assistant PhD, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik Bölümü, 2012 - Continues

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

I. A CHARACTERIZATION OF THE UNIT GROUP IN $Z[T \times C-2]$

Bilgin T., Küsmüş Ö., Low R. M.

BULLETIN OF THE KOREAN MATHEMATICAL SOCIETY, vol.53, no.4, pp.1105-1112, 2016 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **A Novel Public-Key Encryption Scheme Based on Bass Cyclic Units in Integral Group Rings**
Küsmüş Ö., Hanoymak T.
Journal of Discrete Mathematical Sciences and Cryptography, vol.0, pp.0-1, 2020 (Journal Indexed in ESCI)
- II. **On Torsion Units of Integral Group Ring of A Dicyclic Group**
Küsmüş Ö.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.9, no.2, pp.609-614, 2020 (International Refereed University Journal)
- III. **On Idempotent Units in Commutative Group Rings**
Küsmüş Ö.
Sakarya University Journal of Science, vol.0, pp.1, 2020 (International Refereed University Journal)
- IV. **A Different Characterization of the Unit Group $U_1(\mathbb{Z}(\mathbb{C}_n \times \mathbb{C}_6))$**
Küsmüş Ö., Denizler İ. H. , Görentaş N.
Journal of Algebra and Computational Applications, vol.9, no.1, pp.1-8, 2020 (Refereed Journals of Other Institutions)
- V. **A New Multi-Party Key Exchange Protocol and Symmetric Key Encryption Scheme over Non-commutative Group Rings**
Hanoymak T., Küsmüş Ö.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY SCIENCE, vol.8, no.1, pp.11-16, 2019 (Refereed Journals of Other Institutions)
- VI. **Units in $\mathbb{Z}(\mathbb{C}_n \times \mathbb{C}_5)$**
Küsmüş Ö., Low R. M.
Palestine J. Math., vol.*, pp.1-10, 2019 (Refereed Journals of Other Institutions)
- VII. **On Construction of Cryptographic Systems over Units of Group Rings**
Küsmüş Ö., Hanoymak T.
International Electronic Journal of Pure and Applied Mathematics, no.9, pp.37-43, 2015 (Refereed Journals of Other Institutions)
- VIII. **On the units of integral group ring of $\mathbb{C}_n \times \mathbb{C}_6$**
Küsmüş Ö.
ALGEBRA & DISCRETE MATHEMATICS, vol.20, no.1, pp.142-151, 2015 (Journal Indexed in ESCI)
- IX. **Construction of Units in $\mathbb{Z}\mathbb{C}_{24}$**
Küsmüş Ö.
International Journal of Algebra, no.8, pp.471-477, 2014 (Refereed Journals of Other Institutions)
- X. **On Computing the Rank of $U(\mathbb{Z}[\mathbb{C}_n \times \mathbb{C}_6])$**
Küsmüş Ö.
International Journal of Algebra, no.8, pp.365-374, 2014 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Idempotent Units in Integral Group Rings of Direct Products**
Küsmüş Ö., Denizler İ. H. , Görentaş N.
2nd International Conference on Pure and Applied Mathematics 2018, Van, Turkey, 11 - 13 September 2018, vol.1, no.1, pp.101
- II. **Multi-party Key Exchange Protocol and Man in the Middle Attack**
Güleşçe Tatlı T., Hanoymak T., Küsmüş Ö.
2nd International Conference on Pure and Applied Mathematics 2018, Van, Turkey, 11 - 13 September 2018, vol.1, no.1, pp.79
- III. **Idempotent unit group in commutative group rings of direct products.**
Denizler İ. H. , Küsmüş Ö., Görentaş N.
ICPAM-VAN 2018, Van, Turkey, 11 - 13 September 2018, pp.102
- IV. **On Unit Group of Integral Group Ring $\mathbb{Z}(\mathbb{S}_3 \times \mathbb{C}_3)$**

Küsmüş Ö.

New Trends in Rings and Modules I, Kocaeli, Turkey, 20 - 23 June 2018

V. **Trivial Units in Commutative Group Rings of Direct Products**

Küsmüş Ö.

Antalya Algebra Days XX, İzmir, Turkey, 16 - 20 May 2018, pp.33-34

VI. **A Possible Hashed-RSA Signature Scheme Using Units in Group Rings**

Hanoymak T., Küsmüş Ö.

Antalya Algebra Days XX, İzmir, Turkey, 16 - 20 May 2018, pp.30

VII. **Multi-Party Key Exchange Protocol over Units of Group Rings**

Hanoymak T., Küsmüş Ö.

3rd International Conference on Computational Mathematics and Engineering Sciences 2018, Girne, Cyprus (Kkct), 4 - 06 May 2018, pp.357

VIII. **Construction of Units in $Z(C_nXC_5)$**

Küsmüş Ö.

Caucasian Mathematics Conference II, Van, Turkey, 22 August - 24 September 2017, vol.*, pp.100

IX. **Another Description of Units in Integral Group Ring of Dicyclic Group of Order 12**

Küsmüş Ö.

International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.1

X. **A Possible Key Exchange Protocol over Group Rings**

Hanoymak T., Küsmüş Ö.

International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.1

XI. **The Group of Units in Integral Group Ring $Z[TxC_2]$**

Küsmüş Ö.

Antalya Algebra Days, İzmir, Turkey, 20 - 24 May 2015, pp.31

XII. **On The Units in Integral Group Ring of A Kind of Metacyclic Group**

Küsmüş Ö., Bilgin T.

INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Viyana, Austria, 16 - 19 August 2014, pp.65

XIII. **On Cryptographic Schemes over Group Rings**

Hanoymak T., Küsmüş Ö.

INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Viyana, Austria, 16 - 19 August 2014, pp.70

XIV. **Characterization of $U(ZC_{24})$**

Küsmüş Ö.

Algerian Turkish International Days on Mathematics, İstanbul, Turkey, 12 - 14 September 2013, pp.111

Activities in Scientific Journals

Global J. Pure Appl. Math., Committee Member, 2019 - Continues

Scientific Refereeing

International journal of Theoretical Physics, SCI Journal, April 2019

International Journal of Pure Mathematical Sciences, Other Indexed Journal, February 2019

Journal of Biometrics and Biostatistics, Other Indexed Journal, January 2019

Journal of Generalized Lie Theory and Applications, Other Indexed Journal, January 2019