Olcay Coşkun

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EDUCATION

Bilkent University — Ankara, Turkey
PhD - Mathematics — *2004 - 2008*
Advisor: *Laurence J. Barker*   **Thesis:** *A correspondence of simple alcahestic group functors.*

Bilkent University — Ankara, Turkey
M.S. - Mathematics — *2002 - 2004*
Advisor: *Laurence J. Barker*   **Thesis:** *Modular representations and monomial Burnside rings*

Bilkent University — Ankara, Turkey
B.S. - Mathematics — *1997 - 2002*
Advisor: *Laurence J. Barker*   **Thesis:** *Weil representations of $SL(2, \mathbb{Z}/n)$ and $SL(2, \mathbb{Z}_p)$.*

ACADEMIC POSITIONS

Boğaziçi University — İstanbul, Turkey
Full Professor — *2017 - today*

Boğaziçi University — İstanbul, Turkey
Associate Professor — *2012 - 2017*

Boğaziçi University — İstanbul, Turkey
Assistant Professor — *2009 - 2012*

Bilkent University — Ankara, Turkey
Instructor — *2008 - Autumn*

ADMINISTRATIVE POSITIONS

Department of Mathematics, Boğaziçi University — İstanbul, Turkey
Chair — *July 15, 2022 - today*

Matematik Dünyası - Popular math magazine — İstanbul, Turkey
Editor — *2021 - today*

TMD - Turkish Mathematical Society — İstanbul, Turkey
Vice-president — *2021 - today*

IMBM - Istanbul Center for Mathematical Sciences — İstanbul, Turkey
Codirector — *2019 - 2022*

Feza Gürsey Center for Mathematics and Physics — İstanbul, Turkey
Vice chair — *2015 - 2018*

RESEARCH VISITS

University of California at Santa Cruz — Santa Cruz, CA, USA
Fulbright Scholar, Funded partially by TÜBİTAK — *August 2018 - July 2019*

MSRI (Mathematical Sciences Reseach Institute) — Berkeley, CA, USA
Research Associate — *January - April 2008*
at "Representation theory of finite groups and related topics" supported by TÜBİTAK

University of California at Santa Cruz — Santa Cruz, CA, USA
Junior Specialist — *September 2006 - June 2007*
Research under supervision of Robert Boltje supported by TÜBİTAK

HONORS AND AWARDS

- TÜBİTAK 2219 - Research Fellowship for Abroad Study, March 2019 – August 2019
- Fulbright Foundation Academic Research Fellowship, August 2018 – March 2019
- Bilim Akademisi (Science Academy of Turkey) Young Scientist Award Program (BAGEP), 2017
- Türk Matematik Vakfı (Turkish Mathematical Foundation) Masatoshi Gündüz İkeda Research Award, 2014
- Boğaziçi University Foundation Academic Encouragement Award, 2009, 2010, 2011, 2012, 2013, 2014, 2015. Yearly award, discontinued after 2016.
- TÜBİTAK Research Fellowship for Abroad Study, 2008
- TÜBİTAK Research Fellowship, 2006 – 2008
- TÜBİTAK Research Fellowship for Abroad Study, 2006 – 2007
- Bilkent University Department of MathematicsAlišbah Fellowship, 2005
- TÜBİTAK Research Fellowship, 2005 – 2006
- Bilkent University Merit Scholarship, 1997 – 2008. (Scholarship for BS, MS and PhD).

Research projects with funds

- **TÜBİTAK Research Grant - (1001-119F422) - 2020 - 2023**: Classification of simple modules over Green biset functors - (Principal Researcher); Ruslan Muslumov (Ph.D.), Doğa Ulaş Budak (M.S.), Mustafa Akdağ (M.S.), İbrahim Aslan (M.S.) and Mehmet Arslan (Post-doc) were/are fully supported.

- **TÜBİTAK Research Grant - (1002-117F291) - 2018-2019**: Alroran İzleçlerinin Basit Modüllerinin Sınıflandırılması (Principal Researcher)

- **Boğaziçi University Research Grant - (11144) - 2015-2017**: Dade group of Mackey functors for p-groups (Principal Researcher)

- **TÜBİTAK Research Grant - (1001-115F156) - 2015-2018**: Tower Tableaux and Schubert Polynomials (Researcher); Mustafa Türköz (M.S.) and Gözde Sert (M.S.) were fully supported.

- **TÜBİTAK Research Grant - (1001-113F240) - 2014-2017**: Fibered biset functor structure of the character rings (Principal Researcher); Mehmet Arslan (Ph.D.), Deniz Yılmaz (M.S.), Irmak Balçık (M.S.), Ruslan Muslumov(M.S.) were fully supported.

- **Boğaziçi University Research Grant - (7623) - 2013-2015**: Gerçel Karakter halkasının yapısı (Principal Researcher)

- **TÜBİTAK Career Research Grant - (1001-109T661) - 2010-2013**: Representations of finite groups of Lie type (Principal Researcher); Zehra Bilgin (M.S.) was fully supported.

- **Boğaziçi University Research Grant - (6029) - 2011-2013**: Reduced words of permutations (Researcher)

Research Interests

Mackey functors, (fibered) biset functors and category algebras, Green biset functors, block theory, fusion systems, homological algebra.

Teaching Experience - Selected Courses

- **Undergraduate Courses:**: Calculus I and II (for engineering faculty students), **Abstract Mathematics**, Algebra I (Group Theory), **Algebra II (Rings, Fields and Galois Theory)**, Matrix Theory (a linear algebra course for engineering faculty), **Linear Algebra**, Introduction to Set Theory, **Groups and Geometries**, Topics in Group Theory, **Combinatorial Representation Theory**, Representation Theory of Finite Groups

- **Graduate Courses:**: Algebra I (Groups, rings and modules), **Algebra II (ring extensions, filed extensions and Galois Theory)**, Schubert Calculus, **Finite group representations**, Axiomatic representation theory, **Modular representation theory I** and II, **Category Theory**, Homological Algebra, **Advanced group theory**

Graduate Students - Post-Doc advising

- **Post-Doc Advising**:

  - **Cihan Bahran**: (2022-2023)
  - **Mehmet Arslan**: (2020-2021)

- **PhD Students**:

  - **Ruslan Muslumov**: (2022) - Simple functors over section Burnside rings
  - **Mert Seviniş**: (2019) - The fibered Burnside ring of a fusion system
  - **Mehmet Arslan**: (2018) - Composition factors of the functor of complex characters

- **MS Students**:

  - **İbrahim Aslan**: (2023) - Expected
  - **Mustafa Akdağ**: (2023) - Expected
  - **Said Yılmaz**: (2022) - Expected
  - **Doğa Ulaş Budak**: (2021) - Relative endo-trivial modules
  - **Ebru Beyza Küçük**: (2019) - Complex Representations of $GL(2, q)$
  - **Ayçin İplikçi**: (2019) - Mackey functors over fusion systems
  - **Turan Karakurt**: (2018) - Modular Representations of $GL(2, p)$
  - **Gözde Sert**: (2018) - A survey on endotrivial modules over p-groups
  - **Ruslan Muslumov**: (2017) - The Green functor of the character ring of finite groups
  - **Mustafa Türköz**: (2017) - Co-Advisor, a Physics thesis
  - **Irmak Balçık**: (2016) - On simple modules over the section Burnside functor
  - **Deniz Yılmaz**: (2015) - The fibered p-biset functor of the fibered Burnside ring
  - **Zehra Bilgin**: (2012) - On quotients of Hom-functors, co-Advisor with Arzu Boysal

Administrative Duities

- **Professor representative in the faculty board**: 2021-2022
- **Vice chair of the Department of Mathematics.**: 2019-2022
- **Member - graduate assistant admissions committee. (of three members)**: 2013-today
- **Member - Ph.D. qualifying exam committee.**: 2013-today
- **Member - academic advising committee (Center for Teaching and Learning (CeTeLe)). (of 15 members)**: 2017-today
- **Graduate advisor.**: 2019-2022
- **Member - graduate admissions committee. (of five members)**: 2019-2022
- **Academic advisor for undergraduates (class of 2011)**: 2011-2021
- **Member - Faculty of Arts and Sciences Dean election committee. (of four members)**: 2022
- **Member - hiring committee. (of four members)**: 2019-2020
- **Member - graduate curriculum revision committee. (of five members)**: 2017-2018
- **Member - hiring committee. (of three members)**: 2017-2018
- **Vice chair of the Department of Mathematics.**: 2016-2017
- **Graduate advisor.**: 2016-2017
- **Member - colloquium committee. (of two members)**: 2015-2017
- **Member - ug curriculum revision committee. (of five members)**: 2015-2016
- **Member - graduate admissions committee. (of five members)**: 2012-2017

Professional Duities

- **Member of the Algebra Panel - TÜBİTAK-ARDEP**: 2012-today
- **Member of Research Fellowship Evaluation Panel - TÜBİTAK-BİDEP**: 2012-today
- **Referee for some math journals**:

Publications

1. O. Coşkun, M. Seviniş: *The fibered Burnside ring of a fusion system,* Int. Journal of Algebra and Comp. 31 (03) (2021), 453 - 470

2. M. Arslan, O. Coşkun: *The functor of complex characters of finite groups*, Journal of Algebra 562 (2020), 115-147.

3. O. Coşkun, E. Yalçın: *Obstructions for gluing biset functors*, Journal of Algebra 532 (2019), 268-310.

4. O. Coşkun, D. Yılmaz: *Fibered p-biset functor structure of fibered Burnside rings*, Algebras and Representation Theory 22 (2019), 21-41.

5. R. Boltje, O. Coşkun: *Fibered biset functors*, Advances in Mathematics 339 (2018), 540-598.

6. O. Coşkun, M. Taşkın: *Tower diagrams and Pieri's Rule*, Discrete Mathematics 341 (2018), 3089-3105.

7. O. Coşkun: *The Dade group of Mackey functors for p-groups*, Journal of Algebra 470 (2017), 172-196.

8. O. Coşkun: *Inducing native Mackey functors to biset functors*, Journal of Pure and Applied Algebra 219 (2015), 2359-2380.

9. O. Coşkun, M. Taşkın: *Sorting and generating reduced words*, Archiv der Mathematik 101 (2013), 427-436.

10. O. Coşkun, M. Taşkın: *Tower tableaux and Schubert polynomials*, Journal of Combinatorial Theory Series A 120 (2013), 1976-1995.

11. O. Coşkun, M. Taşkın: *Tower Tableaux*, Journal of Combinatorial Theory Series A 120 (2013), 843-871.

12. O. Coşkun: *Gluing Borel-Smith functions and the group of endo-trivial modules*, Bulletin of the London Mathematical Society 43 (2011), 912-926.

13. O. Coşkun, S. Pamuk: *Projective resolutions of globally defined Mackey functors in characteristic zero*, Archiv der Mathematik 96 (2011), 39-48.

14. O. Coşkun: *Ring of subquotients of a finite group II: Pure bisets*, Journal of Algebra 324 (2010), 706-731.

15. O. Coşkun: *Ring of Subquotients of a finite group I: Linearization*, Journal of Algebra 322 (2009), 2773 - 2792.

16. O. Coşkun, E. Yalçın: *A Tate cohomology sequence for generalized Burnside rings*, Journal of Pure and Applied Algebra 213 (2009), 1306 - 1315.

17. O. Coşkun: *Alcahestic subalgebras of the alchemic algebra and a correspondence of simple modules*, Journal of Algebra 320 (2008), 2422 - 2450.

18. O. Coşkun: *Mackey functors, induction from restriction functors and coinduction from transfer functors*, Journal of Algebra 315 (2007), 224 - 248.

Preprints

1. R. Boltje, O. Coşkun and Ç. Karagüzel: *The functor of trivial source modules.*

2. O. Coşkun, R. Muslumov: *Simple section biset functors.*

Popular Articles

As the editor in chief of the journal of Matematik Dünyası, it is part of my duty to write popular articles (each refereed). This is why I have many of them in a short period.

1. *Başarının iki yüzü*, Matematik Dünyası, 113 (2022) 14 - 15.

2. *Galois grupları*, Matematik Dünyası, 112 (2022) 17 - 24.

3. *Rubik küp grubu,* Matematik Dünyası, 112 (2022) 50 - 59.

4. *Asal Portreler*, Matematik Dünyası, 111 (2021) 10 - 13.

5. *Unutulmuş bir problem: Feit-Thompson sanısı*, Matematik Dünyası, 111 (2021) 76 - 78