

## Prof. MUSTAFA KORKMAZ

### Personal Information

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### International Researcher IDs

ScholarID: eAPq\_YAAAAJ

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Publons / Web Of Science ResearcherID: ABA-3419-2020

ScopusID: 36059157800

Yoksis Researcher ID: 7523

### Education Information

Doctorate, Michigan State University, Matematik Bölümü, United States Of America 1993 - 1996

Postgraduate, Michigan State University, Matematik Bölümü, United States Of America 1991 - 1992

Undergraduate, Inonu University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1981 - 1985

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Complex of Curves and Mapping Class Groups, Michigan State University, Matematik Bölümü, 1996

### Research Areas

Natural Sciences

### Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2006 - Continues  
Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2001 - 2006

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 1997 - 2001

Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 1996 - 1997

Research Assistant, Cumhuriyet Üniversitesi, Fen Fakültesi, Matematik Bölümü, 1988 - 1989

## Academic and Administrative Experience

Head of Department, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, 2011 - 2017

## Supervised Theses

Korkmaz M., Non-realizability of braid groups by diffeomorphisms, Postgraduate, N.SENA(Student), 2023  
Korkmaz M., Generating the surface mapping class group by torsion elements, Doctorate, O.YILDIZ(Student), 2020  
KORKMAZ M., Exotic 4-manifolds and hyperelliptic Lefschetz fibrations, Doctorate, T.ALTUNÖZ(Student), 2018  
KORKMAZ M., Generalized chillingworth classes on subsurface Torelli groups, Doctorate, H.ÜNLÜ(Student), 2018  
KORKMAZ M., Finite rigid sets in curve complexes of non-orientable surfaces, Doctorate, S.ILBIRA(Student), 2017  
KORKMAZ M., The slope inequality for Lefschetz fibrations, Doctorate, A.ÇENGEL(Student), 2017  
KORKMAZ M., Open book decompositions of links of quotient surface singularities, Doctorate, E.YILMAZ(Student), 2009  
KORKMAZ M., Legendrian knots and open book decompositions, Doctorate, S.ÇELİK(Student), 2009  
KORKMAZ M., Automorphisms of complexes of curves on odd genus nonorientable surface, Doctorate, F.ATALAN(Student), 2005  
KORKMAZ M., Real-analytic diffeomorphisms of the circle and mapping class groups, Postgraduate, İ.SAVAŞ(Student), 2000

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

- I. **Geography of surface bundles over surfaces**  
Baykur R. I., Korkmaz M.  
MATHEMATISCHE ANNALEN, vol.390, no.4, pp.5793-5817, 2024 (SCI-Expanded)
- II. **GEOGRAPHY OF SYMPLECTIC LEFSCHETZ FIBRATIONS AND RATIONAL BLOWDOWNS**  
Baykur R. I., Korkmaz M., Simone J.  
Transactions of the American Mathematical Society, vol.377, no.10, pp.6771-6792, 2024 (SCI-Expanded)
- III. **Low-dimensional linear representations of mapping class groups**  
KORKMAZ M.  
Journal of Topology, vol.16, no.3, pp.899-935, 2023 (SCI-Expanded)
- IV. **Low-slope Lefschetz fibrations**  
Çengel A., KORKMAZ M.  
Journal of Topology and Analysis, vol.15, no.2, pp.513-526, 2023 (SCI-Expanded)
- V. **The mapping class group is generated by two commutators**  
Baykur R. I., KORKMAZ M.  
JOURNAL OF ALGEBRA, vol.574, pp.278-291, 2021 (SCI-Expanded)
- VI. **Finite rigid sets in curve complexes of nonorientable surfaces**  
Ilbira S., Korkmaz M.  
GEOMETRIAE DEDICATA, vol.206, pp.83-103, 2020 (SCI-Expanded)
- VII. **Mapping class group is generated by three involutions**  
Korkmaz M.  
MATHEMATICAL RESEARCH LETTERS, vol.27, pp.1095-1108, 2020 (SCI-Expanded)
- VIII. **Small Lefschetz fibrations and exotic 4-manifolds**  
Baykur R. I., KORKMAZ M.  
MATHEMATISCHE ANNALEN, vol.367, pp.1333-1361, 2017 (SCI-Expanded)
- IX. **Arbitrarily Long Factorizations in Mapping Class Groups**  
DALYAN E., KORKMAZ M., PAMUK M.  
INTERNATIONAL MATHEMATICS RESEARCH NOTICES, no.19, pp.9400-9414, 2015 (SCI-Expanded)

- X. **Automorphisms of curve complexes on nonorientable surfaces**  
Atalan F., KORKMAZ M.  
GROUPS GEOMETRY AND DYNAMICS, vol.8, no.1, pp.39-68, 2014 (SCI-Expanded)
- XI. **SECTIONS OF SURFACE BUNDLES AND LEFSCHETZ FIBRATIONS**  
Baykur R. I., KORKMAZ M., Monden N.  
TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY, vol.365, no.11, pp.5999-6016, 2013 (SCI-Expanded)
- XII. **ON THE IDEAL TRIANGULATION GRAPH OF A PUNCTURED SURFACE**  
KORKMAZ M., Papadopoulos A.  
ANNALES DE L INSTITUT FOURIER, vol.62, no.4, pp.1367-1382, 2012 (SCI-Expanded)
- XIII. **Minimal generating sets for the mapping class group of a surface**  
KORKMAZ M.  
HANDBOOK OF TEICHMULLER THEORY, VOL III, vol.17, pp.441-463, 2012 (SCI-Expanded)
- XIV. **On the arc and curve complex of a surface**  
KORKMAZ M., Papadopoulos A.  
MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY, vol.148, pp.473-483, 2010 (SCI-Expanded)
- XV. **Number of pseudo-Anosov elements in the mapping class group of a four-holed sphere**  
Atalan F., KORKMAZ M.  
TURKISH JOURNAL OF MATHEMATICS, vol.34, no.4, pp.585-592, 2010 (SCI-Expanded)
- XVI. **Lefschetz Fibrations and an Invariant of Finitely Presented Groups**  
KORKMAZ M.  
INTERNATIONAL MATHEMATICS RESEARCH NOTICES, no.9, pp.1547-1572, 2009 (SCI-Expanded)
- XVII. **Lefschetz fibrations on 4-manifolds**  
KORKMAZ M., Stipsicz A. I.  
HANDBOOK OF TEICHMULLER THEORY, VOL II, vol.13, pp.271-296, 2009 (SCI-Expanded)
- XVIII. **On sections of elliptic fibrations**  
KORKMAZ M., Ozbagci B.  
MICHIGAN MATHEMATICAL JOURNAL, vol.56, no.1, pp.77-87, 2008 (SCI-Expanded)
- XIX. **Automorphisms of the Hatcher-Thurston complex**  
Irmak E., KORKMAZ M.  
ISRAEL JOURNAL OF MATHEMATICS, vol.162, no.1, pp.183-196, 2007 (SCI-Expanded)
- XX. **Homomorphisms from mapping class groups**  
Harvey W., Korkmaz M.  
BULLETIN OF THE LONDON MATHEMATICAL SOCIETY, vol.37, pp.275-284, 2005 (SCI-Expanded)
- XXI. **On stable torsion length of a Dehn twist**  
Korkmaz M.  
MATHEMATICAL RESEARCH LETTERS, vol.12, pp.335-339, 2005 (SCI-Expanded)
- XXII. **Generating the surface mapping class group by two elements**  
Korkmaz M.  
TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY, vol.357, no.8, pp.3299-3310, 2005 (SCI-Expanded)
- XXIII. **Stable commutator length of a Dehn twist**  
Korkmaz M.  
MICHIGAN MATHEMATICAL JOURNAL, vol.52, no.1, pp.23-31, 2004 (SCI-Expanded)
- XXIV. **The second homology groups of mapping class groups of orientable surfaces**  
Korkmaz M., Stipsicz A.  
MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY, vol.134, pp.479-489, 2003 (SCI-Expanded)
- XXV. **Commutators, Lefschetz fibrations and the signatures of surface bundles**  
Endo H., Korkmaz M., Kotschick D., Ozbagci B., Stipsicz A.  
TOPOLOGY, vol.41, no.5, pp.961-977, 2002 (SCI-Expanded)

- XXVI. **Mapping class groups of nonorientable surfaces**  
Korkmaz M.  
GEOMETRIAE DEDICATA, vol.89, no.1, pp.109-133, 2002 (SCI-Expanded)
- XXVII. **On endomorphisms of surface mapping class groups**  
Korkmaz M.  
TOPOLOGY, vol.40, no.3, pp.463-467, 2001 (SCI-Expanded)
- XXVIII. **Noncomplex smooth 4-manifolds with Lefschetz fibrations**  
Korkmaz M.  
INTERNATIONAL MATHEMATICS RESEARCH NOTICES, no.3, pp.115-128, 2001 (SCI-Expanded)
- XXIX. **Minimal number of singular fibers in a Lefschetz fibration**  
Korkmaz M., Ozbagci B.  
PROCEEDINGS OF THE AMERICAN MATHEMATICAL SOCIETY, vol.129, no.5, pp.1545-1549, 2001 (SCI-Expanded)
- XXX. **Surface mapping class groups are ultrahopfian**  
Korkmaz M., McCarthy J.  
MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY, vol.129, pp.35-53, 2000 (SCI-Expanded)
- XXXI. **Automorphisms of complexes of curves on punctured spheres and on punctured tori**  
KORKMAZ M.  
TOPOLOGY AND ITS APPLICATIONS, vol.95, no.2, pp.85-111, 1999 (SCI-Expanded)
- XXXII. **First homology group of mapping class groups of nonorientable surfaces**  
KORKMAZ M.  
MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY, vol.123, pp.487-499, 1998 (SCI-Expanded)

## Books

- I. **Minimal generating sets for the mapping class group of a surface**  
KORKMAZ M.  
in: Handbook of Teichmüller theory Volume III, Athanase Papadopoulos, Editor, European Mathematical Society, Zürich, pp.441-463, 2012
- II. **Lefschetz Fibrations on 4-manifolds**  
KORKMAZ M., Stipsicz A.  
in: Handbook of Teichmüller Theory II, Papadopoulos Athanase, Editor, European Mathematical Society, Zürich, pp.271-296, 2009
- III. **Problems on homomorphisms of mapping class groups**  
KORKMAZ M.  
in: Problems on mapping class groups and related topics, Farb Benson, Editor, American Mathematical Society, Providence, pp.81-89, 2006
- IV. **Kalkülüs Kavram ve Kapsam**  
KORKMAZ B., DÖNMEZ D., KUZUCUOĞLU F., ALPAY Ö. Ş., ERGENÇ T., NURLU M. Z., ARSLAN S. F., KORKMAZ M., UĞUZ M.  
TÜBA Akademik Bilimler Akademisi, Ankara, 2001

## Refereed Congress / Symposium Publications in Proceedings

- I. **Generating surface mapping class groups by involutions and commutators.**  
KORKMAZ M.  
Geometry of Riemann Surfaces, Madrid, Spain, 24 - 26 May 2023
- II. **Commutator and stable commutator lengths in groups**

Korkmaz M.

Journées Mathématiques Régionales: Third Romanian-Turkish Mathematics Colloquium, Constanta, Romania, 18 - 22 September 2019, pp.4

**III. Yüzeylelerin Gönderim Sınıfları Grubunun Üreteçleri**

Korkmaz M.

32. Ulusal Matematik Sempozyumu, Samsun, Turkey, 31 August - 03 September 2019, pp.9

**IV. Mapping class groups presentations representations and relations with symplectic manifolds**

KORKMAZ M.

Mapping class groups, 3- and 4-manifolds, Cluj, Romania, 27 July - 01 August 2015

**V. Arbitrarily long factorizations in mapping class groups**

KORKMAZ M.

49th Spring Topology and Dynamics Conference 2015, Bowling Green, United States Of America, 14 - 16 May 2015

## **Memberships / Tasks in Scientific Organizations**

American Mathematical Society, Member, 1993 - Continues, United States Of America

Türk Matematik Derneği, Member, 1988 - Continues, Turkey

## **Scientific Refereeing**

ISRAEL JOURNAL OF MATHEMATICS, SCI Journal, August 2022

COMMUNICATIONS IN ANALYSIS AND GEOMETRY, SCI Journal, February 2019

BULLETIN OF THE LONDON MATHEMATICAL SOCIETY, SCI Journal, March 2018

EU Supported Other Project, European Research Council, Belgium, October 2015

## **Metrics**

Publication: 41

Citation (WoS): 594

Citation (Scopus): 542

H-Index (WoS): 15

H-Index (Scopus): 14

## **Non Academic Experience**

Orta Doğu Teknik Üniversitesi, Öğretim Üyesi

Cumhuriyet Üniversitesi, Araş. Gör.

Other Public Institution, Milli Eğitim Bakanlığı, Dicle Öğretmen Lisesi, Ergani, Diyarbakır, Öğretmen

Dicle Öğretmen Lisesi, Ergani, Öğretmen