

# Prof. Mustafa DÜLDÜL

## Personal Information

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## International Researcher IDs

ScholarID: 58kA4tUAAAAJ

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## Education Information

Doctorate, Ondokuz Mayıs University, Institute Of Science, Matematik, Turkey 2000 - 2004

Postgraduate, Ondokuz Mayıs University, Institute Of Science, Matematik, Turkey 1998 - 2000

Undergraduate, Ondokuz Mayıs University, Faculty Of Education, Matematik Öğretmenliği, Turkey 1994 - 1998

## Research Areas

Mathematics, Differential Geometry, Natural Sciences

## Academic Titles / Tasks

Professor, Yıldız Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2015 - Continues

Associate Professor, Yıldız Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2011 - 2015

Associate Professor, Sinop University, Faculty Of Arts And Sciences, Matematik, 2010 - 2011

Assistant Professor, Sinop University, Faculty Of Arts And Sciences, Matematik, 2007 - 2010

Assistant Professor, Ondokuz Mayıs University, Sinop Faculty Of Arts And Sciences, Matematik, 2006 - 2006

Research Assistant PhD, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Matematik, 2004 - 2005

Research Assistant, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Matematik, 1998 - 2004

## Academic and Administrative Experience

Head of Department, Yıldız Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2023 - Continues

Head of Department, Yıldız Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2017 - 2020

Yıldız Teknik Üniversitesi, Faculty of Arts & Science, Department of Mathematics, 2016 - 2017

Yıldız Teknik Üniversitesi, Kütüphane Ve Dokümantasyon Daire Başkanlığı, 2013 - 2015

## Advising Theses

- Düldül M., Integral curves connected with a framed curve, Postgraduate, Z.BÜLBÜL(Student), 2022
- Düldül M., Curvatures of intersection curve of (hyper)surfaces and their MATLAB applications, Doctorate, B.ÖZÇETİN(Student), 2021
- Düldül M., Hiperyüzeyler üzerinde eğrilik çizgilerinin diferensiyel geometrik özellikleri, Doctorate, F.ÇELİK(Student), 2020
- Düldül M., Helices according to Darboux frame and their characterizations, Doctorate, N.Macit(Student), 2019
- Düldül M., Projection areas of the surfaces obtained kinematically, Postgraduate, G.İştan(Student), 2018
- DÜLDÜL M., Normal form ile tanımlanmış hiperyüzeyler üzerine, Postgraduate, Y.Duran(Student), 2015
- DÜLDÜL M., Bir eğrinin yüzey üzerine merkezil izdüşümü üzerine, Postgraduate, B.Merih(Student), 2015
- DÜLDÜL M., Parametrik (hiper)yüzeylerin arakesit eğrisi için Willmore-benzeri metotlar, Postgraduate, Ö.Akbaba(Student), 2013
- DÜLDÜL M., Frenet eğrisi ile bağlantılı eğriler ve uygulamaları, Postgraduate, N.Gürhan(Student), 2013

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

- I. **Curvature computations for the intersection curves of hypersurfaces in Euclidean n-space**  
Özçetin B. M., Düldül M.  
Computer Aided Geometric Design, vol.84, no.2021, pp.1-14, 2021 (SCI-Expanded)
- II. **Derivation of slant helices on a given surface through new approaches**  
Duldul B. U., DÜLDÜL M.  
APPLIED MATHEMATICS AND COMPUTATION, vol.366, 2020 (SCI-Expanded)
- III. **Vector fields and planes in E-4 which play the role of Darboux vector**  
Düldül M.  
TURKISH JOURNAL OF MATHEMATICS, vol.44, no.1, pp.274-283, 2020 (SCI-Expanded)
- IV. **Extended Darboux frame curvatures of Frenet curves lying on parametric 3-surfaces**  
UYAR DÜLDÜL B., DÜLDÜL M.  
KUWAIT JOURNAL OF SCIENCE, vol.46, no.1, pp.15-23, 2019 (SCI-Expanded)
- V. **Extension of the Darboux frame into Euclidean 4-space and its invariants**  
DÜLDÜL M., Duldul B. U., Kuruoglu N., Ozdamar E.  
TURKISH JOURNAL OF MATHEMATICS, vol.41, no.6, pp.1628-1639, 2017 (SCI-Expanded)
- VI. **Relatively normal-slant helices lying on a surface and their characterizations**  
Macit N., DÜLDÜL M.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.46, no.3, pp.397-408, 2017 (SCI-Expanded)
- VII. **Differential geometry of non-transversal intersection curves of three implicit hypersurfaces in Euclidean 4-space**  
ALESSIO O., DÜLDÜL M., Duldul B. U., ABDEL-ALL N. H., BADR S. A.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.308, pp.20-38, 2016 (SCI-Expanded)
- VIII. **Can we find Willmore-like method for the tangential intersection problems?**  
Duldul B., DÜLDÜL M.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.302, pp.301-311, 2016 (SCI-Expanded)
- IX. **Non-transversal intersection curves of hypersurfaces in Euclidean 4-space**  
BADR S. A., ABDEL-ALL N. H., ALESSIO O., DÜLDÜL M., Duldul B. U.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.288, pp.81-98, 2015 (SCI-Expanded)
- X. **Differential geometry of non-transversal intersection curves of three parametric hypersurfaces in Euclidean 4-space**  
Alessio O., DÜLDÜL M., Duldul B., Badr S. A., Abdel-All N. H.  
COMPUTER AIDED GEOMETRIC DESIGN, vol.31, no.9, pp.712-727, 2014 (SCI-Expanded)
- XI. **Willmore-like methods for the intersection of parametric (hyper)surfaces**

- Düldül M., Akbaba O.  
APPLIED MATHEMATICS AND COMPUTATION, vol.226, pp.516-527, 2014 (SCI-Expanded)
- XII. **Some new associated curves of a Frenet curve in E-3 and E-4**  
Macit N., Düldül M.  
TURKISH JOURNAL OF MATHEMATICS, vol.38, pp.1023-1037, 2014 (SCI-Expanded)
- XIII. **The extension of Willmore's method into 4-space**  
Duldul B., DÜLDÜL M.  
MATHEMATICAL COMMUNICATIONS, vol.17, no.2, pp.423-431, 2012 (SCI-Expanded)
- XIV. **On the intersection curve of three parametric hypersurfaces**  
Duldul M.  
COMPUTER AIDED GEOMETRIC DESIGN, vol.27, no.1, pp.118-127, 2010 (SCI-Expanded)
- XV. **On the generalizations of the polar inertia momentum of the closed curves obtained kinematically**  
Yuce S., Duldul M., KURUOGLU N.  
STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA, vol.42, no.1, pp.73-78, 2005 (SCI-Expanded)
- XVI. **The generalization of Holditch theorem for closed space curves**  
Duldul M., KURUOGLU N., TUTAR A.  
ZEITSCHRIFT FÜR ANGEWANDTE MATHEMATIK UND MECHANIK, vol.84, no.1, pp.60-64, 2004 (SCI-Expanded)
- XVII. **Generalization of Steiner formula for the homothetic motions on the planar kinematics**  
KURUOGLU N., Duldul M., TUTAR A.  
APPLIED MATHEMATICS AND MECHANICS-ENGLISH EDITION, vol.24, no.8, pp.945-949, 2003 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Hypersurfaces admitting a given curve as a line of curvature and vice versa**  
Çelik F., Düldül M.  
APPLIED MATHEMATICS E - NOTES, vol.23, pp.274-289, 2023 (ESCI)
- II. **Implicit-implicit and parametric-implicit surface intersections in Euclidean n-space**  
Düldül M., Özçetin B. M.  
ACTA ET COMMENTATIONES UNIVERSITATIS TARTUENSIS DE MATHEMATICA, vol.27, no.1, pp.29-45, 2023 (ESCI)
- III. **Integral curves connected with a framed curve in 3-space**  
Düldül M., Bülbül Z.  
HONAM MATHEMATICAL JOURNAL, vol.45, no.1, pp.130-145, 2023 (ESCI)
- IV. **Intersection curve of two parametric surfaces in Euclidean n-space**  
Düldül M., Özçetin B. M.  
ACTA ET COMMENTATIONES UNIVERSITATIS TARTUENSIS DE MATHEMATICA, vol.25, no.2, pp.259-279, 2021 (ESCI)
- V. **Characterizations of helices by using their Darboux vectors**  
Düldül M., Uyar Düldül B.  
Sigma Journal of Engineering and Natural Sciences, vol.38, no.3, pp.1299-1306, 2020 (ESCI)
- VI. **Shape Operator via Darboux Frame Curvatures and Its Applications**  
Duldul B. U., Düldül M.  
INTERNATIONAL ELECTRONIC JOURNAL OF GEOMETRY, vol.12, no.2, pp.182-187, 2019 (ESCI)
- VII. **Associated Surfaces Obtained Kinematically And Their Projection Areas**  
Düldül M., Işitan G.  
APPLIED MATHEMATICS E-NOTES, vol.19, pp.210-219, 2019 (ESCI)
- VIII. **Two and three dimensional regions from homothetic motions**  
Düldül M.  
Applied Mathematics E-Notes, vol.10, pp.86-93, 2010 (Scopus)
- IX. **Computation of polar moments of inertia with Holditch type theorems**  
Düldül M., Kuruoğlu N.

Applied Mathematics E-Notes, vol.8, pp.271-278, 2008 (Scopus)

- X. **The polar moment of inertia of the projection curve**  
Düldül M., Kuruoğlu N.  
Applied Sciences, vol.10, pp.81-87, 2008 (Peer-Reviewed Journal)
- XI. **The Polar Moment Of Inertia Of The Enveloping Curve**  
Düldül M., Yüce S., Kuruoğlu N.  
Novi Sad Journal of Mathematics, vol.38, pp.1-4, 2008 (Scopus)
- XII. **On the volume of the trajectory surfaces under the homothetic motions**  
Düldül M., Kuruoğlu N.  
Acta Mathematica Universitatis Comenianae, vol.76, no.2, pp.241-246, 2007 (Scopus)
- XIII. **On the polar moment of inertia of the projection curve**  
Düldül M., Kuruoğlu N.  
Applied Mathematics E-Notes, vol.5, pp.124-128, 2005 (Scopus)
- XIV. **On the moving coordinate system and pole points on the Euclidean plane**  
Tutar A., Düldül M.  
International Journal of Applied Mathematics, vol.8, pp.277-283, 2002 (Scopus)
- XV. **On the moving coordinate system on the complex plane and pole points**  
Tutar A., DÜLDÜL M.  
Bulletin of Pure and Applied Sciences, no.1, pp.1-6, 2001 (Peer-Reviewed Journal)
- XVI. **On the 1-parameter homothetic motions on the complex plane**  
Tutar A., DÜLDÜL M.  
International Journal of Applied Mathematics, vol.6, no.4, pp.439-447, 2001 (Scopus)
- XVII. **On the moving coordinate system and pole points on the Lorentzian plane**  
Tutar A., Kuruoğlu N., Düldül M.  
International Journal of Applied Mathematics, vol.7, no.4, pp.439-445, 2001 (Scopus)

## Books & Book Chapters

### I. **MATLAB Exercises**

Düldül M., Akın Ö. (Editor)

in: Elementary Linear Algebra with Applications, Akın Ö., Editor, Palme Yayın Dağıtım, Ankara, pp.597-614, 2010

## Refereed Congress / Symposium Publications in Proceedings

- I. **Associated curves of a framed curve in Euclidean 3-space**  
Bülbül Z., Düldül M.  
1st International Symposium on Current Developments in Fundamental and Applied Mathematics Sciences, Erzurum, Turkey, 23 - 25 May 2022, pp.164
- II. **On the intersection curve of implicit hypersurfaces in  $E^n$**   
Özçetin B. M., Düldül M.  
18th International Geometry Symposium , Malatya, Turkey, 12 - 13 July 2021, pp.141
- III. **Relatively-normal Slant Helices and Their Characterizations**  
Macit N., Düldül M.  
The Mediterranean International Conference of Pure&Applied Mathematics and Related Areas, Antalya, Turkey, 26 - 28 October 2018, pp.53
- IV. **Shape Operator Along a Surface Curve and Its Applications**  
UYAR DÜLDÜL B., DÜLDÜL M.  
16th International Geometry Symposium, Manisa, Turkey, 04 July 2018, pp.294
- V. **Computation of the lines of curvature of parametric hypersurfaces in  $E^4$**

- Çelik F., DÜLDÜL M.  
16th International Geometry Symposium, Manisa, Turkey, 04 July 2018, pp.225
- VI. **Projection area of orbit surfaces under special two parameter motions**  
Işıtan G., DÜLDÜL M.  
15th International Geometry Symposium, Amasya, Turkey, 03 July 2017, pp.241
- VII.  **$E^4$ 'te normal form ile verilmiş hiperyüzeyler üzerine**  
Duran Y., Düldül M.  
13. Geometri Sempozyumu, İstanbul, Turkey, 27 - 30 July 2015, pp.101
- VIII. **Some new curves associated with a Frenet curve in  $E^4$**   
Macit N., Düldül M.  
13. Geometri Sempozyumu, İstanbul, Turkey, 27 - 30 July 2015, pp.100
- IX. **V-direction curve of a surface curve in  $E^3$**   
MACİT N., DÜLDÜL M.  
33. Colloquium on Combinatorics, Ilmenau, Germany, 07 November 2014, pp.15
- X. **On some associated curves of a Frenet curve and W-direction curves in Euclidean 3-space**  
Gürhan N., DÜLDÜL M.  
International Conference on Applied Analysis and Mathematical Modelling, İstanbul, Turkey, 02 June 2013, pp.80
- XI. **On the intersection curve of parametric hypersurfaces**  
Düldül M.  
9. Geometri Sempozyumu, Samsun, Turkey, 7 - 11 June 2011, pp.85
- XII. **On the volume of the trajectory surfaces under the homothetic motions**  
Düldül M., Kuruoğlu N.  
VI. Ulusal Geometri Sempozyumu, Bursa, Turkey, 1 - 04 July 2008, pp.115
- XIII. **On the polar moment of inertia of the projection curve**  
Düldül M., Kuruoğlu N.  
IV. International Geometry Symposium, Zonguldak, Turkey, 17 - 21 July 2006, pp.201
- XIV. **The generalization of Holditch theorem for closed space curves**  
Düldül M., Kuruoğlu N., Tutar A.  
II. Geometri Sempozyumu, Sakarya, Turkey, 30 June - 03 July 2004, pp.142
- XV. **The generalization of Steiner formula for the homothetic motions on the planar kinematics**  
Düldül M., Kuruoğlu N.  
I. Geometri Sempozyumu, Elazığ, Turkey, 3 - 04 July 2003, pp.57
- XVI. **On the product inertia momentum of the orbit curves**  
Düldül M., Kuruoğlu N.  
XV. Ulusal Matematik Sempozyumu, Mersin, Turkey, 4 - 07 September 2002, pp.84

## Supported Projects

Düldül M., Uyar Düldül B., Kuruoğlu N., Özdamar E., Project Supported by Higher Education Institutions, Darboux Çatı Alanının 4-Boyuta Genişletilmesi Ve İnvaryantlarının Değerlendirilmesi Çalışması, 2013 - 2017

## Scientific Refereeing

Commun. Fac. Sci. Univ. Ank. Ser. A., Other Indexed Journal, August 2017

Turkish Journal of Mathematics, SCI Journal, May 2017

Acta Cybernetica, Other Indexed Journal, March 2017

FILOMAT, SCI Journal, February 2017

International Journal of Geometric Methods in Modern Physics, SCI Journal, November 2016

CBU Journal of Science, Other Indexed Journal, June 2016

Turkish Journal of Mathematics, SCI Journal, February 2016  
Commun. Fac. Sci. Univ. Ank. Ser. A, National Scientific Refreed Journal, February 2016  
Turkish Journal of Mathematics, SCI Journal, August 2015  
Zeitschrift für Angewandte Mathematik und Mechanik-ZAMM, SCI Journal, November 2014  
Computer Aided Geometric Design, SCI Journal, May 2014  
African Journal of Mathematics and Computer Science Research, SCI Journal, January 2014  
Iranian Journal of Science and Technology, SCI Journal, February 2012  
Zeitschrift für Angewandte Mathematik und Mechanik-ZAMM, SCI Journal, December 2011  
Iranian Journal of Science and Technology, SCI Journal, December 2011  
International Journal of the Physical Sciences, SCI Journal, May 2011  
Scientific Research and Essays, Other Indexed Journal, December 2010

## **Metrics**

Publication: 51  
Citation (WoS): 78  
Citation (Scopus): 69  
H-Index (WoS): 6  
H-Index (Scopus): 5

## **Scholarships**

Yurt İçi Doktora Bursu, TUBITAK, 2001 - 2004