# Michael Bronstein

List of Publications by Year
in descending order



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|---|---|---|---|
| 102 papers | 12,122 citations | 109321 35 h-index | 79698 73 g-index |
| 110 all docs | 110 docs citations | 110 times ranked | 6919 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Matching 3D Facial Shape to Demographic Properties by Geometric Metric Learning: A Part-Based Approach. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2022, 4, 163-172. | 4.4 | 4 |
| 2 | Interaction data are identifiable even across long periods of time. Nature Communications, 2022, 13, 313. | 12.8 | 12 |
| 3 | Multi-Scale Part-Based Syndrome Classification of 3D Facial Images. IEEE Access, 2022, 10, 23450-23462. | 4.2 | 3 |
| 4 | Toward understanding the communication in sperm whales. IScience, 2022, 25, 104393. | 4.1 | 7 |
| 5 | Nonisometric Surface Registration via Conformal Laplaceâ€“Beltrami Basis Pursuit. Journal of Scientific Computing, 2021, 86, 1. | 2.3 | 2 |
| 6 | Unsupervised Diffeomorphic Surface Registration and Non-linear Modelling. Lecture Notes in Computer Science, 2021, , 118-128. | 1.3 | 1 |
| 7 | Utilizing graph machine learning within drug discovery and development. Briefings in Bioinformatics, 2021, 22, . | 6.5 | 90 |
| 8 | Orthogonalized Fourier Polynomials for Signal Approximation and Transfer. Computer Graphics Forum, 2021, 40, 435-447. | 3.0 | 5 |
| 9 | Automated landmarking for palatal shape analysis using geometric deep learning. Orthodontics and Craniofacial Research, 2021, , . | 2.8 | 3 |
| 10 | Predicting anticancer hyperfoods with graph convolutional networks. Human Genomics, 2021, 15, 33. | 2.9 | 9 |
| 11 | Shape My Face: Registering 3D Face Scans by Surface-to-Surface Translation. International Journal of Computer Vision, 2021, 129, 2680-2713. | 15.6 | 12 |
| 12 | Exploring palatal and dental shape variation with 3D shape analysis and geometric deep learning. Orthodontics and Craniofacial Research, 2021, 24, 134-143. | 2.8 | 12 |
| 13 | GReS: Workshop on Graph Neural Networks for Recommendation and Search. , 2021, , . | | 0 |
| 14 | Fast end-to-end learning on protein surfaces. , 2021, , . | | 33 |
| 15 | IntelÂ® RealSenseâ„¢ SR300 Coded Light Depth Camera. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2333-2345. | 13.9 | 55 |
| 16 | Deciphering interaction fingerprints from protein molecular surfaces using geometric deep learning. Nature Methods, 2020, 17, 184-192. | 19.0 | 371 |
| 17 | Weakly-Supervised Mesh-Convolutional Hand Reconstruction in the Wild. , 2020, , . | | 113 |
| 18 | Geometrically Principled Connections in Graph Neural Networks. , 2020, , . | | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Graph Signal Processing for Machine Learning: A Review and New Perspectives. IEEE Signal Processing Magazine, 2020, 37, 117-127. | 5.6 | 77 |
| 20 | Clustered Dynamic Graph CNN for Biometric 3D Hand Shape Recognition. , 2020, , . | | 0 |
| 21 | Latent-Graph Learning for Disease Prediction. Lecture Notes in Computer Science, 2020, , 643-653. | 1.3 | 18 |
| 22 | Dynamic Graph CNN for Learning on Point Clouds. ACM Transactions on Graphics, 2019, 38, 1-12. | 7.2 | 2,437 |
| 23 | Deep Machine Learning Techniques for the Detection and Classification of Sperm Whale Bioacoustics. Scientific Reports, 2019, 9, 12588. | 3.3 | 57 |
| 24 | Functional Maps Representation On Product Manifolds. Computer Graphics Forum, 2019, 38, 678-689. | 3.0 | 5 |
| 25 | SpiralNet++: A Fast and Highly Efficient Mesh Convolution Operator. , 2019, , . | | 80 |
| 26 | Neural 3D Morphable Models: Spiral Convolutional Networks for 3D Shape Representation Learning and Generation. , 2019, , . | | 92 |
| 27 | CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. IEEE Transactions on Signal Processing, 2019, 67, 97-109. | 5.3 | 324 |
| 28 | Localized Manifold Harmonics for Spectral Shape Analysis. Computer Graphics Forum, 2018, 37, 20-34. | 3.0 | 38 |
| 29 | Graph Neural Networks for IceCube Signal Classification. , 2018, , . | | 33 |
| 30 | Partial Single- and Multishape Dense Correspondence Using Functional Maps. Handbook of Numerical Analysis, 2018, 19, 55-90. | 1.8 | 2 |
| 31 | Partial Functional Correspondence. Computer Graphics Forum, 2017, 36, 222-236. | 3.0 | 147 |
| 32 | Fully Spectral Partial Shape Matching. Computer Graphics Forum, 2017, 36, 247-258. | 3.0 | 69 |
| 33 | Geometric Deep Learning on Graphs and Manifolds Using Mixture Model CNNs. , 2017, , . | | 883 |
| 34 | Geometric Deep Learning: Going beyond Euclidean data. IEEE Signal Processing Magazine, 2017, 34, 18-42. | 5.6 | 1,846 |
| 35 | Computing and processing correspondences with functional maps. , 2017, , . | | 33 |
| 36 | Efficient Deformable Shape Correspondence via Kernel Matching. , 2017, , . | | 54 |

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|---|---|---|---|
| 37 | Matching Deformable Objects in Clutter. , 2016, , . | | 42 |
| 38 | Nonâ€Rigid Puzzles. Computer Graphics Forum, 2016, 35, 135-143. | 3.0 | 53 |
| 39 | Computing and processing correspondences with functional maps. , 2016, , . | | 30 |
| 40 | MADMM: A Generic Algorithm for Non-smooth Optimization on Manifolds. Lecture Notes in Computer Science, 2016, , 680-696. | 1.3 | 53 |
| 41 | Sparse Models for Intrinsic Shape Correspondence. Mathematics and Visualization, 2016, , 211-230. | 0.6 | 1 |
| 42 | Coupled Functional Maps. , 2016, , . | | 34 |
| 43 | Shape Analysis with Anisotropic Windowed Fourier Transform. , 2016, , . | | 11 |
| 44 | Geodesic Convolutional Neural Networks on Riemannian Manifolds. , 2015, , . | | 405 |
| 45 | Multimodal Manifold Analysis by Simultaneous Diagonalization of Laplacians. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 2505-2517. | 13.9 | 48 |
| 46 | Manifold Intrinsic Similarity. , 2015, , 1859-1908. | | 0 |
| 47 | Equi-affine Invariant Geometry for Shape Analysis. Journal of Mathematical Imaging and Vision, 2014, 50, 144-163. | 1.3 | 14 |
| 48 | Group-Valued Regularization for Motion Segmentation of Articulated Shapes. Mathematics and Visualization, 2013, , 263-281. | 0.6 | 1 |
| 49 | Sparse Modeling of Intrinsic Correspondences. Computer Graphics Forum, 2013, 32, 459-468. | 3.0 | 79 |
| 50 | Coupled quasiâ€harmonic bases. Computer Graphics Forum, 2013, 32, 439-448. | 3.0 | 133 |
| 51 | Feature-Based Methods in 3D Shape Analysis. , 2012, , 185-219. | | 8 |
| 52 | Discrete Minimum Distortion Correspondence Problems for Non-rigid Shape Matching. Lecture Notes in Computer Science, 2012, , 580-591. | 1.3 | 20 |
| 53 | A Correspondence-Less Approach to Matching of Deformable Shapes. Lecture Notes in Computer Science, 2012, , 592-603. | 1.3 | 11 |
| 54 | Group-Valued Regularization Framework for Motion Segmentation of Dynamic Non-rigid Shapes. Lecture Notes in Computer Science, 2012, , 725-736. | 1.3 | 10 |

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|---|---|---|---|
| 55 | Putting the Pieces Together: Regularized Multi-part Shape Matching. Lecture Notes in Computer Science, 2012, , 1-11. | 1.3 | 10 |
| 56 | Group-Valued Regularization for Analysis of Articulated Motion. Lecture Notes in Computer Science, 2012, , 52-62. | 1.3 | 10 |
| 57 | Shape Palindromes: Analysis of Intrinsic Symmetries in 2D Articulated Shapes. Lecture Notes in Computer Science, 2012, , 665-676. | 1.3 | 3 |
| 58 | Affine-invariant geodesic geometry of deformable 3D shapes. Computers and Graphics, 2011, 35, 692-697. | 2.5 | 26 |
| 59 | Shape google. ACM Transactions on Graphics, 2011, 30, 1-20. | 7.2 | 466 |
| 60 | Affine-invariant diffusion geometry for the analysis of deformable 3D shapes. , 2011, , . | | 22 |
| 61 | Manifold Intrinsic Similarity. , 2011, , 1403-1452. | | 3 |
| 62 | A Gromov-Hausdorff Framework with Diffusion Geometry forÂTopologically-Robust Non-rigid Shape Matching. International Journal of Computer Vision, 2010, 89, 266-286. | 15.6 | 203 |
| 63 | Full and Partial Symmetries of Non-rigid Shapes. International Journal of Computer Vision, 2010, 89, 18-39. | 15.6 | 83 |
| 64 | Nonlinear Dimensionality Reduction by Topologically Constrained Isometric Embedding. International Journal of Computer Vision, 2010, 89, 56-68. | 15.6 | 54 |
| 65 | Scale-invariant heat kernel signatures for non-rigid shape recognition. , 2010, , . | | 386 |
| 66 | Data fusion through cross-modality metric learning using similarity-sensitive hashing. , 2010, , . | | 332 |
| 67 | Intrinsic Regularity Detection in 3D Geometry. Lecture Notes in Computer Science, 2010, , 398-410. | 1.3 | 22 |
| 68 | 3D-color video camera. , 2009, , . | | 10 |
| 69 | Numerical Geometry of Non-Rigid Shapes. Texts and Monographs in Computer Science, 2009, , . | 0.7 | 204 |
| 70 | Partial Similarity of Objects, or How to Compare a Centaur toÂaÂHorse. International Journal of Computer Vision, 2009, 84, 163-183. | 15.6 | 83 |
| 71 | Topology-Invariant Similarity of Nonrigid Shapes. International Journal of Computer Vision, 2009, 81, 281-301. | 15.6 | 47 |
| 72 | Shape Google: a computer vision approach to isometry invariant shape retrieval. , 2009, , . | | 75 |

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| 73 | On reconstruction of non-rigid shapes with intrinsic regularization. , 2009, , . | | 6 |
| 74 | Partial Similarity of Shapes Using a Statistical Significance Measure. IPSJ Transactions on Computer Vision and Applications, 2009, 1, 105-114. | 4.4 | 9 |
| 75 | Analysis of Two-Dimensional Non-Rigid Shapes. International Journal of Computer Vision, 2008, 78, 67-88. | 15.6 | 89 |
| 76 | Not only size matters: Regularized partial matching of nonrigid shapes. , 2008, , . | | 19 |
| 77 | Parallel algorithms for approximation of distance maps on parametric surfaces. ACM Transactions on Graphics, 2008, 27, 1-16. | 7.2 | 98 |
| 78 | Topologically Constrained Isometric Embedding. Computational Imaging and Vision, 2008, , 243-262. | 0.6 | 6 |
| 79 | Regularized Partial Matching of Rigid Shapes. Lecture Notes in Computer Science, 2008, , 143-154. | 1.3 | 22 |
| 80 | Expression-invariant 3D face recognition. SPIE Newsroom, 2008, , . | 0.1 | 0 |
| 81 | Expression-Invariant Representations of Faces. IEEE Transactions on Image Processing, 2007, 16, 188-197. | 9.8 | 122 |
| 82 | Symmetries of non-rigid shapes. , 2007, , . | | 46 |
| 83 | Calculus of Nonrigid Surfaces for Geometry and Texture Manipulation. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 902-913. | 4.4 | 95 |
| 84 | Rock, Paper, and Scissors: extrinsic vs. intrinsic similarity of non-rigid shapes. , 2007, , . | | 18 |
| 85 | Paretian Similarity for Partial Comparison of Non-rigid Objects. , 2007, , 264-275. | | 1 |
| 86 | Story of Cinderella. , 2007, , 119-131. | | 0 |
| 87 | Efficient Computation of Isometryâ€invariant Distances Between Surfaces. SIAM Journal of Scientific Computing, 2006, 28, 1812-1836. | 2.8 | 162 |
| 88 | Multigrid multidimensional scaling. Numerical Linear Algebra With Applications, 2006, 13, 149-171. | 1.6 | 73 |
| 89 | Generalized multidimensional scaling: A framework for isometry-invariant partial surface matching. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1168-1172. | 7.1 | 413 |
| 90 | Sparse ICA for blind separation of transmitted and reflected images. International Journal of Imaging Systems and Technology, 2005, 15, 84-91. | 4.1 | 93 |

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|---|---|---|---|
| 91 | Three-Dimensional Face Recognition. International Journal of Computer Vision, 2005, 64, 5-30. | 15.6 | 429 |
| 92 | Blind deconvolution of images using optimal sparse representations. IEEE Transactions on Image Processing, 2005, 14, 726-736. | 9.8 | 78 |
| 93 | Isometric Embedding of Facial Surfaces into $mathbb{S}^{m 3}$. Lecture Notes in Computer Science, 2005, , 622-631. | 1.3 | 19 |
| 94 | Blind Source Separation Using the Block-Coordinate Relative Newton Method. Lecture Notes in Computer Science, 2004, , 406-413. | 1.3 | 0 |
| 95 | Blind source separation using block-coordinate relative Newton method. Signal Processing, 2004, 84, 1447-1459. | 3.7 | 8 |
| 96 | Optimal Sparse Representations for Blind Deconvolution of Images. Lecture Notes in Computer Science, 2004, , 500-507. | 1.3 | 0 |
| 97 | Blind Deconvolution Using the Relative Newton Method. Lecture Notes in Computer Science, 2004, , 554-561. | 1.3 | 4 |
| 98 | Face Recognition from Facial Surface Metric. Lecture Notes in Computer Science, 2004, , 225-237. | 1.3 | 27 |
| 99 | Expression-Invariant 3D Face Recognition. Lecture Notes in Computer Science, 2003, , 62-70. | 1.3 | 177 |
| 100 | Separation of reflections via sparse ICA. , 2003, , . | | 13 |
| 101 | Reconstruction in diffraction ultrasound tomography using nonuniform FFT. IEEE Transactions on Medical Imaging, 2002, 21, 1395-1401. | 8.9 | 92 |
| 102 | Biometrics was no match for hair-raising tricks. Nature, 2002, 420, 739-739. | 27.8 | 4 |