# Res. Asst. PhD ÜMMÜGÜLSÜN ÇAĞLAYAN

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### **Education Information**

Doctorate, Karadeniz Technical University, Matematik, Turkey 2016 - 2022 Postgraduate, Karadeniz Technical University, -, Matematik, Turkey 2013 - 2016 Undergraduate, Ataturk University, Fen Fakültesi, Matematik, Turkey 2008 - 2012

# Foreign Languages

English, B2 Upper Intermediate

#### Research Areas

Mathematics, Functional Analysis, Combinatorics, Number Theory, Natural Sciences

# **Academic Titles / Tasks**

Research Assistant, Karadeniz Technical University, Fen Fakültesi, Matematik, 2014 - Continues

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

- I. On applications of Pell and Pell-Lucas numbers with matrix method Akbaba Ü., Hikmet Değer A. H. JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, vol.44, no.6, pp.10703-10707, 2023 (SCI-Expanded)
- II. Relation between matrices and the suborbital graphs by the special number sequences Akbaba Ü., Değer A. H.

TURKISH JOURNAL OF MATHEMATICS, vol.46, no.3, pp.753-767, 2022 (SCI-Expanded)

# Articles Published in Other Journals

I. Özel Tam Sayı Dizilerinin Bazı Matris Uygulamaları

ÇAĞLAYAN Ü.

Bilecik Seyh Edebali Universitesi Fen Bilimleri Dergisi, vol.10, no.1, pp.209-216, 2023 (Peer-Reviewed Journal)

II. AN ALGORITHM FOR THE VERTICES ON THE PATHS OF MINIMAL LENGTH IN THE SUBORBITAL GRAPHS

Akbaba Ü., Değer A. H., Berber T.

Proceedings of the 6th International Conference on Computational Mathematics and Engineering Sciences (CMES-2022), vol.1, no.1, pp.250-255, 2022 (Conference Book)

III. Images of Some Discs Under the Linear Fractional Transformation of Special Continued Fractions Akbaba Ü., Tuylu T., Değer A. H.

CONFERENCE PROCEEDINGS OF SCIENCE AND TECHNOLOGY, vol.1, no.1, pp.232-237, 2021 (Conference Book)

IV. Maximally Accretive Differential Operators of First Order in the Weighted Hilbert Spaces AKBABA Ü., Al P. I.

LOBACHEVSKII JOURNAL OF MATHEMATICS, vol.42, no.12, pp.2707-2713, 2021 (ESCI)

V. Maximally Accretive Differential Operators of First Order in the Weighted Hilbert Spaces Akbaba Ü., İpek Al P.

LOBACHEVSKII JOURNAL OF MATHEMATICS, vol.42, pp.2707-2713, 2021 (ESCI)

VI. Maximally Dissipative Differential Operators of First Order in the Weighted Hilbert Space İpek Al P., Akbaba Ü.

LOBACHEVSKII JOURNAL OF MATHEMATICS, vol.42, pp.490-495, 2021 (ESCI)

VII. Maximally Dissipative Differential Operators of First Order in the Weighted Hilbert Space Al P. I., AKBABA Ü.

LOBACHEVSKII JOURNAL OF MATHEMATICS, vol.42, no.3, pp.490-495, 2021 (ESCI)

VIII. On the Compactly Solvable Differential Operators for First Order

İpek Al P., Akbaba Ü.

LOBACHEVSKII JOURNAL OF MATHEMATICS, vol.41, no.6, pp.1078-1086, 2020 (ESCI)

IX. The Generating Functions for Special Pringsheim Continued Fractions

Akbaba Ü., Değer A. H.

Communications in Advanced Mathematical Sciences, vol.3, no.2, pp.74-81, 2020 (Peer-Reviewed Journal)

X. On Some Connections Between Suborbital Graphs and Special Sequences AKBABA Ü., DEĞER A. H., TUYLU T.

Turkish Journal of Mathematics and Computer Science, vol.10, pp.134-143, 2018 (Peer-Reviewed Journal)

XI. Some special values of vertices of trees on the suborbital graphs DEĞER A. H., AKBABA Ü.

AIP Conference Proceedings, vol.1926, no.20013, pp.1-6, 2018 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

On the Edge Conditions of the Some Suborbital Graphs on Q<sup>^</sup>Cağlayan Ü.

15th Algebraic Hyperstructures and its Applications, İstanbul, Turkey, 28 - 30 July 2023, pp.62

II. AN ALGORITHM FOR THE VERTICES ON THE PATHS OF MINIMAL LENGTH IN THE SUBORBITAL

Akbaba Ü., Değer A. H., Berber T.

THE SIXTH INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES (CMES-2022), Ordu, Turkey, 20 - 22 May 2022, pp.188

III. PELL AND PELL-LUCAS NUMBERS IN SUBORBITAL GRAPHS

Akbaba Ü., Değer A. H.

THE SIXTH INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES (CMES-2022), Ordu, Turkey, 20 - 22 May 2022, pp.193

IV. Images of Some Discs Under the Linear Fractional Transformation of Special Continued Fractions

Akbaba Ü., Tuylu T., Değer A. H.

18 th International Geometry Symposium, Malatya, Turkey, 12 - 13 July 2021, pp.186

### V. Images of Minimal-Length Hyperbolic Paths on the Poincare Disc

Tuylu T., Akbaba Ü., Değer A. H.

18 th International Geometry Symposium, Malatya, Turkey, 12 - 13 July 2021, pp.187

### VI. The Farthest Vertices on the Suborbital Graphs via Hyperbolic Geometry

DEĞER A. H., AKBABA Ü., Gökcan İ., TUYLU T.

17th International Geometry Symposium, Erzincan, Turkey, 19 - 22 June 2019, pp.130

# $\label{eq:VII.} \textbf{On Suborbital Graphs with Hyperbolic Geodesics and Entries of Matrices from Some Sequences}$

DEĞER A. H., AKBABA Ü., TUYLU T., Gökcan İ.

17th International Geometry Symposium, Erzincan, Turkey, 19 - 22 June 2019, pp.129

### VIII. On Suborbital Graphs and Matrices with Even Fibonacci and Lucas Numbers

AKBABA Ü., DEĞER A. H.

The Mediterranean International Conference of Pure&Applied Mathematics and Related Areas, Antalya, Turkey, 26 - 29 October 2018, pp.64

# IX. The Generating Functions of Recurrence Relation of the Path of Minimal Length on Suborbital

Graphs

AKBABA Ü., DEĞER A. H., TUYLU T.

INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE AND APPLIED MATHEMATICS, Trabzon, Turkey, 23 - 27 July 2018, pp.17

### X. On Suborbital Graphs and Related Sequences

DEĞER A. H., AKBABA Ü., TUYLU T.

INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE AND APPLIED MATHEMATICS, Trabzon, Turkey, 23 - 27 July 2018, pp.68

# XI. Relation of Some Special Vertices of Suborbital Graphs and Continued Fractions

TUYLU T., DEĞER A. H., AKBABA Ü.

INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE AND APPLIED MATHEMATICS, Trabzon, Turkey, 23 - 27 July 2018, pp.172

# XII. On Some Connections Between Suborbital Graphs and Fibonacci- Lucas Matrices

AKBABA Ü., DEĞER A. H.

INTERNATIONAL CONFERENCE ON MATHEMATICS "An Istanbul Meeting for World Mathematicians"

Minisymposium on Approximation Theory & Minisymposium on Math Education, İstanbul, Turkey, 3 - 06 July 2018, pp.366

# XIII. On Some Properties of Even Fibonacci and Lucas Numbers with Suborbital Graphs

DEĞER A. H., AKBABA Ü.

INTERNATIONAL CONFERENCE ON MATHEMATICS "An Istanbul Meeting for World Mathematicians"

Minisymposium on Approximation Theory & Minisymposium on Math Education, İstanbul, Turkey, 3 - 06 July 2018, pp.365

# XIV. On Some Relations Between Continued Fractions and Fibonacci Numbers

TUYLU T., DEĞER A. H., AKBABA Ü.

International Conference On Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.94-95

# XV. On Some Connections Between Suborbital Graphs and Special Sequences

AKBABA Ü., DEĞER A. H., Tuylu T.

International Conference on Mathematics and Mathematics Education (ICMME 2018), Ordu, Turkey, 27 - 29 June 2018, vol.10, pp.134-143

### XVI. Finding Characteristic Roots of Matrices of Even Lucas and Fibonacci Numbers

AKBABA Ü., DEĞER A. H., TUYLU T.

International Conference On Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.62-63

### XVII. On Some Special Values of Fibonacci and Lucas Sequences with the Suborbital Graphs

DEĞER A. H., AKBABA Ü.

6TH INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Budapest, Hungary, 15 - 18 August 2017, pp.36

### XVIII. Some Special Values of Vertices of Trees on the Suborbital Graphs

DEĞER A. H., AKBABA Ü.

6TH INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Budapest, Hungary, 15 - 18 August 2017, pp.35

# XIX. On Suborbital Graphs and Related Lucas Numbers

AKBABA Ü., DEĞER A. H.

International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 3 - 07 July 2017, pp.191

### XX. On Suborbital Graphs and Related Fibonacci Numbers

AKBABA Ü., DEĞER A. H.

International Conference on Mathematics and Engineering, İstanbul, Turkey, 10 - 12 May 2017, pp.228

# XXI. Some Properties of Special Vertices of the Suborbital Graphs

DEĞER A. H., AKBABA Ü.

International Conference on Mathematics and Engineering, İstanbul, Turkey, 10 - 12 May 2017, pp.286

### XXII. Imprimitive Action with Continued Fractions for the Suborbital Graphs

DEĞER A. H., AKBABA Ü.

International Conference on Recent Advances in Pure and Applied Mathematics, Muğla, Turkey, 19 - 23 May 2016, pp.66

#### XXIII. Fu N Graflarındaki Minimal Uzunluk ve Üretici Cinsleri

DEĞER A. H., AKBABA Ü.

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

### **Supported Projects**

DEĞER A. H., AKBABA Ü., BERBER T., Project Supported by Higher Education Institutions, Sürekli Kesirlerin Yinelenme Bağıntıları ile Alt Yörüngesel Graflardaki Ağaçların Özel Köşeleri, 2018 - 2022

DEĞER A. H., AKBABA Ü., Project Supported by Higher Education Institutions, ?\_0(N) Grubunun Alt Yörüngesel Graflarındaki Minimal Uzunluklu İmprimitif Hareket, 2015 - 2016

# Metrics

Publication: 36 Citation (WoS): 2 Citation (Scopus): 3 H-Index (WoS): 1 H-Index (Scopus): 1