CURRICULUM VITAE

as of August 2023

TITLE, NAME, LAST NAME : Professor Ergün Yalçın

1. PERSONAL DATA

1.1 BIRTH DATE AND PLACE	:	11 June 1971, İzmir, Turkey.
1.2 ADDRESS	:	Bilkent Üniversitesi
		Matematik Bölümü
		06800 Bilkent, Ankara,
		TURKEY
1.3 PHONE	:	90-312-290 2115
1.4 FAX	:	90-312-290 5097
1.5 E-MAIL	:	yalcine@fen.bilkent.edu.tr
1.6 URL	:	http://www.fen.bilkent.edu.tr/~yalcine
1.7 MARITAL STATUS	:	Married, three children.

2. ACADEMIC DEGREES

2.1 Professor, Mathematics Bilkent University, Turkey	2012
2.2 Associate Professor, Mathematics Bilkent University, Turkey	2007
2.3 Doçent, Algebraic Topology YÖK, Higher Education Council of Turkey	2005
2.4 Ph.D., Mathematics University of Wisconsin, U.S.A.	1998
2.5 M.S., Mathematics University of Wisconsin, U.S.A.	1994

2.6 B.S., Electrical and Electronics Engineering   1993
     Bilkent University, Turkey

3. EMPLOYMENT HISTORY

3.1   6/2012-Present   Professor,
Department of Mathematics,
Bilkent University,
Ankara, Turkey

3.2   9/2007-6/2012   Associate Professor,
Department of Mathematics,
Bilkent University,
Ankara, Turkey

3.3   3/2001-8/2007   Assistant Professor,
Department of Mathematics,
Bilkent University,
Ankara, Turkey

3.4   9/2000-3/2001   Visiting Assistant Professor,
Department of Mathematics,
Bilkent University,
Ankara, Turkey

3.5   9/1999-8/2000   Postdoctoral Fellow,
Department of Mathematics,
McMaster University,
Hamilton, Canada

3.6   9/1998-8/1999   Visiting Lecturer,
Department of Mathematics,
Indiana University,
Bloomington, Indiana, U.S.A.

3.7   9/1997-8/1998   Research Assistant,
                      Department of Mathematics,
                      University of Wisconsin,
                      Madison, Wisconsin, U.S.A.

3.8   9/1994-8/1997   Teaching Assistant,
                      Department of Mathematics,
                      University of Wisconsin,
                      Madison, Wisconsin, U.S.A.

3. RESEARCH VISITS

3.1   9/2014-8/2015   Sabbatical visit,
                      Department of Mathematics,
                      McMaster University,
                      Hamilton, Canada

3.2   6/2013-8/2013   Research visit,
                      Department of Mathematics,
                      University of Copenhagen,
                      Denmark

3.3   9/2007-8/2008   Sabbatical visit,
                      Department of Mathematics,
                      McMaster University,
                      Hamilton, Canada

4. SCHOLARSHIPS, AWARDS, AND HONORS

4.1   Member of the Science Academy Association   2013-now

4.2   Masatoshi Gündüz İkeda Award   2009
      Türk Matematik Vakfı

4.3	Hooker Distinguished Visiting Professor Award McMaster University, Hamilton, Canada	2007, 2014
4.4	Tübitak Encouragement Award (Tübitak-Teşvik Ödülü) Turkish Scientific and Technical Research Council	2007
4.5	Distinguished Young Scientist Award (TÜBA-Gebip) Turkish Academy of Sciences	2005-2008
4.6	Research Assistantship University of Wisconsin	1997-1998
4.7	TÜBİTAK-NATO Scholarship for Ph.D. Turkish Scientific and Technical Research Council	1993-1994

5. PROFESSIONAL DUTIES

5.1	President of the Turkish Mathematical Society	2021-2022
5.2	Member of the Editorial Board of the Bulletin of the Iranian Mathematical Society	2019-2020
5.3	Member of the management committee for the Istanbul Center for Mathematical Sciences (IMBM)	2016-now
5.4	Member of the Editorial Board of the Turkish Journal of Mathematics	2009-2015
5.5	Member of the Scientific Committee of the National Mathematics Symposium	2010, 2011, 2019
5.6	Served in Panels for Tübitak 1001 Grant	
5.7	Member of the Organizing Committee for Antalya Algebra Days	2000-2019

5.8   Organized Bilkent Algebra Days   2001, 2002

5.9   Referee for the following Journals:
         Advances in Mathematics
         Advances in Pure and Applied Mathematics
         Algebraic and Geometric Topology
         Algebra and Number Theory
         Archive der Math.
         Bulletin of London Mathematics Society
         Filomat
         Fundamenta Mathematicae
         Homology, Homotopy and Applications
         International Electronic Journal of Algebra
         Journal of Algebra
         Journal of Algebra and Computation
         Journal of Algebras and Representation Theory
         Journal of Combinatorial Theory, Ser. A
         Journal of Group Theory
         Journal of Homotopy, Homology and Applications
         Journal of the Australian Mathematical Society
         Mathematical Communications
         Mathematische Annalen
         Mathematische Nachrichten
         Mexican Mathematical Bulletin
         Pacific Journal of Mathematics
         Proceedings of Edinburg Mathematical Society
         Research in Mathematical Sciences
         Topological Methods in Nonlinear Analysis
         Turkish Journal of Mathematics

6. MEMBERSHIPS

6.1   American Mathematical Society   since 1994
6.2   Turkish Math Society   since 2013

7. INVITED LECTURES AND TALKS

7.1 "Homology decompositions for p-local finite groups", Princeton Topology Seminar, Princeton, US — Online, April 2023

7.2 "Finite group actions on products of spheres", Conference on the occasion of Mefharet Kocatepe's retirement, Bilkent, Ankara (Invited talk) — June 2022

7.3 "Higher limits over the fusion orbit category", Functorial Methods in Groups Theory Conference in honor of Serge Bouc, Logis du Roy, Amiens, France (Invited Talk) — June 2022

7.4 "Higher limits over the fusion orbit category", Bilkent Topology Seminar, Bilkent, Ankara — Online, March 2022.

7.5 "Topolojik uzayların simetrileri", Bilim Akademisi ve Boğaziçi Üniversitesi Bilim Kulübü, Istanbul (Invited talk) — Online, January 2022.

7.6 "Obstructions for gluing biset functors", Conference on the occasion of retirement of Serge Bouc (Invited talk) — Online, August 2021

7.7 "Higher limits over the fusion orbit category", IMBM Algebra Seminar, Boğaziçi University — Online, May 2021

7.8 "Higher limits over the fusion orbit category", METU Topology Seminar — Online, April 2021

7.9 "Topolojide simpleksel yapılar", Türkiye Matematik Kulübü Topoloji Çalıştayı — Online, March 2021

7.10 "The Dade group of a finite group and dimension functions", Séminaire de théorie des groupes d'Amiens, LAMFA, Université de Picardie-Jules Verne, France — Online, Nov. 2020

7.11 "The Dade group of a finite group and dimension functions", Mathematics Department Seminar, Yeditepe University — Online, Oct. 9, 2020

7.12 "Dade groups for finite groups and dimension functions", Oberwolfach Workshop 2033, Cohomology of Finite Groups: Interactions and Applications, Germany — Online, Aug. 2020

7.13 "Cohomology groups of small categories", General Seminar, Department of Mathematics, Atılım University — Ankara, March 2020

7.14 "Classifying spaces and fusion systems", METU Math Department Genel seminer — Ankara, Nov. 2019

7.15 "Homology decompositions for classifying spaces of finite groups and linking systems, Bilkent Topology Seminar — Ankara, Sept. 2019

7.16 "Cohomology of small categories and gluing problems", IMBM Mathematical Days 3 (Invited Talk) — İstanbul, Sept. 2019

7.17 "Obstructions for gluing biset functors", Topology Workshop LIGAT CRM (Contributed Talk) — Barcelona, Spain June 2019

7.18 "Obstructions for gluing biset functors", Bilkent Algebra Seminar — Ankara, April 2019

7.19 "Kürelerin sonlu grup simetrileri", 4. Bahar Matematik Bulumas, ODT Matematik Blm — Ankara, Oct. 2018

7.20 "On liranın üzerindeki formül", Ulusal Matematik Sempozyumu, çağrılı Genel Konuşma (Invited plenary talk) — Erzincan, Sept. 2018

7.21 "Constructing free actions on products of spheres", International Conference on Manifolds, Groups and Homotopy (invited plenary speaker, 1 hour talk) — Isle of Skye, Scotland June 2018

7.22 "Cohomology of small categories and gluing problems", METU Math department, Genel Seminer — Ankara, March 2018

7.23 "Moore Spaces and Endopermutation modules", ODTÜ-Bilkent Algebraic Geometry Seminar — Ankara, Nov. 2017

7.24 "Equivariant Moore spaces and the Dade group", İstanbul Matematiksel Bilimler Merkezi, Boğaziçi Üniversitesi — Istanbul, July 2017

7.25 "Burside ring of a finite group", Feza Gürsey Merkezi Yaz Okulları, Analiz ve Cebir Yaz Okulu (6 lectures) — Istanbul, July 2017

7.26 "Representation rings for fusion systems and dimension functions" Conference: Fusion systems and equivariant algebraic topology Hausdorff Institute for Mathematics (Invited speaker) — Bonn, Germany Nov. 2016

7.27 "Finite group actions on homotopy spheres", Advanced Lectures in Homotopy Theory, (Invited series of talks on my research, 3 one hour talks) — Barcelona, Spain Sept. 2016

7.28 "Equivariant Moore spaces and the Dade group", Conference: Workshop on Group Actions-Classical and Derived (invited speaker) — Toronto, Canada June 2016

7.29 "Kürelerin sonlu grup simetrileri", 29. Ulusal Matematik Sempozyumu (Çağrılı Konuşmacı, Invited one hour talk) — Mersin, Agustos 2016

7.30 "Representation rings for fusion systems and dimension functions", Koç University Colloquium — Istanbul, April 2016

7.31 "Homology decompositions for classifying spaces of finite groups", Models and Groups (Invited plenary speaker, two 75 min lectures) — Istanbul, March 2016

7.32	"Cohomology of fusion systems and the gluing problem", Bilkent Fusion Systems Seminar	Ankara, Nov. 2015
7.33	Group actions on spheres with rank one isotropy, METU Topology Seminar	Ankara, Nov. 2015
7.34	"Finite group actions on homotopy spheres, Bilkent-METU Algebraic Geometry Seminar, METU	Ankara, October 2015
7.35	On the basis of the Burnside ring of a fusion system, Workshop in honour of Serge Bouc on his 60th birthday, EPFL (Invited one hour talk)	Lausanne, Switzerland, Sept. 2015
7.36	Rank three p-group actions on products of spheres, Workshop on Equivariant Homotopy Theory and Infinity Categories, IMBM, Boğaziçi Üniversitesi (Invited talk)	Istanbul, August 2015
7.37	"Finite group actions with rank one prime power isotropy, Geometry-Topology Seminar, McMaster University	Hamilton, ON, Canada, May 2015
7.38	"Group actions on finite acyclic complexes", Geometry-, Topology Seminar, McMaster University	Hamilton, ON, Canada, April 2015
7.39	"Finite group actions on homotopy spheres", Geometry-Topology Seminar, University of Western Ontario	London, Canada, March 2015
7.40	"Rank three p-group actions on products of spheres", Geometry-Topology Seminar, McMaster University	Hamilton, Canada, March 2015
7.41	"Finite group actions on homotopy spheres", Topology seminar at the University of British Columbia	Vancouver, Canada, March 2015
7.42	"Constructing finite group actions on homotopy spheres", Topology Seminar, University of Rochester, Department of Mathematics	NY, USA Oct. 2014

7.43 "Constructing finite group actions on homotopy spheres", Geometry-Topology Seminar, McMaster University, Department of Mathematics — Hamilton, Canada, Sept. 2014

7.44 "Finite group actions on spheres, McMaster University Colloquium (As part of Dr. Harry Lyman Hooker Distinguished Visiting Professor Award) — Hamilton, Canada, Sept. 2014

7.45 "On the basis of the Burnside ring of a fusion system", Gebze Yüksek Teknoloji Üniversitesi Genel Seminer — Gebze, 2014

7.46 "Finite group symmetries of products of spheres", Hacettepe University Department Seminar — Ankara, Nov. 2013.

7.47 "Groups actions on spheres with rank one isotropy", METU Geometry/Topology Seminar — Ankara, Nov. 2013.

7.48 "Constructing free actions on products of spheres", Bilkent University Algebra/Topology Seminar — Ankara, Oct. 2013.

7.49 "Free actions on products of spheres at high dimensions", British Topology Meeting, 2013. (Plenary Speaker, 60 min.) — Aberdeen, 2013

7.50 "Free actions on products of spheres at high dimensions", Workshop on Group Actions and Homotopy Theory. (Invited Talk, 45 min.) — Copenhagen, 2013.

7.51 "A gentle introduction to Mackey functors", Topology Learning Seminar. (45 min.) — Copenhagen, 2013.

7.52 "Constructing free actions on products of spheres using left stable bisets", Conference on Bisets in Algebra and Topology. (50 min.) — Amiens, 2012

7.53 "Free action on products of spheres at high dimensions", Boğaziçi Mathematics Day. (45 min.) — İstanbul, 2012

7.54 "Cohomology of 2-power exact extensions and quadratic maps", Çankaya University Department Seminar.   Ankara, 2012

7.55 "Productive elements in group cohomology and the rank conjecture", Workshop on Homotopical Approaches to Group Actions. (45 min.)   Copenhagen, 2011

7.56 "A problem in commutative algebra related to group actions", Karatekin Mathematics Days. (45 min.)   Çankırı, 2011

7.57 "Grup etkileri ve zincir kompleksleri", I. Cebir Topoloji Çalıştayı. (45 min.)   Adana, 2011

7.58 "Fusion systems and constructions of finite group actions on products of spheres", Boğaziçi University Mathematics Colloquium.   İstanbul, 2011

7.59 "Fusion systems and constructions of finite group actions on products of spheres", METU Mathematics Colloquium.   Ankara, 2011

7.60 "Fusion systems and constructing free actions on products of spheres", Workshop on Group Cohomology.   Oberwolfach, 2010

7.61 "Cohomology of Bockstein closed 2-power exact group extensions", Cemal Koç Algebra Workshop. (45 min.)   Istanbul, 2010

7.62 "Uzayların simetrileri", TOBB-ETÜ Mathematics Department Undergraduate Seminar.   Ankara, 2010

7.63 "Koszul resolutions and the Lie algebra cohomology", METU-Bilkent Algebraic Geometry Seminar.   Ankara, 2010

7.64 "Symmetries of products of spheres", METU Colloquium (Ikeda Award Talk).   Ankara, 2010

7.65 "Uzayların simetrileri ve homoloji cebiri", Ankara University Department Seminar.   Ankara, 2010

7.66 "Acyclic complexes over the orbit category",   Ankara, 2009
METU Topology Seminar.

7.67 "Wall's finiteness obstruction and its generalizations",   Ankara, 2009
METU-Bilkent Algebraic Geometry Seminar.

7.68 "Grupların kohomolojisi ve uzayların simetrileri",   Şirince, 2009
Ulusal Matematik Sempozyumu (Dizi konuşma).

7.69 "Constructing group actions via orbit categories",   Oberwolfach, 2009
Workshop on Manifold Perspectives.

7.70 "Cohomology length of a p-group",   Istanbul, 2008
Istanbul Bilgi University Department Seminar.

7.71 "Group cohomology and group actions on cell complexes", Koç University Department Seminar.   Istanbul, 2008

7.72 "Group cohomology and group actions",   Rochester, 2008.
University of Rochester Topology Seminar.

7.73 "The Euler class of a subset complex",   Hamilton, 2007.
McMaster University Topology Seminar.

7.74 "Group cohomology and group actions",   Hamilton, 2007
McMaster University Colloquium (Hooker Lecture).

7.75 "Vanishing products of one-dimensional classes in group cohomology", Antalya Algebra Days IX. (30 min.)   Antalya, 2007

7.76 "Group cohomology and group actions",   Ankara, 2007
METU Math Department General Seminar.

7.77 "Serre's theorem in group cohomology",   Ankara, 2007
Bilkent-METU Algebraic Geometry Seminar.

7.78 "The top Stiefel-Whitney class of an augmented regular representation", METU-Bilkent Algebraic Geometry Seminar. — Ankara, 2006

7.79 "Generalized Burnside rings and group cohomology", McMaster University Topology Seminar. — Hamilton, 2006

7.80 "Generalized Burnside rings and group cohomology", University of Rochester Topology Seminar. — Rochester, 2006

7.81 "Unit groups of Burnside rings", McMaster University Topology Seminar. — Hamilton, 2006

7.82 "Bockstein closed central extensions of elementary abelian 2-groups I: Binding operators", Conference on Cohomology of Groups. — Oberwolfach, 2005

7.83 "Generalized Burnside rings and group cohomology", Antalya Algebra Days VII. (30 min.) — Antalya, 2005

7.84 "An induction theorem for the unit groups of Burnside rings of 2-groups", Antalya Algebra Days VI. (30 min.) — Antalya, 2004

7.85 "Steenrod closed ideals in the polynomial algebra over $GF(2)$", METU Algebra Seminar. — Ankara, 2004

7.86 "Quadratic maps", METU Math Department General Seminar. — Ankara, 2004

7.87 "Group extensions and quadratic maps", Boğaziçi University Colloquium. — İstanbul, 2004

7.88 "An induction theorem for the unit groups of Burnside rings of 2-groups", Gazi Algebra Day. — Ankara, 2003

7.89 "On nilpotent ideals in the cohomology ring of a finite group", Conference on Hilbert Smith Conjecture. — İstanbul, 2002

7.90 "A new notion of rank for finite supersolvable groups and free linear actions on products of spheres", Conference on Groups, Representations, and Cohomology.   Boston, 2002

7.91 "A new notion of rank for finite supersolvable groups and free linear actions on products of spheres", Antalya Algebra Days IV.   Antalya, 2002

7.92 "Varieties of cohomology rings of finite groups", METU-Bilkent Algebraic Geometry Seminar.   Ankara, 2001

7.93 "On nilpotent ideals in the cohomology ring of a finite group", Conference on Algebraic Topology. (30 min.)   Gdansk, 2001

7.94 "On nilpotent ideals in the cohomology ring of a finite group", Antalya Algebra Days III. (30 min.)   Antalya, 2001

7.95 "Groups from a geometric point of view", Bilkent University General Seminar.   Ankara, 2001

7.96 "Simplicial complexes associated to pairwise non-commuting sets in groups", Feza Gursey Institute Colloquium.   İstanbul, 2001

7.97 "Simplicial complexes associated to pairwise non-commuting sets in groups", Middle East Technical University General Seminar.   Ankara, 2001

7.98 "Set covering and Serre's theorem on the cohomology algebra of a p-group", Middle East Technical University General Seminar.   Ankara, 2000

7.99 "Set covering and Serre's theorem on the cohomology algebra of a p-group", Bilkent University General Seminar.   Ankara, 2000

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7.100 "Set covering and Serre's theorem on the cohomology algebra of a p-group", XIII. National Mathematics Symposium. (Genç Araştırmacı)   İstanbul, 2000

7.101 "Set covering and Serre's theorem on the cohomology algebra of a p-group", Conference on Cohomology of Groups.   Oberwolfach, 2000

7.102 "Set covering and Serre's theorem on the cohomology algebra of a p-group", Cohomology of Groups Conference at Georgia University. (30 min.)   Athens, 2000

7.103 "Free actions of p-groups on products lens spaces", McMaster University Topology Seminar.   Hamilton, 2000

7.104 "Space form problem", McMaster University Topology Seminar.   Hamilton, 2000

7.105 "Group actions and group extensions", McMaster University Topology Seminar.   Hamilton, 1999

7.106 "Free, linear actions on products of spheres", Antalya Algebra Days II. (30 min.)   Antalya, 1999

7.107 "Free, linear actions on products of spheres", Indiana University Algebra Seminar.   Bloomington, 1999

7.108 "Free actions of p-groups on products of lens spaces", Indiana University Topology Seminar.   Bloomington, 1999

7.109 "Group actions and group extensions", Wayne State University Topology Seminar.   Detroit, 1998

7.110 "Group actions on products of spheres", Indiana University Topology Seminar.   Bloomington, 1998

7.111 "Group actions and group extensions", Oklahoma University Topology Seminar.   Norman, 1998

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7.112	"Group actions on k-torus",	İstanbul, 1998
	Boğaziçi University Colloquium.	
7.113	"Group actions on products of spheres",	Bonn, 1998
	Max-Planck-Institut für Mathematik Colloquium.	
7.114	"Group actions and group extensions",	Bonn, 1997
	University of Bonn Topology Seminar.	
7.115	"Group actions and group extensions",	Madison, 1996
	University of Wisconsin Topology Seminar.	

9. TEACHING

9.1 GRADUATE COURSES

MATH 523	Algebra I
MATH 524	Algebra II
MATH 525	Group Representations
MATH 611	Algebraic Topology I
MATH 618	Topics in Algebraic Topology I
MATH 625	Homological Algebra
MATH 626	Cohomology of Groups

9.2 UNDERGRADUATE COURSES

MATH 101	Calculus I
MATH 102	Calculus II
MATH 111	Intermediate Calculus I
MATH 112	Intermediate Calculus II
MATH 123	Abstract Mathematics I
MATH 124	Abstract Mathematics II
MATH 110	Discrete Mathematics
MATH 132	Discrete and Combinatorial Mathematics
MATH 213	Advanced Calculus I
MATH 214	Advanced Calculus II
MATH 220	Linear Algebra
MATH 223	Linear Algebra I
MATH 224	Linear Algebra II

MATH 227	Linear Algebra
MATH 240	Differential Equations
MATH 253	Introduction to Number Theory
MATH 227	Introduction to Linear Algebra
MATH 310	Topology
MATH 323	Algebra I
MATH 324	Algebra II

9.3 SENIOR PROJECTS (BEFORE 2014)

Adnan Çakar	Category theory and classification of covering spaces	2014 Spring
Murat Aşkaroğlu	Representations of finite groups and simplicial complexes	2013 Fall
Adnan Çakar	Classification of covering spaces	2013 Fall
Oğuz Gezmiş	The Frattini subgroups of p-groups and Hobby's Theorem	2012 Spring
Mehmet Kişioğlu	p-Adic analysis and p-adic topology	2012 Spring
Tuğba Uzluer	Symmetries of graphs	2011 Fall
Bekir Danişoğlu	Short exact seqences of groups acting on trees	2011 Fall
Yasemin Türedi	The exponential map on the Burnside ring of elementary abelian groups	2011 Spring
Merve Demirel	The unit groups of Burnside rings of dihedral groups	2011 Spring
Yasemin Türedi	The unit group of Burnside ring of an abelian group	2010 Fall
Merve Demirel	The unit group of Burnside ring of a dihedral group	2010 Fall
Faruk Keskin	Cauchy-Frobenius lemma	2010 Spring
Emrah Turan	Graph coloring	2009 Fall
Doğa Ademoğlu	Fusion in finite groups	2009 Fall
Berrin Şentürk	Cohomology length of p-groups	2009 Spring
Ayşegül Küçüköz	Group cohomology and group extensions	2009 Spring
Ayşe Çamkıran	Möbius inversion	2008 Fall
Toygar Kerman	Burnside rings	2008 Fall

İpek Tuvay	Burnside ring of a finite group	2007 Spring
Tunahan Kökmen	Sets closest to ovoids	2007 Spring
İpek Şengül	Burnside ring of a finite group	2006 Fall
Tunahan Kökmen	Sets closest to ovoids	2006 Fall
Ömer Faruk Zora	Gödel's incompleteness theorem	2006 Spring
Pınar Pekçağlıyan	Modular Lie Algebras	2006 Spring
Pınar Pekçağlıyan	Matrix Algebra modulo 2	2005 Fall
Burak Yılmaz	Classification of $\mathbf{F}_2(\mathbf{Z}/2 \times \mathbf{Z}/2)$-Modules	2004 Fall
Kemal Özbek	2-restricted Lie algebras	2004 Spring
Kemal Özbek	Classification of quadratic forms over $\mathbf{F}_2$	2003 Fall
Koray Karabina	Quadratic forms over $\mathbf{F}_2$	2003 Spring

10. GRADUATE STUDENT SUPERVISION

10.1 Mehmet Kırtışoğlu, M.Sc., "Cohomology of Categories", 9/2022-8/2024 (expected).

10.2 Muhammed Said Gündoğan, Ph.D., "Cohomology of infinite groups realizing fusion systems", 9/2014-8/2020.

10.3 Müge Fidan, M.Sc., "Chain maps between Gruenberg resolutions", 9/2016-8/2018.

10.4 Adnan Cihan Çakar, M.Sc.,"Homotopy colimits and decomposition of function complexes", 9/2014-8/2016.

10.5 Elif Doğan, M.Sc.,"Homological algebra over categories", 9/2012-8/2014.

10.6 Osman Berat Okutan, M.Sc.,"Free actions on products of spheres at high dimensions", 9/2010-6/2012.

10.7 Cihan Bahran, M.Sc.,"Homological algebra over the orbit category", 9/2010-7/2012.

10.8 Ayşegül Küçüköz Tekin, M.Sc., "Cohomology of split group extensions", 9/2009-5/2012.

10.9   Aslı Güçlükan İlhan, Ph.D., "Obstructions for constructing equivariant fibrations", 9/2006-8/2011.

10.10   Fatma Altunbulak Aksu, Ph.D., "Essential cohomology and relative cohomology of finite groups", 9/2004-8/2010.

10.11   Hüseyin Acan, M.Sc., "Topology of lattice of periods of a group action", 9/2004-8/2006.

10.12   Aslı Güçlükan İlhan, M.Sc., "The extension class of a subset complex", 9/2004-8/2006.

10.13   Fatma Altunbulak Aksu, M.Sc., "L_ζ-modules and a theorem of Jon F. Carlson", 9/2002-8/2004.

12. SCHOLARLY PUBLICATIONS

12.1   <u>Ph.D. Dissertation</u>
12.1.1 Group actions and group extensions
        Advisor: Alejandro Adem
        August 1998, University of Wisconsin.

12.5   <u>Reviews</u>

        Reviewed the following papers for Mathematical Reviews.

12.5.1 MR4031760
        S. Huczynska and M. B. Paterson, "Characterising bimodal collections of sets in finite groups", Arch. Math. (Basel) 113 (2019), 571–580.

12.5.2 MR3987701
        H. Rostami., The commutativity degree in the class of nonabelian groups of same order, Kyungpook Math. J. 59 (2019), 203–207.

12.5.3   MR3294262
M. T. Benmoussa, et al., Some properties of semi-abelian p-groups, Bull. Aust. Math. Soc. 91 (2015), 86–91.

12.5.4   MR2728692
T. Januszkiewicz, P. H. Kropholler, and I. J. Leary, "Groups possessing extensive hierarchical decompositions", Bull. Lond. Math. Soc. 42 (2010), 896–904.

12.5.5   MR2743628
K. H. Alzubaidy, "Cohomology of finite abelian p-groups and free actions", Tamkang J. Math. 41 (2010), 271–273.

12.5.6   MR2465929 (2009m:20084)
M. Hamilton, "Finitary group cohomology and group actions on spheres", Proc. Edinb. Math. Soc. (2) 51 (2008), 651–655.

12.5.7   MR2418705 (2009i:20101)
N.J. Kuhn, "The nilpotent filtration and the action of automorphisms on the cohomology of finite p-groups", Math. Proc. Cambridge Philos. Soc. 144 (2008), 575–602.

12.5.8   MR2320243 (2008j:20164)
K. Thas, "On the p-modular cohomology algebra of a finite p-group and a theorem of Serre", C.R. Math. Acad. Sci. Paris, 344 (2007), 417–420.

12.5.9   MR2228632 (2007i:20013)
K. W. Gruenberg and A. Weiss, "Transfer kernels for finite groups", J. Algebra, 300 (2006), 35-43.

12.5.10   MR2201047 (2006m:20024)
M. Linckelmann, "A note on the Schur multiplier of a fusion system", J. Algebra 296 (2006), 402–408.

12.5.11   MR2016658 (2004k:20042)
T. Asai, T. Niwasaki, and Y. Takegahara, "Crossed homomorphisms from rank-2 abelian to exceptional p-groups", J. Algebra 270 (2003), 212–237.

12.5.12   MR1884615 (2002m:20087)
D.J. Green, I. J. Leary, and B. Schuster, "The subring of group cohomology constructed by permutation representations", Proc. Edinb. Math. Soc. (2) 45 (2002), 241–253.

12.5.13   MR1891310 (2002m:53112)
S. Kera, "One class of submanifolds of permutation products of complex manifolds", Math. Balkanica (N.S.) 15 (2001), 275–284.

12.5.14   MR1865540 (2002h:57049)
S. Kera, "On the permutation products of manifolds", Beitrge Algebra Geom. 42 (2001), 547–555.

12.6   ARTICLES IN REFEREED JOURNALS

12.6.1   "Higher limits over the fusion orbit category", Adv. Math. **406** (2022), Paper No. 108482, 69 pp.

12.6.2   "Dade groups for finite groups and dimension functions", J. Algebra **576** (2021), 146-196. (with M. Gelvin)

12.6.3   "Finite groups of rank two which do not involve $Qd(p)$", Proc. Amer. Math. Soc. **148** (2020), 3713-3721. (with M. Y. Kızmaz)

12.6.4   "Cohomology of infinite groups realizing fusion systems", Journal of Homotopy and Related Structures **14** (2019), 1103-1130. (with M.S. Gündoğan)

12.6.5   "Obstructions for gluing biset functors", J. Algebra **532** (2019), 268–310. (with O. Coşkun)

12.6.6   "Dimension functions for spherical fibrations", Algebraic & Geometric Topology **18** (2018), 3907–3941. (with C. Okay)

12.6.7   "Representation rings for finite fusion systems and dimension functions", Math. Z. **288**(2018), 509–530. (with S.P. Reeh)

12.6.8   "Equivariant Moore spaces and the Dade group", Adv. Math. **309** (2017), 209–237.

12.6.9   "Group actions on spheres with rank one prime power isotropy", Math. Res. Letters **24** (2017), 379–400. (with I. Hambleton)

12.6.10   "Rank Three p-group actions on products of spheres", Bull. London Math. Soc. **48** (2016), 325–340.

12.6.11   "Group actions on spheres with rank one isotropy", Trans. Amer. Math. Soc. **368** (2016), 5951–5977. (with I. Hambleton)

12.6.12   "On the basis of the Burnside ring of a fusion system", J. Algebra **423** (2015), 767–797. (with M. Gelvin and S.P. Reeh)

12.6.13   "Homotopy representations over the orbit category", Homology Homotopy Appl. **16** (2014), 345–369. (with I. Hambleton)

12.6.14   "Relative group cohomology and the orbit category", Communications in Algebra **42** (2014), 3220–3243. (with S. Pamuk)

12.6.15   "Constructing homologically trivial actions on products of spheres", Indiana Univ. Math. J. **62** (2013), 927–945. (with Ö. Ünlü)

12.9.16   "Free actions on products of spheres at high dimensions", Algebraic & Geometric Topology **13** (2013), 927–945. (with O. B. Okutan)

12.6.17   "Fusion systems and group actions with abelian isotropy subgroups", Proc. Edin. Math. Soc. **56** (2013), 873–886. (with Ö. Ünlü)

12.6.18   "Equivariant CW-complexes and the orbit category, Comment. Math. Helv. **88** (2013), 369–425. (with I. Hambleton and S. Pamuk)

12.6.19   "Bockstein closed 2-group extensions and cohomology of quadratic maps", J. Algebra **357** (2012), 34–60. (with J. Pakianathan)

12.6.20 "Fusion systems and constructing free actions on products of spheres", Math. Z. **270** (2012), 939–959. (with Ö. Ünlü)

12.6.21 "Productive elements in group cohomology", Homology Homotopy Appl. **13** (2011), 381–401.

12.6.22 "Acyclic chain complexes over the orbit category", Münster J. of Mathematics **3** (2010), 145–162. (with I. Hambleton)

12.6.23 "Quasilinear actions on products of spheres", Bull. London Math. Soc.. **42** (2010), 981–990. (with Ö. Ünlü)

12.6.24 "The Euler class of a subset complex", Quart. J. Math. **61** (2010), 43–68. (with A. Güçlükan İlhan)

12.6.25 "A Tate cohomology sequence for generalized Burnside rings", J. Pure and Appl. Algebra **213** (2009), 1306–1315. (with O. Coşkun)

12.6.26 "A note on Serre's theorem in group cohomology", Proc. Amer. Math. Soc. **136** (2008), 2655–2663.

12.6.27 "Linear colorings of simplicial complexes and collapsing", J. Combin. Theory, Ser. A **114** (2007), 1315–1331. (with Y. Civan)

12.6.28 "Quadratic maps and Bockstein closed group extensions", Trans. Amer. Math. Soc. **359** (2007), 6079–6110. (with J. Pakianathan)

12.6.29 "Borel-Smith functions and the Dade group", J. Algebra **311** (2007), 821–839. (with S. Bouc)

12.6.30 "Generalized Burnside rings and group cohomology", J. Algebra **310** (2007), 917–944. (with R. Hartmann)

12.6.31 "A theorem of Jon F. Carlson on filtrations of modules", J. Pure and Appl. Algebra **208** (2007), 15–28. (with F. Altunbulak)

12.6.32   "An induction theorem for the unit groups of Burnside rings of 2-groups", J. Algebra **289** (2005), 105–127.

12.6.33   "A new notion of rank for finite supersolvable groups and free linear actions on products of spheres", J. Group Theory **6** (2003), 347–364. (with L. Barker)

12.6.34   "On nilpotent ideals in the cohomology ring of a finite group", Topology **42** (2003), 1155–1183. (with J. Pakianathan)

12.6.35   "Set covering and Serre's theorem on the cohomology algebra of a p-group", J. Algebra **245** (2001), 50–67.

12.6.36   "On commuting and non-commuting complexes", J. Algebra **236** (2001), 396–418. (with J. Pakianathan)

12.6.37   "Free p-group actions on products of lens spaces", Proc. Amer. math. Soc. **129** (2001), 887–898.

12.6.38   "Group actions and group extensions", Trans. Amer. Math. Soc. **352** (2000), 2689–2700.

12.6.39   "On some examples of group actions and group extensions", J. Group Theory **2** (1999), 69–79. (with A. Adem)

12.9   Papers submitted for publication

12.9.1   "Steenrod closed parameter ideals in the mod-2 cohomology of A_4 and $SO(3)$", (with H. Ruping and M. Stephan), Submitted, August 2022.

12.9.2   "LHS-spectral sequences for regular extensions of categories", Submitted, May 2023.

12.11   Published conference abstracts

12.11.1   Dade groups for finite groups and dimension functions (with Matthew Gelvin) Oberwolfach Reports, DOI:10.4171/OWR/2020/23, 1233-1236.

12.11.2   Group actions on spheres with rank one isotropy (with Ian Hambleton) Oberwolfach Reports, DOI:10.4171/OWR/2015/24, 17–18.

12.11.3   Fusion systems and constructing free actions on products of spheres (with Ö. Ünlü) Oberwolfach reports, Report No. 32/2010, 67–69.

12.11.4   Constructing group actions via orbit categories (with I. Hambleton and S. Pamuk) Oberwolfach reports, Report No. 27/2009, 1497–1500.

12.11.5   Bockstein closed central extensions of elementary abelian 2-groups I:Binding operators (with J. Pakianathan) Oberwolfach reports, Report No. 2/2005, 2375–2433.

14. RESEARCH INTERESTS

14.1 Cohomology of groups
14.2 Finite group actions on topological spaces
14.3 Equivariant vector bundles and fibrations
14.4 Orbit category and the Bredon cohomology
14.5 Burnside ring of a finite group
14.6 Biset functors
14.7 Fusion systems
14.7 Cohomology of small categories

15. GRANTS

15.1 Principal Investigator for TÜBİTAK 1001 grant with ti-   2016-2019
       tle "Ekuvaryant kurelerin boyut fonksiyonlari" (Dimen-
       sion functions of equivariant homotopy spheres" with
       project number 116F194 Total amount: 66,485 TL

15.2 TÜBİTAK 2219-Yurtdışı Doktora Sonrası Araştırma Burs Programı grant with title "Topology and Group Actions." Total amount: $30000 USD plus a two way airline ticket (to cover my expenses for my visit to McMaster University during my sabbatical year) — Aug. 2014-Aug. 2015

15.3 McMaster University Dr. Harry Lyman Hooker Distinguished Visiting Professor Award, Total Amount: $5000 CDN — Aug. 2014-Aug. 2015

15.4 TÜBİTAK support for inviting scholars: Grant covered an honorarium+plane ticket for Bob Oliver's visit. — March, 2012

15.5 TÜBİTAK support for inviting scholars: Grant covered a plane ticket for Peter Webb's visit. — March, 2012

15.6 Researcher in TÜBİTAK 1001 grant with title "Sonlu grupların kürelerin çarpımlarına pürüzsüz ve serbest etkileri" (Free smooth actions of finite groups on products of spheres), and with project number 110T712, Coordinator: Özgün Ünlü, Total amount: 129.860 TL — 2010-2013

15.7 TÜBİTAK support for inviting scholars: We received 2500 YTL honorarium+plane ticket for Peter Symonds' visit. — May, 2009

15.8 Received 5000 Canadian dollars for my visit to McMaster University through the Hooker distinguished visiting award. — 2007-2008

15.9 TÜBİTAK support for inviting scholars: We received 1400 YTL honorarium+plane ticket for Peter Symonds' visit. — March, 2007

15.10 TÜBİTAK-BDP support for the Bilkent Algebra group: The group consists of L. Barker, S. Sertöz, and E. Yalçın. This grant provided a monthly salary for two of our graduate students as well as an opportunity for them to go abroad for a year using Tübitak support. Fatma Altunbulak Aksu and Olcay Çoşkun used this grant to visit institutions in Germany and U.S.A. This grant also allowed us to use up to 3.000 YTL a year for inviting algebraists to Bilkent University. — 2006-2009

15.11 TÜBİTAK support for inviting scholars: We received 1312 YTL honorarium+plane ticket for Serge Bouc's visit — April, 2006

15.12 TÜBA-Gebip Award: This grant/award provided 15.000 YTL support annually for research activities for a three year period. — 2005-2008

16. EDUCATIONAL DEVELOPMENT ACTIVITIES

16.1 Member of the undergraduate curriculum committee which was formed to prepare on a proposal to change the Math Department undergraduate curriculum. The proposal was successful. — 2011

16.2 Served on the committee which held meetings with the Industrial Engineering Department and with the Department of Economics to decide on the courses needed to complete a Minor in Mathematics. — 2010

16.3 Coordinated a discussion on the graduate qualifying exam requirements of the Bilkent University Math Department. The requirements were changed as a result of this discussion. — 2005

16.4 Served on the committee which revised the undergraduate program of Bilkent University Math Department.   2001

17. CONTRIBUTIONS TO BILKENT UNIVERSITY

17.1 Graduate student evaluation committee   2020-2022

17.2 Served in the committee for organizing
Bilkent Open House for Graduate Program   Spring 2019

17.3 Served in the hiring committee   2003-2019

17.4 I was the faculty member who is responsible for our graduate program from 2005-2018. As part of this responsibility, I monitored our graduate students and see what their needs are; collect data from them to decide which graduate courses should be opened every semester; ensure that there are enough seminars organized and that there is a rich mathematical environment for them; and hold meetings with our fourth year students to promote our graduate program. Organize the qualifying exams for students who finished coursework. I also organized and held the interviews for incoming students.   2005-2018

17.5 Served as the academic advisor for the math club   2013-2015

17.6 Served as an undergraduate advisor   2000-2005

17.7 Member of the University Catalogue Committee   2004

18. CONTRIBUTIONS TO SOCIETY AT LARGE

18.1   HIGH SCHOOL TALKS

Preprints of the articles listed in Sections 12.6 and 12.9 can be found at
`http://www.fen.bilkent.edu.tr/~yalcine`