

Prof. Şenay Baydaş

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Education Information

Doctorate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2001 - 2006

Postgraduate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, Turkey 1997 - 2000

Undergraduate, Van Yüzüncü Yil University, Fen Edebiyat Fakültesi, Matematik, Turkey 1993 - 1997

Dissertations

Doctorate, 2x3R Sabit Çatı Değişimli Robotik Modelleme, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, 2006

Research Areas

Mathematics, Geometry, Natural Sciences

Academic Titles / Tasks

Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2019 - Continues

Associate Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2013 - 2019

Assistant Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2007 - 2013

Research Assistant, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2003 - 2007

Academic and Administrative Experience

Van Yüzüncü Yil University, Fen Fakültesi, Matematik, 2020 - Continues

Van Yüzüncü Yil University, Matematik, 2007 - Continues

Deputy Head of Department, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2008 - 2008

Courses

Mekanizmaların Kinematığı ve Uygulamaları II, Postgraduate, 2016 - 2017, 2018 - 2019

Manifoldlar Üstünde Tensör Analizi, Doctorate, 2018 - 2019

Robotik II, Postgraduate, 2016 - 2017, 2018 - 2019

Robotik I, Postgraduate, 2016 - 2017, 2018 - 2019

Mekanizmaların Kinematığı ve Uygulamaları II, Doctorate, 2018 - 2019

Oklit Dışı Geometrilere, Postgraduate, 2016 - 2017, 2018 - 2019

Analitik Geometri II, Undergraduate, 2011 - 2012

Advising Theses

Baydaş Ş., Split Kuaterniyonlarla Mekanizma Kinematığı, Postgraduate, M.Siddik(Student), 2019

Baydaş Ş., Galois Teorisi, Palindromik Polinomlar ve Sıfırlarının Bulunuşu için Algoritmalar, Postgraduate, F.Tutar(Student), 2018

Baydaş Ş., R3 deki Yüzey Eğrilerinin Bezier Eğrileri ve Matlab Uygulamaları, Postgraduate, C.Yılmaz(Student), 2018

Baydaş Ş., 2-3RRR Mekanizma Zincirinin Kinematik Analizi ve Matlab Uygulamaları, Postgraduate, B.Kalkan(Student), 2018

Baydaş Ş., Klasik Mekanikte Eylem Fonksiyonelinin İkinci Varyasyonu, Postgraduate, F.Gürman(Student), 2017

Baydaş Ş., Matlab Uygulamalı Euler-Poinsot Yaklaşımı ile Bir Yerdeğiştirmenin Eylemsizlik Eğrisi, Postgraduate, M.Dilan(Student), 2017

Baydaş Ş., Kinematics of Delta Robot with Matlab Applications, Postgraduate, F.Nasrullin(Student), 2017

Baydaş Ş., Relativistik Kinematik, Postgraduate, R.Kara(Student), 2013

Baydaş Ş., Bumerang hareketinin kinematik açıdan incelenmesi, Postgraduate, Y.Muslu(Student), 2010

Jury Memberships

Post Graduate, Tez Savunma, Bitlis Eren Üniversitesi, January, 2020

Post Graduate, Tez Savunma, Van Yüzüncü Yıl Üniversitesi, December, 2019

Doctoral Examination, Doktora Yeterlilik Sınavı, Van Yüzüncü Yıl Üniversitesi, November, 2019

Post Graduate, Tez Savunma, Van Yüzüncü Yıl Üniversitesi, May, 2018

Doctoral Examination, Doktora Yeterlik Sınavı, Atatürk Üniversitesi, July, 2017

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, June, 2017

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, May, 2017

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, March, 2017

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, March, 2016

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2016

Doctorate, Doktora Tez Savunması, Atatürk Üniversitesi, December, 2015

Doctorate, Doktora Tez Savunma, Van Yüzüncü Yıl Üniversitesi, January, 2015

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2013

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2013

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2013

Post Graduate, Yüksek Lisans Tez Savunması, Van Yüzüncü Yıl Üniversitesi, January, 2010

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **The cissoid of Diocles in the Lorentz-Minkowski plane**
Baydaş Ş., Karakaş B.
TURKISH JOURNAL OF MATHEMATICS, vol.43, no.3, pp.1232-1240, 2019 (Journal Indexed in SCI)
- II. **Defining a curve as a Bezier curve**
Baydaş Ş., Karakaş B.
JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, vol.13, no.1, pp.522-528, 2019 (Journal Indexed in SCI)
- III. **Relation between Press Intensity and Angular Velocity at a RPPP Mechanism**
Baydaş Ş., Karakaş B.

Articles Published in Other Journals

- I. **Design a Mechanism with Denavit-Hartenberg Representation and Dual Quaternion**
Baydaş Ş., Karakaş B.
Journal of Mathematics, vol.4, pp.5-13, 2018 (Refereed Journals of Other Institutions)
- II. **An Umbrella Surface in \mathbb{R}^3 as an Orbit Surface**
Baydaş Ş., Karakaş B.
JOURNAL OF INFORMATICS AND MATHEMATICAL SCIENCES, vol.-, pp.1-9, 2018 (Refereed Journals of Other Institutions)
- III. **A New Approach to Meusnier's Theorem in Game Theory**
Baydaş Ş., Karakaş B.
Applied Mathematical Sciences, vol.-, pp.1-8, 2017 (Refereed Journals of Other Institutions)
- IV. **A GEOMETRIC APPROACH TO UMBRELLA MOTION IN \mathbb{R}^3**
Baydaş Ş., Karakaş B.
Hadronic Journal, vol.40, no.4, pp.345-352, 2017 (Refereed Journals of Other Institutions)
- V. **Lie Group Structure on the Set of $BP(\mathbb{R}^2)$**
Baydaş Ş., Karakaş B.
International Mathematical Forum, vol.-, pp.1-6, 2017 (Refereed Journals of Other Institutions)
- VI. **A Controllable Space Motion Along A Bezier Curve**
Baydaş Ş.
Algebras, Groups and Geometries, vol.34, no.3, pp.213-224, 2017 (Refereed Journals of Other Institutions)
- VII. **An action of a regular curve on \mathbb{R}^3 and Matlab applications**
Baydaş Ş., Karakaş B.
JOURNAL OF INFORMATICS AND MATHEMATICAL SCIENCES, vol.5, no.3, pp.133-141, 2013 (Refereed Journals of Other Institutions)
- VIII. **Modeling boomerang motion in Euclidean plane**
Baydaş Ş., Karakaş B., NURI ALMALI M.
Applied Mathematical Sciences, vol.6, pp.4067-4074, 2012 (Refereed Journals of Other Institutions)
- IX. **Matlab Applications for Cone Surfaces of 1-parameter Motions**
Baydaş Ş., Karakaş B.
International Mathematical Forum, vol.7, no.38, pp.1885-1893, 2012 (Other Refereed National Journals)
- X. **Transitions Among $SO(3)/\sim$, S^2/\sim and QO/\sim ,**
Baydaş Ş., Karakaş B.
International Mathematical Forum, vol.7, no.38, pp.1895-1904, 2012 (Refereed Journals of Other Institutions)
- XI. **Modelling of the 3R Motion at Non-Parallel Planes**
Baydaş Ş., Karakaş B.
JOURNAL OF INFORMATICS AND MATHEMATICAL SCIENCES, vol.4, no.1, pp.85-92, 2012 (Other Refereed National Journals)
- XII. **n-fold Product and Deformation Mapping on \mathbb{R}^n and Matlab Applications,**
Karakas B., Baydas S.
Adv. Theor. Appl. Mech., vol.5, no.4, pp.191-198, 2012 (Refereed Journals of Other Institutions)
- XIII. **A Normed Projection Mapping on Unit Sphere**
Baydaş Ş., İşleyen Ş.
YYÜ Fen Bilimleri Dergisi, vol.16, no.1, pp.5-11, 2011 (National Refreed University Journal)
- XIV. **A Group Structure on S^2/\sim**
Baydaş Ş., Karakaş B.
Groups, Algebras and Geometries, no.28, pp.225-232, 2011 (Refereed Journals of Other Institutions)
- XV. **Kinematics of 2x3R Robotics Modelling: Climbing The Stairs Form,**

Baydaş Ş., Karakaş B.

Hadronic Journal, vol.1, pp.303-320, 2010 (Refereed Journals of Other Institutions)

XVI. Kinematics of 2x3R Robotics Modelling: Walking Form

Baydaş Ş., Karakaş B.

Advances in Applied Mathematical Analysis, vol.1, no.2, pp.1-10, 2006 (Refereed Journals of Other Institutions)

XVII. Quaternion Forms of the Motions Defined as 2x3R Robotics Modelling

Baydaş Ş., Karakaş B.

Math Track, vol.-, pp.65-83, 2006 (Refereed Journals of Other Institutions)

Books & Book Chapters

I. Matlab Uygulamalı Analitik Geometri

Karakaş B., Baydaş Ş.

Palme Yayıncılık, Ankara, 2019

II. Analitik Geometri

Karakaş B., Baydaş Ş.

Palme Yayıncılık, Ankara, 2008

Refereed Congress / Symposium Publications in Proceedings

I. Pronation Motion in the Concepts of Artificial Intelligence Approach

Karakaş B., Baydaş Ş.

ICAI4.0 - International Conference on Artificial Intelligence towards Industry 4.0, Hatay, Turkey, 14 - 16 November 2019, pp.5

II. A New Algorithm to Define the Control Points for a Bezier Curve

Karakaş B., Baydaş Ş.

17th International Geometry Symposium, Erzincan, Turkey, 19 - 22 July 2019, pp.148

III. Transferring of Subspaces Between Metric Spaces and Comparison of Their Properties

Karakaş B., Baydaş Ş.

17th International Geometry Symposium, Erzincan, Turkey, 19 - 22 July 2019, pp.147

IV. Galois theory and palindromic-polynomials

Tutar F., Baydaş Ş., Karakaş B.

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.139

V. On Mechanisms in the Three-Dimensional Minkowski Space

Baydaş Ş., Karakaş B.

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.57

VI. On the Orbit Surface of Two Parameter Motion

Tuğrul F., Baydaş Ş., Karakaş B.

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.136

VII. Kinematics of 4R and 2RPR mechanisms in Clifford algebra

Dörma V., Karakaş B., Baydaş Ş.

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.70

VIII. Inverse kinematics computation for a 6-DOF articulated robot arm using conformal geometric algebra

Kalkan B., Baydaş Ş., Karakaş B.

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.89

- IX. **Non-Euclidean form of Minkowski Space and 4-Dimensional Geometry**
Karakas B., Baydas S.
16th International Geometry Symposium 2018, Manisa, Turkey, 4 - 07 July 2018, vol., pp.1
- X. **D-H Representation in Lorentzian Space and Mechanical Applications**
Baydas S.
16th International Geometry Symposium 2018, Manisa, Turkey, 4 - 07 July 2018, vol., pp.2
- XI. **A Different Wedge Product using Cross Product**
Baydas S., Karakas B.
International Conference on Mathematics and Mechanics 2018, Viyana, Austria, 15 - 16 May 2018, pp.52
- XII. **A New Technique for Finding of the Control Points of Bezier Curves**
Karakas B., Baydas S.
International Conference on Mathematics and Mechanics 2018, Viyana, Austria, 15 - 16 May 2018, pp.26
- XIII. **2x3R Mechanism with D-H Representation and Dual Quaternions**
Baydas S., Karakas B.
International Conference on Mathematics and Mechanics 2018, Viyana, Austria, 15 - 16 May 2018, pp.53
- XIV. **Pronation and Supination with Stewart Platform**
Karakas B., Baydas S.
International Conference on Mathematics and Mechanics 2018, Viyana, Austria, 15 - 16 May 2018, pp.27
- XV. **Geometry and kinematics of 2RRS-UPS Stewart manipulator with moving base platform**
Kalkan B., Baydas S., Karakas B.
Caucasian Mathematics Conference, CMC II, Van, Turkey, 22 - 24 August 2017, pp.83
- XVI. **Lie group structure on the set of S1r**
Karakas B., Baydas S.
Caucasian Mathematics Conference, CMC II, Van, Turkey, 22 - 24 August 2017, pp.84
- XVII. **Simulations of mechanisms using Ge- oGebra and Matlab**
Baydas S., Karakas B.
Caucasian Mathematics Conference, CMC II, Van, Turkey, 22 - 24 August 2017, pp.38
- XVIII. **On the second variation of the action in classical mechanics**
Gürman F., Baydas S., Akkuş H., Karakas B.
Caucasian Mathematics Conference, CMC II, Van, Turkey, 22 - 24 August 2017, pp.71
- XIX. **The properties of the orbits under Lie group action**
Tuğrul F., Baydas S., Karakas B.
Caucasian Mathematics Conference, CMC II, Van, Turkey, 22 - 24 August 2017, pp.131
- XX. **An Equivalence Relation on Control Points of a Bezier Curve**
Karakas B., Baydas S.
15th International Geometry Symposium 2017, Amasya, Turkey, 3 - 06 July 2017
- XXI. **RPPPTi Mechanism with Matlab Applications**
Baydas S., Karakas B.
15th International Geometry Symposium 2017, Amasya, Turkey, 3 - 06 July 2017
- XXII. **A New Kinematical And Mathematical Modelling For 3d Printers**
Karakas B., Baydas S.
International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017, pp.656-660
- XXIII. **Displacements with n-Control Points**
Karakas B., Baydas S.
International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017, pp.692-693
- XXIV. **Construction a New Differentiable Manifold Structure on Markov Matrices**
Karakas B., Baydas S.

ICMM 2016 International Conference on Mathematics and Mechanics, Venedik, Italy, 1 - 02 May 2016, pp.6

- XXV. **GROUP STRUCTURE OF MARKOV POLYGONS**
Karakas B., Baydas S.
International Conference on Pure and Applied Mathematics (ICPAM 2015), Van, Turkey, 25 - 28 August 2015, pp.1
- XXVI. **Lie Group Structure on $n \times n$ Markov Matrix**
Baydas S., Karakas B.
International Conference on Pure and Applied Mathematics (ICPAM 2015), Van, Turkey, 25 - 28 August 2015, pp.1
- XXVII. **Special Type Stochastic Markov Lie Groups**
Karakas B., Baydas S.
XI. Geometri Sempozyumu, Ordu, Turkey, 1 - 05 July 2013, pp.1
- XXVIII. **Umbrella Surfaces in R^3 as an Orbit Surfaces**
Karakas B., Baydas S.
1st International Eurasian Conference on Mathematical Sciences and Applications, Pristina, Kosova, 3 - 07 September 2012, pp.1
- XXIX. **Umbrella Motion in R^3**
Karakas B., Baydas S.
1st International Eurasian Conference on Mathematical Sciences and Applications, Pristina, Kosova, 3 - 07 September 2012, pp.2
- XXX. **Application of Meusnier's Sphere of Saddle Surface in Game Theory**
Karakas B., Baydas S.
X. Geometri Sempozyumu, Balikesir, Turkey, 13 - 16 June 2012, pp.34
- XXXI. **Multiple Motion with One Center**
Baydas S., Karakas B.
X. Geometri Sempozyumu, Balikesir, Turkey, 13 - 16 June 2012, pp.65
- XXXII. **Deformation Product on R^n and Matlab Applications**
Baydas S., Karakas B.
The International Conference of Differential Geometry and Dynamical Systems, Bükres, Romania, 6 - 09 October 2011, pp.1-5
- XXXIII. **Matlab Applications of Cone Surfaces of 1-parameter Motion**
Baydas S., Karakas B.
The International Conference of Differential Geometry and Dynamical Systems, Bükres, Romania, 6 - 09 October 2011, pp.1
- XXXIV. **An Action of a Regular Curve on R^3 and Matlab Application**
Baydas S., Karakas B.
XXIV. Ulusal Matematik Sempozyumu, Bursa, Turkey, 7 - 10 September 2011, pp.41
- XXXV. **A Group Structure on S^2**
Baydas S., Karakas B.
IX. Geometri Sempozyumu, Samsun, Turkey, 7 - 10 June 2011, pp.55
- XXXVI. **The Planar Motion Which Has The Moving Pole Points That They Bounce Periodically**
Baydas S., Karakas B.
VIII. Geometri Sempozyumu, Antalya, Turkey, 1 - 03 May 2010, pp.96
- XXXVII. **Synchronized Motion Between The Intersecting Planes**
Karakas B., Baydas S., Erdur S.
VII. Geometri Sempozyumu, Kırşehir, Turkey, 1 - 03 July 2009, pp.53

Supported Projects

Baydas S., Project Supported by Higher Education Institutions, Lorentz Uzayında DH Temsili ve Mekanik Uygulamalar, 2018 - 2019

Karakas B., Baydas S., Project Supported by Higher Education Institutions, Stewart Platform Algoritması ile Pronasyon-

spinyasyon Hareket Modellemesi, 2017 - 2018

Baydaş Ş., Project Supported by Higher Education Institutions, N Kontrol Noktalı Kapalı Bir Bezier Uzay Eğrisi Boyunca Bumerang Hareketi Uzay Formu, 2017 - 2018

Karakaş B., Baydaş Ş., Project Supported by Higher Education Institutions, Katı Olmayan Tek Merkezli Simetrik Hareket: KOS Hareketi, 2011 - 2013

Scientific Refereeing

Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, December 2019

Conference Proceedings of Science and Technology, Other Indexed Journal, August 2019

Dumlupınar Üniversitesi Fen Bilimleri Dergisi, National Scientific Refreed Journal, August 2019

Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, National Scientific Refreed Journal, August 2019

Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, National Scientific Refreed Journal, February 2019

Applications and Applied Mathematics, Other Indexed Journal, October 2018

Applications and Applied Mathematics, Other Indexed Journal, October 2018

Journal of Taibah University for Science, Other Indexed Journal, September 2018

Robotica, SCI Journal, February 2018

Project Supported by Higher Education Institutions, February 2018

Robotica, SCI Journal, September 2017

International Journal of Physical Science, Other Indexed Journal, February 2012

Industrial Robot- An International Journal, SCI Journal, January 2012

Edit Congress and Symposium Activities

17th International Geometry Symposium, Session Moderator, Erzincan, Turkey, 2019

ICPAM 2018, Session Moderator, Van, Turkey, 2018

16th International Geometry Symposium, Session Moderator, Manisa, Turkey, 2018

Caucasian Mathematics Conference CMC II, Session Moderator, Van, Turkey, 2017

15. International Geometry Symposium, Session Moderator, Amasya, Turkey, 2017

International Conference On Mathematics And Mathematics Education, Session Moderator, Şanlıurfa, Turkey, 2017

ICPAM 2015, Session Moderator, Van, Turkey, 2015

Citations

Total Citations (WOS):1

h-index (WOS):1