

## Assoc. Prof. SERHAN EKER

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAR-7568-2020

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### Education Information

Doctorate, Anadolu University, Fen Bilimleri Enstitüsü, Matematik Anabilim Dalı, Turkey 2010 - 2016

Postgraduate, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Turkey 2007 - 2009

Undergraduate, Ege University, Turkey 2002 - 2007

### Dissertations

Doctorate, Seiberg-Witten denklemlerinin genelleştirilmeleri, Anadolu University, Fen Bilimleri Enstitüsü, 2016

Postgraduate, s-metrik geometrisi üzerine, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, 2009

### Research Areas

Mathematics, Differential Geometry, Global Analysis, Analysis on Manifolds, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Marmara University, Faculty of Arts and Sciences, Mathematics, 2022 - Continues

Associate Professor, Agri Ibrahim Cecen University, 2020 - 2022

Assistant Professor, Agri Ibrahim Cecen University, 2017 - 2020

Research Assistant, Anadolu University, Fen Fakültesi, Matematik Bölümü, 2011 - 2016

### Academic and Administrative Experience

Head of Department, Agri Ibrahim Cecen University, 2017 - 2022

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

#### I. Some estimates on the spin-submanifolds

EKER S.

Turkish Journal of Mathematics, vol.48, no.1, 2024 (SCI-Expanded)

#### II. Generalization of Kim's estimates in terms of the trace of divergence-free symmetric tensor

Eker S.

- Mathematical Methods in the Applied Sciences, vol.45, no.9, pp.5471-5482, 2022 (SCI-Expanded)
- III. **Some Estimates Over Spacelike Spin Hypersurfaces of Lorentzian Manifold**  
Eker S.  
Advances in Applied Clifford Algebras, vol.32, no.1, 2022 (SCI-Expanded)
- IV. **Estimation on the Spin twisted Dirac operators**  
EKER S.  
Hacettepe Journal of Mathematics and Statistics, vol.51, no.6, pp.1621-1629, 2022 (SCI-Expanded)
- V. **Eigenvalue Estimates in Terms of the Extrinsic Curvature**  
Eker S., Değirmenci N.  
Iranian Journal of Science and Technology, Transaction A: Science, vol.45, no.4, pp.1411-1416, 2021 (SCI-Expanded)
- VI. **Lower Bounds for the Eigenvalues of the Dirac Operator on Spin  $c$  Manifolds**  
Eker S.  
Iranian Journal of Science and Technology, Transaction A: Science, vol.44, no.1, pp.251-257, 2020 (SCI-Expanded)
- VII. **Seiberg-witten-like equations on the strictly pseudoconvex CR-3 manifolds**  
Eker S.  
Bulletin of the Korean Mathematical Society, vol.56, no.6, pp.1551-1567, 2019 (SCI-Expanded)
- VIII. **Seiberg-Witten-Like equations on the strictly-pseudoconvex CR 7-manifolds**  
Eker S.  
Miskolc Mathematical Notes, vol.20, no.1, pp.233-243, 2019 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Limiting Case of the Spin Hypersurface Dirac Operator arising in the positive mass theorem for black holes**  
EKER S.  
APPLIED MATHEMATICS AND NONLINEAR SCIENCES, vol.6, no.1, pp.459-466, 2021 (ESCI)
- II. **Eigenvalue Estimates Using Harmonic 1-Form of Constant Length for The Spin $c$  Dirac Operator**  
EKER S.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, no.2, pp.1213-1223, 2020 (Peer-Reviewed Journal)
- III. **Lower Bound Eigenvalue Problems of the Compact Riemannian Spin-Submanifold Dirac Operator**  
EKER S.  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.13, no.1, pp.63-69, 2020 (Peer-Reviewed Journal)
- IV. **Seiberg-Witten-like equations on 6-manifolds without self-duality**  
EKER S., DEĞİRMENCİ N.  
Differential Geometry-Dynamical Systems, vol.21, pp.63-74, 2019 (Peer-Reviewed Journal)
- V. **THE BOCHNER VANISHING THEOREMS ON THE CONFORMAL KILLING VECTOR FIELDS**  
EKER S.  
Turkish World Mathematical Society Journal of Applied and Engineering Mathematics, vol.9, no.1, pp.114-120, 2019 (Scopus)
- VI. **Seiberg-Witten-Like Equations on 8-Manifolds without Self-Duality**  
EKER S.  
Celal Bayar Üniversitesi Fen Bilimleri Dergisi, vol.14, no.4, pp.429-433, 2018 (Peer-Reviewed Journal)
- VII. **Seiberg-Witten-Like Equations Without Self-Duality on Odd Dimensional Manifolds**  
EKER S., DEĞİRMENCİ N.  
JOURNAL OF PARTIAL DIFFERENTIAL EQUATIONS, vol.31, no.4, pp.291-303, 2018 (Peer-Reviewed Journal)
- VIII. **Seiberg-Witten equations on 8-dimensional manifolds with different self-duality**  
EKER S.  
BALKAN JOURNAL OF GEOMETRY AND ITS APPLICATIONS, vol.22, no.2, pp.37-43, 2017 (Scopus)
- IX. **8-BOYUTTA HİPERBOLİK UZAYLARDA SEIBERG –WITTEN DENKLEMLERİ**

EKER S., BULUT Ş., DEĞİRMENCİ N.

Anadolu Üniversitesi Bilim ve Teknoloji Dergisi :B-Teorik Bilimler, vol.5, no.1, pp.34-48, 2017 (Peer-Reviewed Journal)

X. **THE EQUIVALENCE OF TWO APPROACHES OF SEIBERG-WITTEN EQUATIONS IN 8-DIMENSION**

EKER S.

Konuralp Journal of Mathematics, vol.5, no.1, pp.187-192, 2017 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Eigenvalue Estimates over Compact Spacelike Spin Hypersurfaces of Lorentzian Manifolds**  
EKER S.  
4th International Conference on Mathematical and Related Sciences(ICMRS 2021), Turkey, 22 October 2021
- II. **Some Estimates on the Spin Manifolds by Using beta-twist Dirac operator**  
EKER S.  
4th International Conference on Mathematical and Related Sciences (ICMRS 2021), Turkey, 22 October 2021
- III. **Some Estimates in Terms of The Divergencefree Symmetric Tensor and It's Trace**  
EKER S.  
18th International Geometry Symposium, İnönü University, Malatya, Malatya, Turkey, 12 July 2021
- IV. **Eigenvalue Estimates Using Penrose-Like Operator on the Spinc-Manifolds**  
EKER S.  
4th International Conference on Advance in Natural Applied Sciences, Ağrı, Turkey, 19 - 22 June 2019
- V. **Modified Spinorial Levi-Civita Connection on the Spin Hypersurfaces of Manifolds**  
EKER S.  
17th International Geometry Symposium, Erzincan, Turkey, 19 - 22 June 2019
- VI. **Eigenvalue Estimates Involving Energy-Momentum Tensor on the Spin Manifolds**  
EKER S.  
2nd International Conference on Mathematical and Related Sciences Icmrs 2019, Antalya, Turkey, 27 - 30 April 2019
- VII. **Curvature Equation of Monopole Equations in Higher Dimensions**  
EKER S.  
3rd International Conference on Advances in Natural and Applied Sciences – ICANAS 2018, Antalya, Turkey, 9 - 12 May 2018
- VIII. **Seiberg-Witten equations on 8-Dimensional Manifolds Without Self-Duality**  
EKER S.  
2nd International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 18 - 21 April 2017
- IX. **Seiberg Witten Equations on 6-Dimensional manifold Without Duality**  
EKER S., DEĞİRMENCİ N.  
14th International Geometry Symposium Pamukkale University Denizli/TURKEY, Denizli, Turkey, 25 - 28 May 2016
- X. **General Setting for Higher Dimensional Seiberg-Witten Equations**  
DEĞİRMENCİ N., EKER S.  
International Conference on Quantum Science and Applications ( ICQSA), Eskişehir, Turkey, 25 - 27 May 2016
- XI. **Some Properties of Quadratic Map on Spinors in Higher Dimensions**  
EKER S., DEĞİRMENCİ N.  
Algebra,Geometry and Topology of Singularities, Galatasaray University, İstanbul, Turkey, 8 - 14 May 2016
- XII. **Seiberg Witten Equations on Hyperbolic Spaces**  
EKER S., BULUT Ş., DEĞİRMENCİ N.  
Conference of the Relativity and Geometry-in Memory of A.Lichnerowicz, Paris, France, 15 - 16 December 2015
- XIII. **Seiberg-Witten Equations on 8-Dimensional Manifolds**  
EKER S., DEĞİRMENCİ N.  
4th INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS(IECMSA-

2015), Atina, Greece, 31 August - 03 September 2015

XIV. **8-Boyutlu Seiberg-Witten Denklemleri İçin Alternatif Bir Formül**

EKER S., DEĞİRMENCİ N.

13. Geometri Sempozyumu, İstanbul, Turkey, 27 - 30 July 2015

## **Metrics**

Publication: 32

Citation (Scopus): 14

H-Index (Scopus): 2