

Prof. MURAT BEKAR

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: W-1777-2017

ScopusID: 55391628300

Yoksis Researcher ID: 42318

Education Information

Postgraduate, Kütahya Dumlupınar University, Sosyal Bilimler Enstitüsü, İşletme, Turkey 2023 - Continues

Undergraduate, Anadolu University, Faculty Of Business Administration, Department Of Business, Turkey 2015 - 2019

Associate Degree, Anadolu University, Open Education Faculty, Department Of Law, Turkey 2012 - 2015

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), Turkey 2011 - 2014

Postgraduate, Kütahya Dumlupınar University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), Turkey 2006 - 2009

Postgraduate, Ankara University, Eğitim Bilimleri Enstitüsü, İlköğretim Anabilim Dalı, Turkey 2003 - 2006

Undergraduate, Ankara University, Fen Fakültesi, Matematik Bölümü, Turkey 1998 - 2003

Foreign Languages

English, C1 Advanced

German, B1 Intermediate

Dissertations

Doctorate, Kuarterniyonların involüsyonları ve anti_involüsyonları, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), 2014

Postgraduate, Kuarterniyonların lie grup yapıları üzerine, Kütahya Dumlupınar University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), 2009

Research Areas

Natural Sciences

Academic Titles / Tasks

Associate Professor, Gazi University, Gazi Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi, 2020 - Continues

Associate Professor, Ankara Hacı Bayram Veli University, Polatlı Fen-Edebiyat Fakültesi, Matematik Bölümü, 2018 - 2020

Research Assistant, Necmettin Erbakan University, Faculty Of Science, Department Of Mathematics And Computer

Science, 2011 - 2017

Academic and Administrative Experience

Ankara Hacı Bayram Veli University, Polatlı Fen-Edebiyat Fakültesi, Matematik Bölümü, 2019 - 2020

Vice Dean, Ankara Hacı Bayram Veli University, Polatlı Faculty Of Arts And Sciences, 2018 - 2019

Gazi University, Polatlı Fen-Edebiyat Fakültesi, 2017 - 2018

Courses

Hareket Geometrisi, Postgraduate, 2022 - 2023

Yüksek Lisans Tezine Hazırlık, Postgraduate, 2022 - 2023

Yüksek Lisans Tez Çalışması, Postgraduate, 2022 - 2023

Anali 1, Undergraduate, 2021 - 2022

Seminer, Postgraduate, 2021 - 2022

Öğretmenlik Uygulaması, Undergraduate, 2022 - 2023

Analitik Geometri 1, Undergraduate, 2022 - 2023

Analize Giriş, Undergraduate, 2022 - 2023

Diferansiyel Geometri II (BAHAR), Undergraduate, 2017 - 2018

Geometri II (BAHAR), Undergraduate, 2017 - 2018

Analitik Geometri I (YAZ), Undergraduate, 2017 - 2018

Geometri I (GÜZ), Undergraduate, 2017 - 2018

Diferansiyel Geometri II (BAHAR), Undergraduate, 2017 - 2018

Geometri I (YAZ), Undergraduate, 2017 - 2018

Hareket Geometrisi II (BAHAR), Undergraduate, 2017 - 2018

Araştırma Projesi II (BAHAR), Undergraduate, 2017 - 2018

Diferansiyel Geometri I (GÜZ), Undergraduate, 2017 - 2018

Hareket Geometrisi I (GÜZ), Undergraduate, 2017 - 2018

Araştırma Projesi I (GÜZ), Undergraduate, 2017 - 2018

Diferansiyel Geometri I (GÜZ), Undergraduate, 2017 - 2018

Advising Theses

Bekar M., Şahan T., İnvölüsyonların Geometrisi, Postgraduate, H.PENBEGÜL(Student), 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Geometric 3-space and multiplicative quaternions**
Aslan S., BEKAR M., YAYLI Y.
International Journal of Geometric Methods in Modern Physics, vol.20, no.9, 2023 (SCI-Expanded)
- II. **Ruled surfaces corresponding to hyper-dual curves**
Aslan S., BEKAR M., YAYLI Y.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.51, no.1, pp.187-198, 2022 (SCI-Expanded)
- III. **Ruled Surfaces in Minkowski 3-space and Split Quaternion Operators**
Aslan S., BEKAR M., YAYLI Y.
ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.31, no.5, 2021 (SCI-Expanded)
- IV. **Legendre Curves and the Singularities of Ruled Surfaces Obtained by Using Rotation Minimizing Frame**

BEKAR M., Hathout F., YAYLI Y.

UKRAINIAN MATHEMATICAL JOURNAL, vol.73, no.5, pp.686-700, 2021 (SCI-Expanded)

- V. **Ruled surfaces constructed by quaternions**
Aslan S., BEKAR M., Yayli Y.
Journal of Geometry and Physics, vol.161, 2021 (SCI-Expanded)
- VI. **Hyper-dual split quaternions and rigid body motion**
Aslan S., Bekar M., YAYLI Y.
JOURNAL OF GEOMETRY AND PHYSICS, vol.158, 2020 (SCI-Expanded)
- VII. **Involutions in split semi-quaternions**
Bekar M., YAYLI Y.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.41, no.12, pp.4491-4505, 2018 (SCI-Expanded)
- VIII. **Ruled surfaces and tangent bundle of unit 2-sphere**
Hathout F., Bekar M., Yayli Y.
INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS, vol.14, no.10, 2017 (SCI-Expanded)
- IX. **N-Legendre and N-Slant curves in the unit tangent bundle of surfaces**
Hathout F., Bekar M., Yayli Y.
KUWAIT JOURNAL OF SCIENCE, vol.44, no.3, pp.28-33, 2017 (SCI-Expanded)
- X. **Lie Algebra of Unit Tangent Bundle**
Bekar M., Yayli Y.
ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.27, no.2, pp.965-975, 2017 (SCI-Expanded)
- XI. **Semi-Euclidean quasi-elliptic planar motion**
Bekar M., Yayli Y.
INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS, vol.13, no.7, 2016 (SCI-Expanded)
- XII. **Involutions in Dual Split-Quaternions**
Bekar M., Yayli Y.
ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.26, no.2, pp.553-571, 2016 (SCI-Expanded)
- XIII. **Dual Quaternion Involutions and Anti-Involutions**
Bekar M., Yayli Y.
ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.23, no.3, pp.577-592, 2013 (SCI-Expanded)
- XIV. **Involutions of Complexified Quaternions and Split Quaternions**
Bekar M., Yayli Y.
ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.23, no.2, pp.283-299, 2013 (SCI-Expanded)

Articles Published in Other Journals

- I. **Singularities of rectifying developable surfaces of Legendre curves on UTS^2**
Bekar M., Hathout F., Yayli Y.
International Journal of Geometry, vol.11, no.4, pp.20-33, 2022 (Peer-Reviewed Journal)
- II. **DEVELOPABLE SURFACES GENERATED BY USING MOVING FRAME**
BEKAR M., HATHOUT F., YAYLI Y.
JOURNAL OF SCIENCE AND ARTS, vol.22, no.2, pp.26-438, 2022 (ESCI)
- III. **Lie Algebra of Unit Tangent Bundle in Minkowski 3-Space**
Bekar M.
INTERNATIONAL ELECTRONIC JOURNAL OF GEOMETRY, vol.12, no.1, pp.1-8, 2019 (ESCI)
- IV. **Slant Helix Curves and Acceleration Centers**
Bekar M., YAYLI Y.
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.32, no.1, pp.256-271, 2019 (ESCI)
- V. **Tangent bundle of pseudo-sphere and ruled surfaces in Minkowski 3-space**
BEKAR M., FOUZI H., YAYLI Y.
General Letters in Mathematics, vol.5, no.2, pp.58-70, 2018 (Peer-Reviewed Journal)

- VI. **N-Legendre and N-slant curves in the unit tangent bundle of Minkowski surfaces**
Bekar M., Hathout F., Yayli Y.
ASIAN-EUROPEAN JOURNAL OF MATHEMATICS, vol.11, no.1, 2018 (ESCI)
- VII. **Involutions in Quasi-Quaternions**
Bekar M., Yayli Y.
JOURNAL OF ADVANCED PHYSICS, vol.6, no.3, pp.459-463, 2017 (Peer-Reviewed Journal)
- VIII. **Slant Helix Curves and Acceleration Centers in Minkowski 3-Space E-1(3)**
Bekar M., Yayli Y.
JOURNAL OF ADVANCED PHYSICS, vol.6, no.1, pp.133-141, 2017 (Peer-Reviewed Journal)
- IX. **Slant Helix Curves and Acceleration Centers in Minkowski 3 Space**
BEKAR M., YAYLI Y.
Journal of Advanced Physics, vol.6, no.1, pp.133-141, 2017 (ESCI)
- X. **Kinematics of Dual Quaternion Involution Matrices**
BEKAR M., YAYLI Y.
SDU Journal of Science, vol.11, no.2, pp.121-132, 2016 (Peer-Reviewed Journal)
- XI. **Dual Quasi Elliptic Planar Motion**
BEKAR M.
Mathematical Sciences and Applications E-Notes, vol.4, no.1, pp.136-143, 2016 (Peer-Reviewed Journal)
- XII. **Involution Matrices of Real Quaternions**
BEKAR M., YAYLI Y.
Caspian Journal of Mathematical Sciences, vol.5, no.1, pp.7-16, 2016 (Peer-Reviewed Journal)
- XIII. **INVOLUTIONS IN SEMI-QUATERNIONS**
Bekar M., Yayli Y.
JOURNAL OF GEOMETRY AND SYMMETRY IN PHYSICS, vol.41, pp.1-16, 2016 (ESCI)
- XIV. **Biquaternions Lie Algebra and Complex Projective Spaces**
BEKAR M., YAYLI Y.
Caspian Journal of Mathematical Sciences, vol.4, no.2, pp.227-240, 2015 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **M E B ORTAÖĞRETİM MATEMATİK 9 Kod Nu 1055**
BEKAR M., TEMEL S.
Gezegen Yayıncılık Mat. Bilg. Kırt. İnş. Mim. Turz. İth. İhr. San. ve Tic. Ltd. Şti, Ankara, 2014

Refereed Congress / Symposium Publications in Proceedings

- I. **Kuaterniyonlar ve İnvölüsyonları**
PENBEGÜL H., BEKAR M., ŞAHAN T.
14. Ankara Matematik Günleri AMG 2019, Turkey, 28 - 29 June 2019
- II. **Involutions in Elliptic Quaternion**
ES H., BEKAR M.
2nd International Conference on Mathematical Advances and Applications (ICOMAA - 2019), 3 - 05 May 2019
- III. **Involutions in Elliptic Biquaternions**
ES H., BEKAR M.
2nd International Conference on Mathematical Advances and Applications (ICOMAA - 2019), 3 - 05 May 2019
- IV. **Some Algebraic Properties of Elliptic Biquaternions**
BEKAR M., YAYLI Y.
Internatioanal Conference on Pure and Applied Mathematics (ICPAM - VAN 2018), 11 - 13 September 2018
- V. **Legendre Curves and Rectifying Developable Surfaces**

- BEKAR M., ES H., YAYLI Y.
2nd International Scientific and Vocational Studies Congress, 5 - 08 July 2018
- VI. **Rotation Minimizing Frame and Ruled Surfaces**
BEKAR M., ES H., YAYLI Y.
2nd International Scientific and Vocational Studies Congress, 5 - 08 July 2018
- VII. **Screw Motions in Minkowski 3-Space and Dual Split Quaternions**
BEKAR M., YAYLI Y.
2nd International Scientific and Vocational Studies Congress, 5 - 08 July 2018
- VIII. **Singularities of Ruled Surfaces and Legendre Curves**
BEKAR M., YAYLI Y.
International Conference on Operators in Morrey-type Spaces and Applications (OMTSA2017), 10 - 13 July 2017
- IX. **A Study on Complexified Semi-Quaternions**
BEKAR M., YAYLI Y.
International Conference on Operators in Morrey-type Spaces and Applications (OMTSA2017), 10 - 13 July 2017
- X. **Legendre Curves and Rotation Minimizing Frames**
BEKAR M., YAYLI Y.
15th International Geometry Symposium, 3 - 06 July 2017
- XI. **Semi-Quaternions and Unit Tangent Bundle of Euclidean 3-Space**
BEKAR M., YAYLI Y.
15th International Geometry Symposium, 3 - 06 July 2017
- XII. **Split Semi-Quaternions and Unit Tangent Bundle of Minkowski 3-Space**
BEKAR M., YAYLI Y.
15th International Geometry Symposium, 3 - 06 July 2017
- XIII. **Unit Dual Lorentzian Sphere and Tangent Bundle of Lorentzian Unit 2 Sphere**
BEKAR M., YAYLI Y.
3rd International Intuitionistic Fuzzy Sets and Contemporary Mathematics Conference (IFSCOM2016), 29 August - 01 September 2016
- XIV. **Involution Matrices of $1/4$ Quaternions**
BEKAR M.
3rd International Intuitionistic Fuzzy Sets and Contemporary Mathematics Conference (IFSCOM2016), 29 August - 01 September 2016
- XV. **Algebraic Properties of Dual Quasi Quaternions**
BEKAR M., YAYLI Y.
3rd International Intuitionistic Fuzzy Sets and Contemporary Mathematics Conference (IFSCOM2016), 29 August - 01 September 2016
- XVI. **Unit Dual Sphere and Tangent Bundle of Unit 2 Sphere**
BEKAR M., YAYLI Y.
International Congress on Fundamental and Applied Sciences (ICFAS2016), 22 - 26 August 2016
- XVII. **Dual Semi Quaternions and Planar Motions**
BEKAR M.
International Congress on Fundamental and Applied Sciences (ICFAS2016), 22 - 26 August 2016
- XVIII. **Split Semi Quaternions and Semi Euclidean Planar Motions**
BEKAR M., YAYLI Y.
14th International Geometry Symposium, Turkey, 25 May - 28 June 2016
- XIX. **Dual Split Semi Quaternions and Planar Motions**
BEKAR M., YAYLI Y.
International Conference on Mathematics and Mathematics Education (ICMME-2016), Turkey, 12 - 14 May 2016
- XX. **Semi Quaternions and Planar Motions**
BEKAR M., YAYLI Y.
International Conference on Natural Science and Engineering (ICNASE'16), Turkey, 19 - 20 March 2016
- XXI. **Semi Kuaterniyonların Diferansiyel Geometrisi**

BEKAR M., YAYLI Y.

XIII. Geometri Sempozyumu, Turkey, 27 - 30 July 2015

XXII. **Slant Helix Curves and Acceleration Centers in Minkowski 3 Space**

BEKAR M., YAYLI Y.

XII. Geometri Sempozyumu, Turkey, 23 - 26 June 2014

XXIII. **Slant Helix Curves and Acceleration Centers**

BEKAR M., YAYLI Y.

Karatekin Mathematics Days-2014, Turkey, 11 - 13 June 2014

XXIV. **Involutions and Anti Involutions of Quaternion Matrices**

BEKAR M., YAYLI Y.

The 4th International Conference on Matrix Analysis and Applications (ICMAA 2013), Turkey, 2 - 05 July 2013

XXV. **Dual Quaternions and Screw Motions**

BEKAR M., YAYLI Y.

International Conference on Applied Analysis and Mathematical Modeling (ICAAMM 2013), Turkey, 2 - 05 June 2013

Supported Projects

Yaylı Y., Bekar M., Kahveci D., Project Supported by Higher Education Institutions, BAP Projesi, 2016 - 2018

Metrics

Publication: 54

Citation (WoS): 63

Citation (Scopus): 49

H-Index (WoS): 5

H-Index (Scopus): 4