# Assoc. Prof. ÖMER KÜÇÜKSAKALLI

#### **Personal Information**

Office Phone: +90 312 210 5397

Email: komer@metu.edu.tr

Web: https://avesis.metu.edu.tr/komer

#### **International Researcher IDs**

ScholarID: iaXtU88AAAAJ ORCID: 0000-0002-9805-7552

Publons / Web Of Science ResearcherID: ABA-4131-2020

ScopusID: 36816194200 Yoksis Researcher ID: 164003

#### **Education Information**

Doctorate, University of Massachusetts Amherst, College of Natural Sciences, Department of Mathematics and Statistics, United States Of America 2006 - 2009

Postgraduate, University of Massachusetts Amherst, College of Natural Sciences, Department of Mathematics and Statistics, United States Of America 2004 - 2006

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, Turkey 1999 - 2004

## Foreign Languages

English, C1 Advanced

#### **Dissertations**

Doctorate, Class numbers of ray class fields of imaginary quadratic fields, University Of Massachusetts Amherst, Matematik Ve İstatistik Bölümü, 2009

## **Research Areas**

Mathematics, Nonassociative Rings and Algebras, Algebraic Geometry, Commutative Rings and Algebras, Number Theory, Natural Sciences

## **Academic Titles / Tasks**

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2016 -

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2010 - 2016

Lecturer PhD, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2009 - 2010

Research Assistant, University of Massachusetts Amherst, College of Natural Science, Mathematics and Statistics, 2004 - 2009

#### **Courses**

Elliptic Curves, Postgraduate, 2022 - 2023, 2021 - 2022

Theory of Function Fields, Postgraduate, 2023 - 2024

Introduction to Number Theory, Undergraduate, 2023 - 2024

Linear Algebra I, Undergraduate, 2022 - 2023, 2018 - 2019

Abstract Algebra, Undergraduate, 2022 - 2023

Algebraic Number Theory, Postgraduate, 2022 - 2023, 2021 - 2022, 2017 - 2018

Calculus of Functions of Several Variables, Undergraduate, 2021 - 2022

Lie algebras, Postgraduate, 2022 - 2023

Algebra II, Postgraduate, 2020 - 2021

Calculus for Mathematics Students I, Undergraduate, 2020 - 2021, 2019 - 2020

Calculus with Analytic Geometry, Undergraduate, 2021 - 2022

Algebra I, Postgraduate, 2020 - 2021

Elementary Number Theory II, Undergraduate, 2019 - 2020

Calculus I, Undergraduate, 2020 - 2021

Introduction to Representation Theory, Undergraduate, 2018 - 2019

Linear Algebra II, Undergraduate, 2018 - 2019

Introduction to Differential Equations, Undergraduate, 2019 - 2020

Groups and Geometry, Undergraduate, 2019 - 2020

Ideals Varieties and Algorithms, Undergraduate, 2018 - 2019

Basic Algebraic Structures, Undergraduate, 2017 - 2018

## **Advising Theses**

Küçüksakallı Ö., EXPLORING BERNOULLI NUMBERS AND THEIR APPLICATIONS, Postgraduate, A.ABDELRAZIK(Student), 2024

Küçüksakallı Ö., On the Jacobian matrices of generalized Chebyshev polynomials, Postgraduate, A.İLERİ(Student), 2023 Küçüksakallı Ö., Arithmetically exceptional lattès maps attached to elliptic curves without complex multiplication,

Postgraduate, 0.0DABAŞ(Student), 2023

KÜÇÜKSAKALLI Ö., Coefficients of folding polynomials attached to lie algebras of rank two, Postgraduate,

M.AYDOĞDU(Student), 2021

## Jury Memberships

Appointment to Academic Staff-Assistant Professorship, Appointment to Academic Staff-Assistant Professorship, Boğaziçi Üniversitesi, July, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, December, 2022

## **Designed Lessons**

Küçüksakallı Ö., Algorithmic Number Theory, Postgraduate, 2022 - 2023

Küçüksakallı Ö., Elliptic Curves, Postgraduate, 2021 - 2022

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

I. Value sets of folding polynomials over finite fields

KÜÇÜKSAKALLI Ö.

TURKISH JOURNAL OF MATHEMATICS, vol.43, no.3, pp.1407-1413, 2019 (SCI-Expanded)

II. Value sets of bivariate folding polynomials over finite fields

KÜÇÜKSAKALLI Ö.

FINITE FIELDS AND THEIR APPLICATIONS, vol.54, pp.253-272, 2018 (SCI-Expanded)

III. Arithmetic exceptionality of generalized Lattes maps

KÜÇÜKSAKALLI Ö., ÖNSİPER M. H.

JOURNAL OF THE MATHEMATICAL SOCIETY OF JAPAN, vol.70, no.2, pp.823-832, 2018 (SCI-Expanded)

IV. On the arithmetic exceptionality of polynomial mappings

KÜÇÜKSAKALLI Ö.

BULLETIN OF THE LONDON MATHEMATICAL SOCIETY, vol.50, no.1, pp.143-147, 2018 (SCI-Expanded)

V. Bivariate polynomial mappings associated with simple complex Lie algebras

KÜÇÜKSAKALLI Ö.

JOURNAL OF NUMBER THEORY, vol.168, pp.433-451, 2016 (SCI-Expanded)

VI. Value sets of bivariate Chebyshev maps over finite fields

KÜÇÜKSAKALLI Ö.

FINITE FIELDS AND THEIR APPLICATIONS, vol.36, pp.189-202, 2015 (SCI-Expanded)

VII. On the computation of generalized division polynomials

KÜÇÜKSAKALLI Ö.

TURKISH JOURNAL OF MATHEMATICS, vol.39, no.4, pp.547-555, 2015 (SCI-Expanded)

VIII. Value sets of Lattes maps over finite fields

Kucuksakalli O.

JOURNAL OF NUMBER THEORY, vol.143, pp.262-278, 2014 (SCI-Expanded)

IX. On the units generated by Weierstrass forms

KÜÇÜKSAKALLI Ö.

LMS JOURNAL OF COMPUTATION AND MATHEMATICS, vol.17, pp.303-313, 2014 (SCI-Expanded)

X. A RECURRENCE RELATION FOR BERNOULLI NUMBERS

KÜÇÜKSAKALLI Ö.

HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.42, no.4, pp.319-329, 2013 (SCI-Expanded)

XI. Class numbers of ring class fields of prime conductor

KÜÇÜKSAKALLI Ö.

ACTA ARITHMETICA, vol.153, no.3, pp.251-269, 2012 (SCI-Expanded)

XII. CLASS NUMBERS OF RAY CLASS FIELDS OF IMAGINARY QUADRATIC FIELDS

Kucuksakalli O.

MATHEMATICS OF COMPUTATION, vol.80, no.274, pp.1099-1122, 2011 (SCI-Expanded)

## Articles Published in Other Journals

I. A Proof of the Lucas-Lehmer Test and its Variations by Using a Singular Cubic Curve KÜÇÜKSAKALLI Ö.

JOURNAL OF INTEGER SEQUENCES, vol.21, no.6, 2018 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

I. Value sets of Lattes maps over finite fields

KÜÇÜKSAKALLI Ö.

The 12th International Conference on Finite Fields and Their Applications, New York, United States Of America, 13 - 17 July 2015

## II. Weierstrass Formları Tarafından Üretilen Tersinir Elemanlar Üzerine

KÜÇÜKSAKALLI Ö.

10. Ankara Matematik Günleri, Ankara, Turkey, 11 - 12 June 2015

## III. On the units generated by Weierstrass forms

KÜÇÜKSAKALLI Ö.

Algorithmic Number Theory Symposium XI, Gyeongju, South Korea, 6 - 11 August 2014, vol.17, pp.303-313

# **Supported Projects**

Küçüksakallı Ö., TUBITAK Project, Eğri Tabanlı Kriptografiye Matematiksel Bakış 112T011, 2012 - 2014

## **Metrics**

Publication: 16 Citation (WoS): 17 Citation (Scopus): 17 H-Index (WoS): 3 H-Index (Scopus): 3