

## Lect. Serpil KARAYEL

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-1161-7466

Publons / Web Of Science ResearcherID: AAZ-6836-2020

ScopusID: 84943246450

Yoksis Researcher ID: 174184

### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Matematik, Turkey 2001 - 2006

Postgraduate, Mimar Sinan Fine Arts University, Institute Of Science, Matematik, Turkey 1998 - 2001

Undergraduate, Yildiz Technical University, Fen Edebiyat Fakültesi, Matematik, Turkey 1991 - 1997

### Foreign Languages

English, B1 Intermediate

### Research Areas

Mathematics, Differential Equations, Natural Sciences

### Academic Titles / Tasks

Lecturer PhD, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2007 - Continues

Research Assistant PhD, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2006 - Continues

Research Assistant, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 1998 - Continues

### Courses

Linear Algebra, Undergraduate, 2022 - 2023, 2021 - 2022, 2018 - 2019

Mathematics 2, Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019

Mathematics 1, Undergraduate, 2022 - 2023

Mathematics 1, Undergraduate, 2021 - 2022

Differential Equations, Undergraduate, 2019 - 2020, 2018 - 2019

Mathematics, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2015 - 2016

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

- I. **Second regularized trace of a differential operator of Sturm–Liouville type**  
Gül E., Karayel S.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.47, no.7, pp.5461-5483, 2024 (SCI-Expanded)
- II. **On Higher Regularized Traces of a Differential Operator with Bounded Operator Coefficient Given in a Finite Interval**  
SEZER Y., BAKŞI Ö., KARAYEL S.  
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.18, no.3, 2021 (SCI-Expanded)
- III. **Second regularized trace of a differential operator with second order unbounded operator coefficient given in a finite interval**  
Bakşi Ö., Karayel S., Sezer Y.  
Operators and Matrices, vol.11, pp.735-747, 2017 (SCI-Expanded)
- IV. **The regularized trace formula for a fourth order differential operator given in a finite interval**  
Karayel S., Sezer Y.  
JOURNAL OF INEQUALITIES AND APPLICATIONS, 2015 (SCI-Expanded)

### Articles Published in Other Journals

- I. **TRACE REGULARIZATION PROBLEM FOR HIGHER ORDER DIFFERENTIAL OPERATOR**  
Sezer Y., Bakşi Ö., Karayel S.  
Maltepe Journal of Mathematics, vol.2, no.1, pp.27-37, 2020 (Peer-Reviewed Journal)
- II. **The sum of subtraction of the eigenvalues of two self adjoint differential operators with unbounded operator coefficient**  
BAKŞI Ö., SEZER Y., KARAYEL S.  
INTERNATIONAL JOURNAL OF PURE AND APPLIED MATHEMATICS, vol.3, no.63, pp.255-268, 2010 (Scopus)
- III. **Asymptotic formulas for the number of negative eigenvalues of a differential operator with operator coefficient**  
Karayel S., Adıgüzelov E.  
INTERNATIONAL JOURNAL OF MATHEMATICAL ANALYSIS, vol.3, pp.491-504, 2009 (Scopus)
- IV. **A self adjoint expansion of a symmetric differential operator with operator coefficient**  
Karayel S., Adıgüzelov E.  
Int. J. Contemp. Math. Sci., Vol. 2, No. 22, s. 1053-1067., vol.2, no.66, pp.1053-1067, 2007 (Peer-Reviewed Journal)
- V. **The asymptotic formulas for the sum of squares of negative eigenvalues of the singular Sturm–Liouville operator**  
Karayel S., Adıgüzelov E., Akyol M.  
Int. J. Contemp. Math. Sci., vol.1, no.7, pp.341-358, 2006 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Time-Ordered Hyperbolic Evolution Systems**  
Bakşi Ö., Gül E., Kızılbudak Çalışkan S., Sezer Y., Karayel S., Hansen A. K., Gill T. L.  
2nd International Workshop: Constructive Mathematical Analysis, Konya, Turkey, 6 - 08 July 2023, pp.10
- II. **On The Second Regularized Trace Formula of A Second Order Differential Operator**  
Gül E., Karayel S.

2nd International Workshop: Constructive Mathematical Analysis, Konya, Turkey, 6 - 08 July 2023, pp.21

**III. On a Second Regularized Trace Formula**

Gül E., Karayel S.

2nd International E-Conference on Mathematical and Statistical Sciences: A Selcuk Meeting, Konya, Turkey, 5 - 07 June 2023, pp.108

**IV. On the Number of Negative Eigenvalues of a Differential Operator with Operator Coefficient**

KARAYEL S., Adıgüzelov E.

Operator Theory, Analysis and Mathematical Physics Conference, 01 June 2012

**V. The Regularized Trace Formula For a Differential Operator of Fourth order with bounded operator Coefficient**

SEZER Y., BAKŞI Ö., KARAYEL S.

International Conference on Mathematical Sciences, Bolu, Turkey, 23 - 27 November 2010

**VI. The Regularized Trace Formula for a Differential Operator of Fourth Order with Bounded Operator Coefficient**

Bakşı Ö., KARAYEL S.

Int. Conference on Mathematical Science, 01 November 2010

**VII. The Asymptotic Formula for the Subtraction of eigenvalues of a second order Differential operator**

Bakşı Ö., Karayel S., Sezer Y.

International Symposium on Analysis and theory of Functions, İstanbul Kültür University, İstanbul, Turkey, 24 - 26 August 2009, pp.41-42

**VIII. Yarı Eksende verilmiş Sturm- Liouville Operatörünün Negatif Özdeğerlerinin Karelerinin Toplamının Asimtotik Davranışı**

KARAYEL S., Adıgüzelov E.

XIX. Ulusal Matematik Sempozyumu, 01 August 2006

## **Supported Projects**

GÜL E., KARAYEL S., Project Supported by Higher Education Institutions, Sınırlı Operatör Katsayılı Sturm-Liouville Operatörünün İkinci Düzenli İzinin Hesaplanması, 2023 - 2023