March 30, 2026

Neşet Deniz Turgay — ***Curriculum vitae***

CONTACT INFORMATION

Department of Mathematics, Faculty of Arts and Sciences, Office No: AS 263, Eastern Mediterranean University, Famagusta, North Cyprus Via Mersin 10, Turkey

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NATIONALITY Turkish
DATE OF BIRTH 1982
MARITAL STATUS Single

RESEARCH INTERESTS

Algebra; Hopf algebras, in particular Leibniz-Hopf algebra; Overlapping shuffle algebra (MSC 57T05); Algebraic topology, especially Steenrod algebra (MSC 55S10); digital geometry, and Clifford algebras.

EDUCATION

University of Swansea, Swansea, Wales, UK

Ph.D., Mathematics, February 2013

- Thesis: *Conjugation invariants in word Hopf algebras*
- Supervisor: Assoc. Prof. Dr. Martin Crossley
- Second Supervisor: Prof. Dr. Tomasz Brzezinski

Ege University, Izmir, Turkey

M.S., Mathematics, July 2009

- Thesis: *Some Calculations in the Steenrod algebra*
- Supervisor: Prof. Dr. Ismet Karaca

University of Aberdeen, Aberdeen, Scotland, UK

Erasmus Programme, Mathematics 2008-2009

- Research subject: *Steenrod algebra*
- Supervisor: Prof. Dr. Stephen Theriault

Ege University, Izmir, Turkey

B.S., Mathematics June 2006

ACADEMIC TITLES

- Associate professor (Since 6 January 2026)
- Assistant professor 2022-2026.
- Associate professor (Docent) in Mathematics, by Inter-University Council (UAK) of Turkey (Since 6 March 2018)
- Ph.D. (Since 28 February 2013)

EMPLOYMENT

- Associate professor 2026-present
- Part-time lecturer, Eastern Mediterranean University, 2016-2022.

ACADEMIC EXPERIENCE

- Part-time lecturer at Eastern Mediterranean University, February 2016 –2022
- Visitor, Ege University Mathematics Department, 2013-2015.
- Tutor, Swansea, Further Maths Support Programme, Wales Institute of Mathematical and Computational Sciences, 2012.
- Tutor, Swansea Maths Master classes February-March 2012.
- Student Demonstrator, Swansea University, UK, 2009-2013.
- Volunteer tutorial asistant, Introductory to Mathematics, University of Aberdeen, UK, Spring 2008.

ARTICLES PUBLISHED IN JOURNALS COVERED BY SCI AND SCI EXPANDED, INTERNATIONAL

1. **N.D. Turgay**, B. Nagy, G. Kovács, B. Vizvári, Weighted distance on the m-dimensional extensions of the face-centered cubic lattice. *Central European Journal of Operations Research*, (2025) 1-13. doi:10.1007/s10100-025-00998-5 (SCI-Expanded)
2. G. Stomfai, G. Kovács, B. Nagy, **N.D. Turgay**, B. Vizvári, . Distances in the face-centered cubic crystalline structure applying operational research. *Foundations of Crystallography*, 79(5),(2023), 452–462. doi:10.1107/S2053273323004837 (SCI-Expanded)
3. **N.D. Turgay**,B. Nagy, G. Kovács, Weighted distances in the Cairo pattern. *Pattern Recognition Letters* 166 (2023), 105–111. doi:10.1016/j.patrec.2023.01.004 (SCI-Expanded).
4. **N.D. Turgay**, B. Nagy, G. Kovács, B. Vizvári, Chamfer Distance on the Four-dimensional Face-centred Cubic Grid. *Proceedings of the Bulgarian Academy of Sciences.* 76(6), (2023), 839–848. doi:10.7546/CRABS.2023.06.03 (SCI-Expanded).
5. G. Kovács, B. Nagy, G. Stomfai, **N.D. Turgay**, B. Vizvári, On Chamfer Distances on the Square and Body-Centered Cubic Grids: An Operational Research Approach. *Mathematical Problems in Engineering* 2021, (2021), doi:10.1155/2021/5582034 (SCI-Expanded)
6. G. Kovács, B. Nagy, **N.D. Turgay**, Distance on the Cairo pattern. *Pattern Recognition Letters* 145, (2021), 141–146 doi:10.1016/j.patrec.2021.02.002 (SCI-Expanded)
7. G. Kovács, B. Nagy, G. Stomfai, **N.D. Turgay**, B. Vizvári, Discrete Optimization: The Case of Generalized BCC Lattice. *Mathematics* 9(3), 208, (2021), doi:10.3390/math9030208 (SCI-Expanded)
8. **N.D. Turgay**, I. Karaca, The Arnon bases in the Steenrod algebra. *Georgian Mathematical Journal* 27(4), (2020), 649–654 doi:10.1515/gmj-2018-0076 (SCI-Expanded)
9. **N.D. Turgay**, On The Mod p Steenrod algebra and the Leibniz-Hopf Algebra, *Electronic Research Archive* 28(2), (2020), 951–959 doi:10.3934/era.2020050 (SCI-Expanded)

10. **N.D. Turgay**, Invariants under decomposition of the conjugation in the mod 2 dual Leibniz-Hopf Algebra. *Miskolc Math Notes* 19(2), (2018), 1217–1222. doi:10.18514/MMN.2018.2591 (SCI-Expanded)

11. **N.D. Turgay**, An alternative approach to the Adem relations in the mod p Steenrod algebra, *Comptes rendus de I'Académie bulgare des Sciences* 70(4), (2017), 457–466 (SCI-Expanded)

12. **N.D. Turgay**, S. Kaji, The mod 2 dual Steenrod algebra as a subalgebra of the mod 2 dual Leibniz-Hopf algebra, *Journal of Homotopy related Structures*, 12(3), (2017), 727—739 doi:10.1007/s40062-016-0163-x (SCI-Expanded)

13. **N.D. Turgay**, An alternative approach to the Adem relations in the mod 2 Steenrod algebra, *Turkish Journal of Mathematics*, 38(5), (2014), 924-934. doi:10.3906/mat-1309-6 (SCI-Expanded)

14. M.D. Crossley, **N.D. Turgay**, Conjugation invariants in the mod 2 dual Leibniz-Hopf algebra, *Communications in Algebra*, 41(9), (2013), 3261–3266. doi:10.1080/00927872.2012.682675 (SCI-Expanded)

15. M.D. Crossley, **N.D. Turgay**, Conjugation Invariants in the Leibniz-Hopf algebra, *Journal of Pure and Applied Algebra*, 217, (2013), 2247–2254. doi:10.1016/j.jpaa.2013.03.003 (SCI)

Articles Published in journals covered by other indexes, International

1. H.J.Al Hwaeer, G. Albkwre, **N.D. Turgay**, Correction to "On prime near-rings with generalized $(\sigma, \tau)-$ derivations 45(2005), 249–254, Kyungpook Math. J., 45(2005), 249–254". *Kyungpook Math. J.*, 60(2) 2020, 415–421. doi:10.5666/KMJ.2020.60.2.415 (ESCI,SCOPUS, AMS-MR(MR4157350))

2. **N.D. Turgay**, On the X basis in the Steenrod algebra, *Journal of Linear and Topological Algebra* 08(4) (2019), 215–218. (zbMath(Zbl 1449.55005), OCLC WorldCat, Copernicus, Google Scholar)

3. **N.D. Turgay**, A remark on the conjugation in the Steenrod algebra. *Communications of the Korean Mathematical Society*, 30(3) (2015), 269–276. doi:10.4134/CKMS.2015.30.3.269 (ESCI, SCOPUS, AMS-MR(MR3383634))

4. **N.D. Turgay**, On the conjugation invariant problem in the mod p dual Steenrod algebra. *Italian Journal of Pure and Applied Algebra*, 34 (2015), 151–158. (ESCI, SCOPUS, zbMath, AMS-MR(MR3393077))

5. **N.D. Turgay**, A Short Note on the Conjugation in the Leibniz-Hopf Algebra, *Journal of Mathematics and System Science*, 4(1) (2014) 34-36. (EBSCO, Google Scholar, Index Copernicus, etc.)

6. **N.D. Turgay**, Some notes on the dual Leibniz-Hopf algebra, *Journal of Mathematics and System Science*, 3(11) (2013), 573–576. (EBSCO, Google Scholar, Index Copernicus, etc.)

7. **N.D. Turgay**, A note on conjugation invariants in the dual-Leibniz Hopf algebra, *International journal of algebra* 7(17) (2013), 809–815. doi:10.12988/ija.2013.31099 (AMS-MR(MR3158606), zbMath, EBSCO, Google Scholar, ULRICH's Periodicals Directory, etc.)

SUPERVISOR FOR MASTER'S STUDENTS:

- Hazan Boranlı (MSc in Mathematics, Eastern Mediterranean University). Thesis title "Some Topologic Properties on Ultrametric Spaces" 2025-present
- Mustafa Taşkın (MSc in Mathematics, Eastern Mediterranean University).Thesis title"Optimizing Examination Timetables" Co-supervised with Saeid AsgharzadehBonab. 2024-2025.

CO-SUPERVISOR FOR MASTER'S STUDENTS:

- Cihan Güder (MSc in Mathematics, Eastern Mediterranean University). Thesis title "Clifford Algebras and Clifford Analysis"(coadvisor with Arran Fernandez), 2022–2023.

PROJECTS

- Scientific Research Project (BAPC04-22-03), Eastern Mediterranean University, Northen Cyprus (01.02.2023-31.07.2023) Project Title:"Clifford Analysis Knowledge Exchange (CAKE)" Director of the Project: Associate. Prof. Dr. Arran Fernandez. Researchers: Neşet Deniz Turgay and Cihan Güder
- Scientific Research Project (BAP 08-FEN-003) Ege University, Turkey 2009 Project Title: Some calculations in the Steenrod algebra
  Director of the Project: Prof. Dr. Ismet Karaca Researcher: Neşet Deniz Turgay

WORK PRESENTED IN INTERNATIONAL SCIENTIFIC MEETINGS, WITH THE ABSTRACT PUBLISHED IN THE PROCEEDINGS BOOKLET EITHER IN PRINT OR ELECTRONICALLY.

1. The dual Steenrod algebra and the overlapping shuffle product,contributed talk,International Conference on Mathematical Methods in Physics 24-28 April 2023, Marrakech, Morocco
2. Overlapping shuffle algebra and the mod p dual Steenrod algebra, contributed online talk by zoom, Euro Asia 9th. International Congress on Applied Sciences Erzurum, Turkey, August 11-12, 2021 (abstract accepted and available at conference webpage).
3. Invariant elements in the mod 2 dual Leibniz-Hopf algebra, contributed online talk by zoom, 6th international gap mathematics-engineering-science and health sciences congress Sanliurfa, Turkey, June 26-27, 2021 (abstract accepted and available at conference webpage).
4. A note on change of bases in the mod-p dual Steenrod algebra, contributed online talk by zoom,6th international gap mathematics-engineering-science and health sciences congress Sanliurfa, Turkey, June 26-27, 2021 (abstract accepted and available at conference webpage).
5. Mod p Leibniz Hopf algebra and the conjugation in the mod p Steenrod algebra, contributed online talk by zoom,International 19 may innovative scientific approaches congress-v Samsun, Turkey, May 19, 2021 (abstract accepted and available at conference webpage).

6. Leibniz Hopf algebra and the anti-automorphism of the mod 2 Steenrod algebra, contributed online talk by zoom, Ispec 10th international conference on engineering & natural sciences Siirt University, Siirt, Turkey, May 16-18, 2021 (abstract accepted and available at conference webpage).

7. Some results of conjugation in the mod 2 dual Leibniz-Hopf algebra, contributed talk, XV. Antalya Algebra Days Izmir, Turkey, 22 - 26 May, 2013 (abstract accepted and available at conference webpage).

8. Conjugation invariants in the Leibniz-Hopf algebra, contributed talk, University of Cambridge, ICMS, 27th British Topology Meeting 2012, CMS, U.K, September 6-8, 2012 (abstract accepted and available at conference webpage).

9. Conjugation invariants in the mod-2 Leibniz-Hopf algebra, contributed talk, Queen's University Belfast, Algebra, Combinatorics, Dynamics and Applications, U.K, August 27-30, 2012 (abstract accepted and available at conference webpage).

10. Conjugation invariants in the Leibniz-Hopf algebra, contributed talk, University of Copenhagen, Young Topologists Meeting, Denmark, July 26, 2012 (abstract accepted and available at conference webpage).

11. Conjugation invariants in the dual Leibniz-Hopf algebra, contributed talk, University of Edinburgh, ICMS, 26th British Topology Meeting, U.K, September 1-3, 2011 (abstract accepted).

12. Conjugation invariants in the mod-p and Integral Leibniz-Hopf algebra, invited talk, University of Manchester, Departmental Topology Seminar, 5th November 2012.

13. Free conjugation invariants, contributed talk, Gregynog, Mathematics Colloquium, U.K, 2011.

14. Contribution to weekly topology seminar for undergraduate students,coordinated by Prof. Ismet Karaca, Mathematics Department Ege University, 2007-2008.

Poster presentations

- University of Manchester, *Calculations in the Steenrod algebra*, MAGIC Postgraduate Student Conference,U.K, Jan 12-14, 2009.

Undergraduate Courses Taught in Turkish

- Mate111 - General Mathematics (Fall 2017)
- Mate163 - Discrete Mathematics (Spring 2021)
- Mate204 - Linear Algebra II (Spring 2016 - Spring 2017)
- Mate218 - Linear Algebra II (Spring 2016)
- Mate306 - Topology (Fall 2017)
- Mate319 - Analytic Geometry 1 (Fall 2018)

Undergraduate Courses Taught in English

- Math106 - Linear Algebra (Spring 2016 - Spring 2022)
- Math134 - Discrete Mathematics for Information Technology (Fall 2021)
- Math135 - Basic Mathematics for Health Sciences (Fall 2018)
- Math151 - Calculus 1 (Spring 2016 - Fall 2022)
- Math152 - Calculus 2 (Spring 2016 - Spring 2022)
- Math163 - Discrete Mathematics (Fall 2019 - Spring 2022)
- Math361 - Elementary Number Theory (Spring 2021)
- Math494 - Topology (Fall 2018 - Fall 2022)

Research fellowships, Grants and Scholarships

- Departmental Scholarship, Swansea University, U.K. 2009-2012.
- Socrates Erasmus Grant, University of Aberdeen 2008-2009.
- Research project "Some calculations in the Steenrod algebra" financed by Faculty of Science, Ege University, Turkey 2008-2009.

Awards

- Publication Awards (8 times), Eastern Mediterranean University 2017-2021.
- Departmental Scholarship, Swansea University. 2009-2012.
- Erasmus Grant, University of Aberdeen. 2008-2009.

Refereeing in international publications

1. *Hacettepe Journal of Mathematics & Statistics* (SCI-Expanded)
2. *Journal of Function Spaces* (SCI-Expanded)
3. *Bulletin of the Malaysian Mathematical Sciences Society* (SCI-Expanded)
4. *Utilitas Mathematica* (SCI-Expanded)
5. *Filomat* (SCI-Expanded)
6. *Electronic Research Archive* (SCI-Expanded) **(3 times)**
7. *Journal of Linear and Topological Algebra* (zbMath, OCLC WorldCat, Copernicus, Google Scholar) **(2 times)**
8. *Bulletin of International Mathematical Virtual Institute* (AMS-MR, zbMath) **(2 times)**
9. *Osmaniye Korkut Ata University Journal of The Institute of Science and Technology* (Tubitak Ulakbim TR Index, TR Dizin, Crossref, Scientific Indexing Services) **(2 times)**
10. *Romanian Journal of Mathematics and Computer Science* (AMS-MR, zbMath, DOAJ)
11. *Cogent Mathematics* (DOAJ,Google Scholar)
12. *Italian Journal of Pure and Applied Algebra* (ESCI, SCOPUS, zbMath, AMS-MR)

Selected Reviews for Mathematical Reviews AMS

1. MR4386465 Larson, Donald M., *Connectedness of graphs arising from the dual Steenrod algebra*, J. Homotopy Relat. Struct. 17 (2022), no. 1, 145–161 55S10 (05E16 16T05)
2. MR4344705 Shelukhin, Egor, *Pseudo-rotations and Steenrod squares revisited, Math. Res. Lett. 28 (2021), no. 4, 1255–1261* 57R17 (37K06)
3. MR4163079 Zheng, Yiwei; Gao, Yun; Hu, Naihong *Finite-dimensional Hopf algebras over the Hopf algebra $H_{b:1}$ of Kashina.* J. Algebra 567 (2021), 613–659. 16T05 (16T99)
4. MR4143889 Halbig, Sebastian and Krähmer, Ulrich, *A Hopf algebra without a modular pair in involution*, in Geometric methods in physics XXXVII, 140–142, Birkhäuser/Springer, Cham, 2019 16T05 (57T05)

Professional experience in mathematics

- Part-time lecturer at Eastern Mediterranean University, February 2016 to Present (6 Years)

Services Towards EMU

- Examiner for Qualifying Examination MATH163 CMPE 2021-2022 Fall
- Internal M.S. examiner, Eastern Mediterranean University 2016.

Services Towards Community

- Head of session in Ispec 10th international conference on engineering & natural sciences Siirt University, Siirt, Turkey, May 16-18, 2021.
- Representative instructor in Orientation Days, Eastern Mediterranean University 2016-2017
- Representative Ph.D. student, Swansea University, UK, 2009-2012.

Languages

- Turkish: native language.
- English: 2014-YDS Score: 81.25/100

Computer experience

- Latex, Mathematica, Maple, Matlab

Courses, Conferences and Meetings attended

- 36th Meeting of New Directions in Group Theory and Triangulated Categories, 29th March 2022, zoom meeting.
- Dynamics, Topology and Computations Bedlowa, Poland June 15-20, 2015.
- Applied Algebraic Topology Workshop, Castro Urdiales, CIEM Spain, 2014.
- Mathematical Structures of Computation, Directed topology, France, 2014.
- TTT86, Sheffield University, UK, 2013.
- Modern Perspectives in Homotopy Theory: Infinity Categories and Homotopy Type Theory, Swansea University, 10-13 April, 2012.
- Fourth Sheffield Homotopy Miniconference: Homotopy and Geometry of Loop Spaces 20-22 January, 2012.
- YTM, EPFL, Lausanne, Switzerland, June 14 - 18, 2011.
- TTT75, Sheffield University, UK, 2010.
- International Conference on Algebraic and Geometric Topology, Capital Normal University, Beijing, China, 28 June - 2 July, 2010.

- Toric Topology - Malaga Spring School, Malaga University, Spain, 2010.
- ICMS, Generic Skills Courses for First Year Postgraduates in the Mathematical Sciences, Edinburgh University, UK, Spring 2009.
- ICMS, Generic Skills Courses for Mathematics Later Years Postgraduates, Edinburgh University, UK, Autumn 2008.

Additional Experience

- Treasurer of AEGEE "European Students Forum" Abertawe, 2009-2012.
- ACE (Aiming for College Education) day leader, Student ACE day tomorrow with Reaching Winder, Swansea University, 2011–2013.
- Swansea study abroad programme Weihai, China, 2010.