

# Articles and Preprints by A. Kaygun

## Mathematics

1. **Bialgebra Cyclic Homology with Coefficients, Part I**  
arXiv:math/04080.2 [Math.KT]
2. **Bialgebra Cyclic Homology with Coefficients, Part II**  
arXiv:math/0409191 [Math.KT]
3. **A Loday–Quillen–Tsygan Theorem For Coalgebras**  
arXiv:math/0411661 [Math.KT]
4. **Bialgebra Cyclic Homology with Coefficients**  
*K-Theory* Vol.34 (2), 2005.
5. **Excision in Hopf Cyclic Homology** (with M. Khalkhali)  
*K-Theory* Vol.37 (1-2), 2006.
6. **Hopf Modules and Noncommutative Differential Geometry** (with M. Khalkhali)  
*Letters in Mathematical Physics* Vol.76 (1), 2006.
7. **Hopf-Hochschild (co)homology of module algebras**  
*Homology, Homotopy and Applications* Vol.9 (2), 2007.
8. **Bivariant Hopf cyclic cohomology** (with M. Khalkhali)  
*Communications in Algebra*, Vol.38 (7), 2010.
9. **The universal Hopf cyclic theory**  
*Journal of Noncommutative Geometry*, Vol.2 (3), 2008.
10. **Products in Hopf-cyclic cohomology**  
*Homology, Homotopy, Applications*, Vol.10 (2), 2008.
11. **Uniqueness of pairings in Hopf-cyclic cohomology**  
*Journal of K-Theory*, Vol.6 (1) 2010.
12. **Finite closed coverings of compact quantum spaces** (With P.M. Hajac and B. Zielinski)  
*Operator Algebras and Quantum Groups*, Banach Center Publ. 98 (2012) P.M. Soltan and W. Pusz Eds.
13. **Quantum projective space from Toeplitz cubes** (With P.M. Hajac and B. Zielinski)  
*Journal of Noncommutative Geometry*, Volume 6, Issue 3, 2012, pp. 603–621.
14. **A survey on Hopf-cyclic cohomology and Connes-Moscovici characteristic map**  
*Proceedings of Noncommutative Geometric Methods in Global Analysis, Conference in Honor of Henri Moscovici*. Contemporary Mathematics, Vol. 546 pp. 171-179 (2011)
15. **Jacobi-Zariski exact sequence for Hochschild homology and cyclic (co)homology.**  
*Homology, Homotopy and Applications*, Vol. 14 2012, No. 1, pp.65-78.
16. **Global Dimension of Some Artinian Algebras.** (with M. Kanuni), arXiv:math/1206/3726.

17. **Hopf-cyclic Cohomology of Quantum Enveloping Algebras.** (with S. Sütlü)  
*Journal of Noncommutative Geometry*; Volume 10, Issue 2, 2016, pp. 429–446.
18. **A characteristic map for compact quantum groups.** (with S. Sütlü)  
*Journal of Homotopy and Related Structures*, (2017) 12:549.
19. **Hopf-dihedral (co)homology and L-theory.** (with S. Sütlü)  
*Journal of Noncommutative Geometry* 12 (2018), 69-106.
20. **Hochschild Cohomology of Reduced Incidence Algebras.** (with S. Sütlü and M. Kanuni)  
*Journal of Algebra and Its Applications*, 16, 1750168 (2017)
21. **The asymptotic Connes-Moscovici characteristic map and the index cocycles.** (with S. Sütlü)  
*Banach Center Publications* 120 (2020), 221-244. DOI: 10.4064/bc120-15
22. **A graded pullback structure of Leavitt path algebras of trimmable graphs.** (with P.M. Hajac and M. Tobolski)  
*Banach Center Publications* 120 (2020), 47-52. DOI: 10.4064/bc120-4
23. **Noncommutative Fibrations.**  
*Communications in Algebra*, Volume 47, 2019 - Issue 8.
24. **On the Hochschild homology of smash biproducts.** (with S. Sütlü)  
*Journal of Pure and Applied Algebra*, Volume 225, Issue 2, 2021.
25. **Homology of quantum linear groups.** (with S. Sütlü)  
*Homology, Homotopy and Applications*, Volume 23 (2021), Number 2, Pages: 9–31.
26. **Birational Equivalences and Generalized Weyl Algebras.**  
arXiv:2009.14801 [math.KT]
27. **Enumerating Labeled Graphs that Realize a Fixed Degree Sequence.**  
arXiv:2101.02299 [math.CO]
28. **Birational Equivalences and Kac-Moody Algebras.**  
arXiv:2105.11360 [math.QA]

## **Topological Data Analysis**

1. **A New Non-Archimedean Metric on Persistent Homology.** (with İ. Güzel)  
*Computational Statistics* (2022) DOI: 10.1007/s00180-021-01187-z
2. **Time Series Classification via Topological Data Analysis.** (with A. Karan)  
*Expert Systems with Applications*, Volume 183, 2021, 115326. DOI: 10.1016/j.eswa.2021.115326
3. **Classification of Stochastic Processes with Topological Data Analysis.** (with İ. Güzel)  
arXiv:2206.03973 [stat.ML]
4. **Persistent Homology, Matroids, and Cobordisms.** (with İ. Güzel)  
arXiv:2209.01099 [math.AT]

## **History and Applied Statistics**

1. **Intergenerational Mobility in the in the Ottoman Empire: Observations from Eighteenth-Century.** (With B.A. Ergene)  
*The History of The Family*. Volume 16, Issue 1, 15 March 2011, Pages 30.26.
2. **Spouse Selection and Marital Mobility in the Ottoman Empire: Observations from Eighteenth-Century Kastamonu.** (With B.A. Ergene)  
*Historical Methods: A Journal of Quantitative and Interdisciplinary History*, Volume 45, Issue 1, 2012.
3. **A Temporal Analysis of Wealth and Inequality in Eighteenth-Century Ottoman Empire** (With M.M. Cosgel and B.A. Ergene)  
*Continuity and Change*, Volume 28, Issue 01 (May 2013), pp 1–26
4. **Log-linear Analysis of Intergenerational Mobility in Eighteenth-Century Ottoman Anatolia.** (With B.A. Ergene)  
*Journal of the Economic and Social History of the Orient*, Vol. 57, (20.2), pp 669-702.
5. **Semantic Mapping of An Ottoman Fetva Compilation: Fetava-yı Ebussuud through a Textual-Computational Lens.** (With B.A. Ergene)  
*Journal of Islamic Studies*, Volume 32, Issue 1, 1 January 2021, Pages 62–115. DOI: 10.1093/jis/etaa032
6. **The Textual Evolution of the Ottoman Şeyhülislams' Fetvas: A Cross-Corpora Computational Analysis.** (With B.A. Ergene)  
*Der Islam* 2021; 98 (2). DOI: 10.1515/islam-2021-0031
7. **Change Visible from a Distance: Digital Analysis of Ottoman Şeyhülislams' Fetvas in the Early Modern Era.** (with B.A. Ergene)  
*Journal of Middle Eastern Studies*, 1-20. DOI: 10.1017/S0020743822000460