

Orhan Ođulcan Tuncer

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Education

- 2016-** Ph.D. in Mathematics - Ankara University
- 2015-2016** M.Sc. in Mathematics - Ankara University
Thesis: "Surface pencils with a common isophote curve" (Advisor: Prof. İsmail Gök)
- 2011-2015** B.Sc. in Mathematics (high honors; 3.5 academic years; GPA: 3.71/4) - Ankara University

Work Experience

Apr 2017 - Present Hacettepe University, Dept. of Math., 06800 Beytepe, Ankara, Turkey
Research Assistant

Publications

1. E. Kocakuşaklı, **OOT**, İ. Gök & Y. Yaylı, A New Representation of Canal Surfaces with Split Quaternions in Minkowski 3-Space, Adv. Appl. Clifford Algebras 27, 1387–1409, 2017. DOI: 10.1007/s00006-016-0723-5
2. S. Özdoğan, **OOT**, İ. Gök & Y. Yaylı, Some new types of associated curves in Euclidean 3-space, An. Şt. Univ. Ovidius Constanta 26(1), 205–221, 2018. DOI: 10.2478/auom-2018-0013
3. **OOT**, H. Ceyhan, İ. Gök & F.N. Ekmekci, Notes on pedal and contrapedal curves of fronts in the Euclidean plane, Math Meth Appl Sci. 41, 5096–5111, 2018. DOI: 10.1002/mma.5056
4. **OOT**, Z. Çanakcı, İ. Gök & Y. Yaylı, Circular Surfaces with Split Quaternionic Representations in Minkowski 3-space, Adv. Appl. Clifford Algebras 28:63, 23 pages, 2018. DOI: 10.1007/s00006-018-0883-6
5. Z. Çanakcı, **OOT**, İ. Gök & Y. Yaylı, The construction of circular surfaces with quaternions, Asian-Eur. J. Math. 12(7), 1950091, 14 pages, 2019. DOI: 10.1142/S1793557119500918
6. İ. Yurduşen, **OOT** & P. Winternitz, Superintegrable systems with spin and second-order tensor and pseudo-tensor integrals of motion, J. Phys. A: Math. Theor. 54, 305201, 2021. DOI: 10.1088/1751-8121/ac0a9e
7. Z. Özdemir, **OOT** & İ. Gök, Kinematic equations of magnetic flux tubes based on split quaternion algebra, Eur Phys J Plus 136:910, 2021.
8. **OOT**, Generalized tubes in pseudo-Galilean 3-space: Split semi-quaternionic representations and an application to magnetic flux tubes, Math Meth Appl Sci. 2021;1-20. <https://doi.org/10.1002/mma.7866>
9. **OOT** & İ. Gök, Pedal curves, orthotomics and catacaustics of frontals in the hyperbolic 2-space, arXiv: 2012.06818 [math.DG].

Skills

- **Programming Languages and tools**

Mathematica, LaTeX, Python, PyTorch, Unity, C#

- **Research Interests**

*Theory of Quaternions
Differential Geometry of Curves and Surfaces
Singularity Theory
Computer Aided Geometric Design
Geometry Processing*

Teaching Experience

MTK 111, Analysis I (TA)

MTK 112, Analysis II (TA)

MTK 241, Linear Algebra (TA)

MAT 121, Mathematics I (TA)

MAT 122, Mathematics II (TA)

MAT 123, Mathematics for Engineers I (TA)

MAT 124, Mathematics for Engineers II (TA)

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Professional Activities

Reviewer

- **Rendiconti del Circolo Matematico di Palermo Series 2 (2021)**
- **Mathematical Methods in the Applied Sciences (2020)**
- **Mediterranean Journal of Mathematics (2019)**
- **Hacettepe Journal of Mathematics and Statistics (2019, 2021)**
- **Applied Mathematics E-notes (2018)**
- **Journal of Mathematical Extension (2018)**
- **Commun. Fac. Sci. Univ. Ank. Ser. A (2017, 2018)**

Editor

- **Production Editor of "Hacettepe Journal of Mathematics and Statistics" (2018 - Present)**

Awards and Grants

BİDEB 2214-A International Doctoral Research Fellowship, TÜBİTAK, 2019.

BİDEB 2211-A Ph.D Scholarship, TÜBİTAK, 2016-2021.

Projects

Project Scholar: TUBITAK 1001, *İzometrik Olmayan Şekiller Arasında Gönderim Hesaplama*, No: 119E572, MAR 15, 2021 - Present. (Directed by Y. Sahillioğlu)

Project Scholar: Ankara Üniversitesi BAP, Hızlandırılmış Destek Projesi, *Surface Pencils Generated by Isoparametric Curves*, 2015-2016 (Directed by İ. Gök)

Interests

- **Piano (for 3 years), Drums (for 12 years)**
- **Making animations for teaching mathematics**