

# Patrizio Frosini

## List of Publications by Year in descending order

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Version: 2024-02-01

47  
papers

856  
citations

567281

15  
h-index

526287

27  
g-index

50  
all docs

50  
docs citations

50  
times ranked

278  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | On the use of size functions for shape analysis. <i>Biological Cybernetics</i> , 1993, 70, 99-107.  | 1.3  | 94        |
| 2  | Betti numbers in multidimensional persistent homology are stable functions. <i>Mathematical Methods in the Applied Sciences</i> , 2013, 36, 1543-1557.                                | 2.3  | 77        |
| 3  | A distance for similarity classes of submanifolds of a Euclidean space. <i>Bulletin of the Australian Mathematical Society</i> , 1990, 42, 407-415.                                   | 0.5  | 71        |
| 4  | Multidimensional Size Functions for Shape Comparison. <i>Journal of Mathematical Imaging and Vision</i> , 2008, 32, 161-179.  | 1.3  | 62        |
| 5  | Size Functions and Formal Series. <i>Applicable Algebra in Engineering, Communications and Computing</i> , 2001, 12, 327-349.   | 0.5  | 52        |
| 6  | Natural Pseudo-Distance and Optimal Matching between Reduced Size Functions. <i>Acta Applicandae Mathematicae</i> , 2010, 109, 527-554.   | 1.0  | 44        |
| 7  | Size homotopy groups for computation of natural size distances. <i>Bulletin of the Belgian Mathematical Society - Simon Stevin</i> , 1999, 6, .                                       | 0.2  | 44        |
| 8  | <title>Measuring shapes by size functions</title>. , 1992, , .  |      | 41        |
| 9  | Persistent Betti numbers for a noise tolerant shape-based approach to image retrieval. <i>Pattern Recognition Letters</i> , 2013, 34, 863-872.  | 4.2  | 39        |
| 10 | Using matching distance in size theory: A survey. <i>International Journal of Imaging Systems and Technology</i> , 2006, 16, 154-161.   | 4.1  | 35        |
| 11 | A new algorithm for computing the 2-dimensional matching distance between size functions. <i>Pattern Recognition Letters</i> , 2011, 32, 1735-1746.                                   | 4.2  | 28        |
| 12 | Connections between Size Functions and Critical Points. <i>Mathematical Methods in the Applied Sciences</i> , 1996, 19, 555-569.  | 2.3  | 26        |
| 13 | Towards a topological "geometrical theory of group equivariant non-expansive operators for data analysis and machine learning. <i>Nature Machine Intelligence</i> , 2019, 1, 423-433. | 16.0 | 21        |
| 14 | The Use of Size Functions for Comparison of Shapes Through Differential Invariants. <i>Journal of Mathematical Imaging and Vision</i> , 2004, 21, 107-118.                            | 1.3  | 20        |
| 15 | Natural pseudo-distances between closed curves. <i>Forum Mathematicum</i> , 2009, 21, .   | 0.7  | 18        |
| 16 | New methods for reducing size graphs. <i>International Journal of Computer Mathematics</i> , 1999, 70, 505-517.   | 1.8  | 16        |
| 17 | Size Functions and Morphological Transformations. <i>Acta Applicandae Mathematicae</i> , 1997, 49, 85-104.  | 1.0  | 15        |
| 18 | 3D relevance feedback via multilevel relevance judgements. <i>Visual Computer</i> , 2010, 26, 1321-1338.  | 3.5  | 15        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Combining Persistent Homology and Invariance Groups for Shape Comparison. <i>Discrete and Computational Geometry</i> , 2016, 55, 373-409.   | 0.6 | 15        |
| 20 | Natural pseudodistances between closed surfaces. <i>Journal of the European Mathematical Society</i> , 2007, 9, 331-353.  | 1.4 | 11        |
| 21 | The persistent homotopy type distance. <i>Homology, Homotopy and Applications</i> , 2019, 21, 231-259.  | 0.4 | 8         |
| 22 | <title>New pseudodistances for the size function space</title>. , 1997, , .   |     | 7         |
| 23 | Does intelligence imply contradiction?. <i>Cognitive Systems Research</i> , 2009, 10, 297-315.  | 2.7 | 7         |
| 24 | Comparison of persistent homologies for vector functions: From continuous to discrete and back. <i>Computers and Mathematics With Applications</i> , 2013, 66, 560-573.                                 | 2.7 | 7         |
| 25 | Some Remarks on the Algebraic Properties of Group Invariant Operators in Persistent Homology. <i>Lecture Notes in Computer Science</i> , 2017, , 14-24.   | 1.3 | 7         |
| 26 | <title>Size functions for signature recognition</title>. , 1998, 3454, 178.   |     | 6         |
| 27 | Necessary conditions for discontinuities of multidimensional persistent Betti numbers. <i>Mathematical Methods in the Applied Sciences</i> , 2015, 38, 617-629.   | 2.3 | 6         |
| 28 | On the geometrical properties of the coherent matching distance in 2D persistent homology. <i>Journal of Applied and Computational Topology</i> , 2019, 3, 381-422.                                     | 2.0 | 6         |
| 29 | Deformation Energy for Size Functions. <i>Lecture Notes in Computer Science</i> , 1999, , 44-53.  | 1.3 | 6         |
| 30 | On the Construction of Group Equivariant Non-Expansive Operators via Permutants and Symmetric Functions. <i>Frontiers in Artificial Intelligence</i> , 2022, 5, 786091.                                 | 3.4 | 6         |
| 31 | G -invariant persistent homology. <i>Mathematical Methods in the Applied Sciences</i> , 2015, 38, 1190-1199.  | 2.3 | 5         |
| 32 | A Study of Monodromy in the Computation of Multidimensional Persistence. <i>Lecture Notes in Computer Science</i> , 2013, , 192-202.  | 1.3 | 5         |
| 33 | KEYPICS: FREE“HAND DRAWN ICONIC KEYWORDS. <i>International Journal of Shape Modeling</i> , 2007, 13, 125-137.   | 0.2 | 4         |
| 34 | No embedding of the automorphisms of a topological space into a compact metric space endows them with a composition that passes to the limit. <i>Applied Mathematics Letters</i> , 2011, 24, 1654-1657. | 2.7 | 4         |
| 35 | Intrinsic harmonicity of Morse functions. <i>Mathematika</i> , 2003, 50, 167-170.   | 0.5 | 3         |
| 36 | A global reduction method for multidimensional size graphs. <i>Electronic Notes in Discrete Mathematics</i> , 2006, 26, 21-28.  | 0.4 | 3         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | On a New Method to Build Group Equivariant Operators by Means of Permutants. Lecture Notes in Computer Science, 2018, , 265-272.                            | 1.3 | 3         |
| 38 | Persistent Betti Numbers for a Noise Tolerant Shape-Based Approach to Image Retrieval. Lecture Notes in Computer Science, 2011, , 294-301.                  | 1.3 | 3         |
| 39 | Size functions as complete invariants for image recognition. , 2002, , .  |     | 2         |
| 40 | A Note on the Linearity of Real-valued Functions with Respect to Suitable Metrics. Geometriae Dedicata, 2004, 108, 105-110.                                 | 0.3 | 2         |
| 41 | VCâ€dimension on manifolds: a first approach. Mathematical Methods in the Applied Sciences, 2008, 31, 589-605.  | 2.3 | 2         |
| 42 | ADVANCES IN MULTIDIMENSIONAL SIZE THEORY. Image Analysis and Stereology, 2010, 29, 19.  | 0.9 | 2         |
| 43 | Stable Comparison of Multidimensional Persistent Homology Groups with Torsion. Acta Applicandae Mathematicae, 2013, 124, 43-54.                             | 1.0 | 1         |
| 44 | A Brief Introduction to Multidimensional Persistent Betti Numbers. Springer Proceedings in Mathematics and Statistics, 2021, , 215-228.                     | 0.2 | 1         |
| 45 | A Global Method for Reducing Multidimensional Size Graphs. Lecture Notes in Computer Science, 2011, , 1-11.   | 1.3 | 1         |
| 46 | Geometrical shape comparison by size theory. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1141907-1141908.                                    | 0.2 | 0         |
| 47 | An Introduction to the Notion of Natural Pseudo-distance in Topological Data Analysis. Springer Proceedings in Mathematics and Statistics, 2021, , 203-213. | 0.2 | 0         |