

ESMA DİRİCAN ERDAL

Assistant Professor Dr.

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Department of Mathematics

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Education

Post-Doc 2022 October 02, 2023	İSTANBUL TEECHNICAL UNIVERSITY FACULTY OF ARTS AND SCIENCES/DEPARTMENT OF MATHEMATICS ENGINEERING
PhD 2017 August 23, 2021	İZMİR INSTITUTE OF TECHNOLOGY INSTITUTE OF SCIENCE AND ENGINEERING/MATHEMATICS (DR) (ENGLISH) Thesis title: Reidemeister torsion of closed π -manifolds (2022) Supervisor:Fatih Erman, Co-advisor: Yaşar Sözen
MSc 2013 July 12, 2015	HACETTEPE UNIVERSITY INSTITUTE OF SCIENCE/MATHEMATICS (MS) (ENGLISH) Thesis title: Reidemeister torsiyon ve yönlendirilmiş yüzeylerin pantolon parçalanışı (2015) Advisor:(PROF. DR. YAŞAR SÖZEN)
BSc 2008 June 1, 2015	HACETTEPE UNIVERSITY FACULTY OF SCIENCE/DEPARTMENT OF MATHEMATICS

Academic Titles

ASSISTANT PROFESSOR 02.10.2023	İŞIK UNIVERSITY/FACULTY OF ENGINEERING AND NATURAL SCIENCES/DEPARTMENT OF MATHEMATICS
LECTURER 23.09.2021-28.06.2022	YEDİTEPE UNIVERSITY/FACULTY OF ARTS AND SCIENCES/DEPARTMENT OF MATHEMATICS
RESEARCH ASSISTANT 18.04.2017-23.08.2021	İZMİR INSTITUTE OF TECHNOLOGY/FACULTY OF SCIENCE/DEPARTMENT OF MATHEMATICS

Project Duties

- Reidemeister Torsiyon Ve Kahler Manifoldlara Uygulamaları, TÜBİTAK PROJECT, Coordinator:SÖZEN YAŞAR,Scholarship Student:DİRİCAN ESMA,Scholarship Student:ZEYBEK HATİCE, 01/03/2015 - 01/03/2017 (NATIONAL)
- Lefschetz Sayıları ve Cartan Determinant Sanısı, DOSAP Project, Coordinator:ATABEY KAYGUN, Researcher:ESMA DİRİCAN ERDAL, 15/10/2022 - 29/09/2023 (NATIONAL)

Courses Taught (Last Two Years)

2021-2022

Undergraduate

	Language
Discrete Mathematics	English
Calculus-I	English
Basic Mathematics	English

Publications

Journal Publications (SCI-Expanded)

1. DİRİCAN ERDAL ESMA (2023). The adjoint Reidemeister torsion for compact 3-manifolds admitting a unique decomposition. Turkish Journal of Mathematics, 47(5), 1469-1480., Doi: 10.55730/1300-0098.3441 (Publication No: 8046457)
2. DİRİCAN ESMA, SÖZEN YAŞAR (2018). Reidemeister Torsion and Orientable Punctured Surfaces. Journal of the Korean Mathematical Society, 55(4), 1005-1018., Doi: 10.4134/JKMS.j170595 (Publication No: 4465463)
3. DİRİCAN ESMA, SÖZEN YAŞAR (2016). Connected Sum of Orientable Surfaces and Reidemeister Torsion. Pure and Applied Mathematics Quarterly, 12(4), 517-541., Doi: 10.4310/PAMQ.2016.v12.n4.a4 (Publication No: 3858710)

Journal Publications (SCI-Expanded)

4. DİRİCAN ERDAL ESMA, SÖZEN YAŞAR (2022). Reidemeister-Franz Torsion of Compact Orientable Surfaces via Pants Decomposition. Balkan Journal of Geometry and Its Applications, 27(2), 37-49. (Publication No: 8046410)

B. International Conference Papers

1. DİRİCAN ERDAL ESMA, SÖZEN YAŞAR (2015). Reidemeister torsion of some surfaces. International Conference on Advancements in Mathematical Sciences, Doi: 10.1063/1.4930432 (Tam Metin Bildiri/Sözlü Sunum)(Publication No:8047001)
2. DİRİCAN ESMA, SÖZEN YAŞAR (2018). Reidemeister Torsion of Orientable Punctured Surfaces. 16 th Geometry Symposium, 41-41. (Abstract/Presentation)(Publication No:4307796)
3. DİRİCAN ESMA, ZEYBEK HATİCE, SÖZEN YAŞAR (2017). On Some Volume Elements of Anderson's Moduli Space. 15th International Geometry Symposium Amasya University, Amasya, Turkey, 3-6 July 2017, 106-107. (Abstract/Presentation)(Publication No:3976657)
4. DİRİCAN ESMA, SÖZEN YAŞAR (2017). Reidemeister Torsion of Compact 3-manifolds with Boundary finitely many closed surfaces. 15th International Geometry Symposium Amasya University, Amasya, Turkey, 3-6 July 2017, 170-170. (Abstract/Presentation)(Publication No:3976864)
5. DİRİCAN ESMA, SÖZEN YAŞAR (2017). Reidemeister Torsion of Compact 3-manifolds with Boundary finitely many closed surfaces. 15th International Geometry Symposium Amasya University, Amasya, Turkey, (Abstract/Presentation)(Publication No:3858988)
6. DİRİCAN ESMA, SÖZEN YAŞAR (2017). Homological Algebra Techniques in Computation of R-Torsion. Antalya Algebra Days XVII in 2017 (Abstract/Presentation)(Publication No:3859052)
7. DİRİCAN ESMA, ZEYBEK HATİCE, SÖZEN YAŞAR (2017). Hard Lefschetz Theorem and Reidemeister Torsion of 3-manifolds. International Conference on Mathematics and Mathematics Education (ICMME-2017), Harran University, Şanlıurfa, 11-13 May 2017, 711-712. (Abstract/Presentation) (Publication No:3976364)

E. National Conference Papers

1. DİRİCAN ERDAL ESMA, SÖZEN YAŞAR (2019). Connected Sum of Orientable Surfaces and Reidemeister Torsion. İzmir Mathematics Days-II (Abstract/Presentation)(Publication No:8046751)
2. DİRİCAN ERDAL ESMA, SÖZEN YAŞAR (2020). Reidemeister torsion of $(n-2)$ -connected $2n$ -dimensional closed \mathbb{Z}_2 -manifolds. İzmir Mathematics Days-III (Abstract/Presentation)(Publication No:8046659)
3. DİRİCAN ERDAL ESMA (2022). A Formula for Volume forms on Representation Varieties of Surfaces with Boundary $\Sigma_{g,2}$. İzmir Mathematics Days (Abstract/Presentation)(Publication No:8046621)
4. DİRİCAN ERDAL ESMA (2023). Kompakt 3-Manifoldlar için Bükülmüş Reidemeister Torsiyon. 35. ULUSAL MATEMATİK SEMPOZYUMU. 48 (Abstract/Presentation)(Publication No:8493552)
5. Alabay Hilal, BORAT AYŞE, Cihangirli Esra, DİRİCAN ERDAL ESMA (2023). Yüksek Ayrık Topolojik Karmaşıklık. 35. Ulusal Matematik Sempozyumu (Abstract/Presentation)(Publication No:8457659)

Preprints

1. DİRİCAN ERDAL ESMA (2022). Gluing Formulas for Volume Forms on Representation Varieties of Surfaces. [ArXiv.org](https://arxiv.org/abs/2208.14487) (Publication No: 8046487)

Scholarship

57105 BİDEB 2211 Domestic Graduate Scholarship Programme (PhD), TÜBİTAK, İZMİR INSTITUTE OF
7 TECHNOLOGY, Scholarship, 15.09.2015 -15.09.2019 (National)

57105 BİDEB 2210 Domestic Graduate Scholarship Programme (Ms), TÜBİTAK, HACETTEPE University,
8 Scholarship, 15.03.2014 -15.08.2015 (National)