

# Andrea Maria Chiariello

## List of Publications by Year in descending order

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47  
papers

2,029  
citations

394421

19  
h-index

302126

39  
g-index

58  
all docs

58  
docs citations

58  
times ranked

1881  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hierarchical folding and reorganization of chromosomes are linked to transcriptional changes in cellular differentiation. <i>Molecular Systems Biology</i> , 2015, 11, 852.	7.2	305
2	Polymer physics predicts the effects of structural variants on chromatin architecture. <i>Nature Genetics</i> , 2018, 50, 662-667.	21.4	179
3	Polymer physics of chromosome large-scale 3D organisation. <i>Scientific Reports</i> , 2016, 6, 29775.	3.3	160
4	Single-allele chromatin interactions identify regulatory hubs in dynamic compartmentalized domains. <i>Nature Genetics</i> , 2018, 50, 1744-1751.	21.4	150
5	Dynamic 3D chromatin architecture contributes to enhancer specificity and limb morphogenesis. <i>Nature Genetics</i> , 2018, 50, 1463-1473.	21.4	147
6	Preformed chromatin topology assists transcriptional robustness of <i>Shh</i> during limb development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 12390-12399.	7.1	131
7	Cell-type specialization is encoded by specific chromatin topologies. <i>Nature</i> , 2021, 599, 684-691.	27.8	112
8	CTCF mediates dosage- and sequence-context-dependent transcriptional insulation by forming local chromatin domains. <i>Nature Genetics</i> , 2021, 53, 1064-1074.	21.4	90
9	Active and poised promoter states drive folding of the extended <i>HoxB</i> locus in mouse embryonic stem cells. <i>Nature Structural and Molecular Biology</i> , 2017, 24, 515-524.	8.2	80
10	Polymer physics indicates chromatin folding variability across single-cells results from state degeneracy in phase separation. <i>Nature Communications</i> , 2020, 11, 3289.	12.8	79
11	Release of paused RNA polymerase II at specific loci favors DNA double-strand-break formation and promotes cancer translocations. <i>Nature Genetics</i> , 2019, 51, 1011-1023.	21.4	73
12	Predicting chromatin architecture from models of polymer physics. <i>Chromosome Research</i> , 2017, 25, 25-34.	2.2	42
13	Comparison of the Hi-C, GAM and SPRITE methods using polymer models of chromatin. <i>Nature Methods</i> , 2021, 18, 482-490.	19.0	39
14	A Dynamic Folded Hairpin Conformation Is Associated with $\hat{\alpha}$ -Globin Activation in Erythroid Cells. <i>Cell Reports</i> , 2020, 30, 2125-2135.e5.	6.4	38
15	Loop-extrusion and polymer phase-separation can co-exist at the single-molecule level to shape chromatin folding. <i>Nature Communications</i> , 2022, 13, .	12.8	35
16	Computational approaches from polymer physics to investigate chromatin folding. <i>Current Opinion in Cell Biology</i> , 2020, 64, 10-17.	5.4	31
17	Molecular Dynamics simulations of the Strings and Binders Switch model of chromatin. <i>Methods</i> , 2018, 142, 81-88.	3.8	27
18	Structure of the human chromosome interaction network. <i>PLoS ONE</i> , 2017, 12, e0188201.	2.5	27

#	ARTICLE	IF	CITATIONS
19	Polymer models of the hierarchical folding of the Hox-B chromosomal locus. <i>Physical Review E</i> , 2016, 94, 042402.	2.1	22
20	Modeling Single-Molecule Conformations of the HoxD Region in Mouse Embryonic Stem and Cortical Neuronal Cells. <i>Cell Reports</i> , 2019, 28, 1574-1583.e4.	6.4	21
21	Polymer physics reveals a combinatorial code linking 3D chromatin architecture to 1D chromatin states. <i>Cell Reports</i> , 2022, 38, 110601.	6.4	18
22	Polymer models of chromatin organization. <i>Frontiers in Genetics</i> , 2013, 4, 113.	2.3	15
23	Models of polymer physics for the architecture of the cell nucleus. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2019, 11, e1444.	6.6	14
24	A modern challenge of polymer physics: Novel ways to study, interpret, and reconstruct chromatin structure. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2020, 10, e1454.	14.6	14
25	Inference of chromosome 3D structures from GAM data by a physics computational approach. <i>Methods</i> , 2020, 181-182, 70-79.	3.8	12
26	The Interplay between Phase Separation and Gene-Enhancer Communication: A Theoretical Study. <i>Biophysical Journal</i> , 2020, 119, 873-883.	0.5	12
27	A Polymer Physics Investigation of the Architecture of the Murine Orthologue of the 7q11.23 Human Locus. <i>Frontiers in Neuroscience</i> , 2017, 11, 559.	2.8	11
28	Divergent Transcription of the Nkx2-5 Locus Generates Two Enhancer RNAs with Opposing Functions. <i>IScience</i> , 2020, 23, 101539.	4.1	11
29	8-oxodG accumulation within super-enhancers marks fragile CTCF-mediated chromatin loops. <i>Nucleic Acids Research</i> , 2022, 50, 3292-3306.	14.5	11
30	Higher-order Chromosome Structures Investigated by Polymer Physics in Cellular Morphogenesis and Differentiation. <i>Journal of Molecular Biology</i> , 2020, 432, 701-711.	4.2	10
31	Physical mechanisms of chromatin spatial organization. <i>FEBS Journal</i> , 2022, 289, 1180-1190.	4.7	10
32	3DGenBench: a web-server to benchmark computational models for 3D Genomics. <i>Nucleic Acids Research</i> , 2022, 50, W4-W12.	14.5	10
33	Polymer models of the organization of chromosomes in the nucleus of cells. <i>Modern Physics Letters B</i> , 2015, 29, 1530003.	1.9	8
34	Polymer models are a versatile tool to study chromatin 3D organization. <i>Biochemical Society Transactions</i> , 2021, 49, 1675-1684.	3.4	8
35	Dynamic and equilibrium properties of finite-size polymer models of chromosome folding. <i>Physical Review E</i> , 2021, 104, 054402.	2.1	7
36	The scaling features of the 3D organization of chromosomes are highlighted by a transformation $\tilde{A}$ la Kadanoff of Hi-C data. <i>Europhysics Letters</i> , 2017, 120, 40004.	2.0	6

#	ARTICLE	IF	CITATIONS
37	Efficient computational implementation of polymer physics models to explore chromatin structure. International Journal of Parallel, Emergent and Distributed Systems, 2019, , 1-12.	1.0	6
38	The Physics of DNA Folding: Polymer Models and Phase-Separation. Polymers, 2022, 14, 1918.	4.5	5
39	Polymer Physics of the Large-Scale Structure of Chromatin. Methods in Molecular Biology, 2016, 1480, 201-206.	0.9	4
40	Understanding Chromatin Structure: Efficient Computational Implementation of Polymer Physics Models. Lecture Notes in Computer Science, 2019, , 680-691.	1.3	1
41	A Polymer Physics Model to Dissect Genome Organization in Healthy and Pathological Phenotypes. Methods in Molecular Biology, 2022, 2301, 307-316.	0.9	1
42	Hybrid Machine Learning and Polymer Physics Approach to Investigate 3D Chromatin Structure. Lecture Notes in Computer Science, 2020, , 572-582.	1.3	1
43	A novel complex genomic rearrangement affecting the KCNJ2 regulatory region causes a variant of Cocks syndrome. Human Genetics, 2022, 141, 217-227.	3.8	1
44	Further Delineation of Duplications of ARX Locus Detected in Male Patients with Varying Degrees of Intellectual Disability. International Journal of Molecular Sciences, 2022, 23, 3084.	4.1	1
45	Analysis of Genome Architecture Mapping Data with a Machine Learning and Polymer-Physics-Based Tool. Lecture Notes in Computer Science, 2021, , 321-332.	1.3	0
46	The Strings and Binders Switch Model of Chromatin. , 2019, , 57-68.		0
47	Connecting the Dots: PHF13 and Cohesin Promote Polymer-Polymer Phase Separation of Chromatin Into Chromosomes. SSRN Electronic Journal, 0, , .	0.4	0