Hui Lu

List of Publications by Year in descending order

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76294 45285 9,102 135 40 90 citations h-index g-index papers 140 140 140 11504 citing authors all docs docs citations times ranked

#	Article	IF	Citations
1	Template-based protein structure modeling using the RaptorX web server. Nature Protocols, 2012, 7, 1511-1522.	5.5	1,474
2	Mechanical unfolding intermediates in titin modules. Nature, 1999, 402, 100-103.	13.7	789
3	Unfolding of Titin Immunoglobulin Domains by Steered Molecular Dynamics Simulation. Biophysical Journal, 1998, 75, 662-671.	0.2	658
4	Reverse engineering of the giant muscle protein titin. Nature, 2002, 418, 998-1002.	13.7	487
5	The mechanical stability of ubiquitin is linkage dependent. Nature Structural and Molecular Biology, 2003, 10, 738-743.	3.6	436
6	Contour Length and Refolding Rate of a Small Protein Controlled by Engineered Disulfide Bonds. Biophysical Journal, 2007, 92, 225-233.	0.2	285
7	The Key Event in Force-Induced Unfolding of Titin's Immunoglobulin Domains. Biophysical Journal, 2000, 79, 51-65.	0.2	282
8	A distance-dependent atomic knowledge-based potential for improved protein structure selection. Proteins: Structure, Function and Bioinformatics, 2001, 44, 223-232.	1.5	282
9	A statistical framework for cross-tissue transcriptome-wide association analysis. Nature Genetics, 2019, 51, 568-576.	9.4	262
10	Steered molecular dynamics simulations of force-induced protein domain unfolding., 1999, 35, 453-463.		246
11	Steered Molecular Dynamics. Lecture Notes in Computational Science and Engineering, 1999, , 39-65.	0.1	240
12	MULTIPROSPECTOR: An algorithm for the prediction of protein-protein interactions by multimeric threading. Proteins: Structure, Function and Bioinformatics, 2002, 49, 350-364.	1.5	239
13	Correlation between gene expression profiles and protein-protein interactions within and across genomes. Bioinformatics, 2005, 21, 2730-2738.	1.8	160
14	Steered molecular dynamics simulation of conformational changes of immunoglobulin domain I27 interprete atomic force microscopy observations. Chemical Physics, 1999, 247, 141-153.	0.9	145
15	Kernel-based machine learning protocol for predicting DNA-binding proteins. Nucleic Acids Research, 2005, 33, 6486-6493.	6.5	142
16	Development of Unified Statistical Potentials Describing Protein-Protein Interactions. Biophysical Journal, 2003, 84, 1895-1901.	0.2	137
17	Cholesterol modulates cell signaling and protein networking by specifically interacting with PDZ domain-containing scaffold proteins. Nature Communications, 2012, 3, 1249.	5.8	129
18	Single-molecule force spectroscopy reveals a mechanically stable protein fold and the rational tuning of its mechanical stability. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9278-9283.	3.3	117

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19	Multimeric Threading-Based Prediction of Protein-Protein Interactions on a Genomic Scale: Application to the Saccharomyces cerevisiae Proteome. Genome Research, 2003, 13, 1146-1154.	2.4	102
20	Quantum dynamics of the femtosecond photoisomerization of retinal in bacteriorhodopsin. Faraday Discussions, 1998, 110, 447-462.	1.6	83
21	Differential Roles of Phosphatidylserine, PtdIns(4,5)P2, and PtdIns(3,4,5)P3 in Plasma Membrane Targeting of C2 Domains. Journal of Biological Chemistry, 2008, 283, 26047-26058.	1.6	75
22	Solvent molecules bridge the mechanical unfolding transition state of a protein. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3185-3190.	3.3	73
23	Acetylproteomic Analysis Reveals Functional Implications of Lysine Acetylation in Human Spermatozoa (sperm). Molecular and Cellular Proteomics, 2015, 14, 1009-1023.	2.5	70
24	NAPS: a residue-level nucleic acid-binding prediction server. Nucleic Acids Research, 2010, 38, W431-W435.	6. 5	66
25	Argonaute integrated single-tube PCR system enables supersensitive detection of rare mutations. Nucleic Acids Research, 2021, 49, e75-e75.	6.5	66
26	Probing static disorder in Arrhenius kinetics by single-molecule force spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11336-11340.	3.3	65
27	Genome-wide Functional Annotation of Dual-Specificity Protein- and Lipid-Binding Modules that Regulate Protein Interactions. Molecular Cell, 2012, 46, 226-237.	4.5	62
28	Intrinsically disordered proteinâ€specific force field <scp>CHARMM</scp> 36 <scp>IDPSFF</scp> . Chemical Biology and Drug Design, 2018, 92, 1722-1735.	1.5	62
29	Three Electronic State Model of the Primary Phototransformation of Bacteriorhodopsin. Biophysical Journal, 1998, 75, 1689-1699.	0.2	61
30	Unfolding of titin domains studied by molecular dynamics simulations. Journal of Muscle Research and Cell Motility, 2002, 23, 513-521.	0.9	61
31	Residue-level prediction of DNA-binding sites and its application on DNA-binding protein predictions. FEBS Letters, 2007, 581, 1058-1066.	1.3	61
32	Mechanically Untying a Protein Slipknot: Multiple Pathways Revealed by Force Spectroscopy and Steered Molecular Dynamics Simulations. Journal of the American Chemical Society, 2012, 134, 10428-10435.	6.6	60
33	Molecular Basis of the Potent Membrane-remodeling Activity of the Epsin 1 N-terminal Homology Domain. Journal of Biological Chemistry, 2010, 285, 531-540.	1.6	59
34	Structural Bioinformatics Prediction of Membrane-binding Proteins. Journal of Molecular Biology, 2006, 359, 486-495.	2.0	58
35	Finding new structural and sequence attributes to predict possible disease association of single amino acid polymorphism (SAP). Bioinformatics, 2007, 23, 1444-1450.	1.8	55
36	Chemistry on a Single Protein, Vascular Cell Adhesion Molecule-1, during Forced Unfolding. Journal of Biological Chemistry, 2004, 279, 45865-45874.	1.6	53

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37	Boosting the prediction and understanding of DNA-binding domains from sequence. Nucleic Acids Research, 2010, 38, 3149-3158.	6.5	50
38	Predicting essential genes for identifying potential drug targets in Aspergillus fumigatus. Computational Biology and Chemistry, 2014, 50, 29-40.	1.1	50
39	Simulated Refolding of Stretched Titin Immunoglobulin Domains. Biophysical Journal, 2001, 81, 2268-2277.	0.2	48
40	Multi-omics facilitated variable selection in Cox-regression model for cancer prognosis prediction. Methods, 2017, 124, 100-107.	1.9	45
41	The PDZ2 domain of zonula occludens-1 and -2 is a phosphoinositide binding domain. Cellular and Molecular Life Sciences, 2009, 66, 3951-3966.	2.4	44
42	Ab initio protein structure prediction on a genomic scale: Application to the Mycoplasma genitalium genome. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 5993-5998.	3.3	41
43	Application of statistical potentials to protein structure refinement from low resolutionab initio models. Biopolymers, 2003, 70, 575-584.	1.2	40
44	A Singleâ€Molecule Perspective on the Role of Solvent Hydrogen Bonds in Protein Folding and Chemical Reactions. ChemPhysChem, 2008, 9, 2836-2847.	1.0	39
45	Residue-Specific Force Field Improving the Sample of Intrinsically Disordered Proteins and Folded Proteins. Journal of Chemical Information and Modeling, 2019, 59, 4793-4805.	2.5	39
46	<p>Assessment of tumor mutation burden calculation from gene panel sequencing data</p> . OncoTargets and Therapy, 2019, Volume 12, 3401-3409.	1.0	38
47	The molecular basis of ceramide-1-phosphate recognition by C2 domains. Journal of Lipid Research, 2013, 54, 636-648.	2.0	34
48	A New Exhaustive Method and Strategy for Finding Motifs in ChIP-Enriched Regions. PLoS ONE, 2014, 9, e86044.	1.1	34
49	Stabilization Provided by Neighboring Strands Is Critical for the Mechanical Stability of Proteins. Biophysical Journal, 2008, 95, 3935-3942.	0.2	33
50	Meta-analysis of sex differences in gene expression in schizophrenia. BMC Systems Biology, 2016, 10, 9.	3.0	31
51	Nuclear Segmentation in Histopathological Images Using Two-Stage Stacked U-Nets With Attention Mechanism. Frontiers in Bioengineering and Biotechnology, 2020, 8, 573866.	2.0	31
52	A threeâ€gene panel that distinguishes benign from malignant thyroid nodules. International Journal of Cancer, 2015, 136, 1646-1654.	2.3	30
53	A disease similarity matrix based on the uniqueness of shared genes. BMC Medical Genomics, 2017, 10, 26.	0.7	28
54	Mechanical Signaling on the Single Protein Level Studied Using Steered Molecular Dynamics. Cell Biochemistry and Biophysics, 2009, 55, 141-152.	0.9	27

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55	Comparison of SARS and NL63 Papain-Like Protease Binding Sites and Binding Site Dynamics: Inhibitor Design Implications. Journal of Molecular Biology, 2011, 414, 272-288.	2.0	23
56	More Overweight Adolescents Think They Are Just Fine. American Journal of Preventive Medicine, 2015, 49, 670-677.	1.6	22
57	MeTaDoR: a comprehensive resource for membrane targeting domains and their host proteins. Bioinformatics, 2007, 23, 3110-3112.	1.8	21
58	Analysis of Combinatorial Regulation: Scaling of Partnerships between Regulators with the Number of Governed Targets. PLoS Computational Biology, 2010, 6, e1000755.	1.5	21
59	Network-based prediction and knowledge mining of disease genes. BMC Medical Genomics, 2015, 8, S9.	0.7	20
60	High-dimensional omics data analysis using a variable screening protocol with prior knowledge integration (SKI). BMC Systems Biology, 2016, 10, 118.	3.0	19
61	Transcription Factors Contribute to Differential Expression in Cellular Pathways in Lung Adenocarcinoma and Lung Squamous Cell Carcinoma. Interdisciplinary Sciences, Computational Life Sciences, 2018, 10, 836-847.	2.2	19
62	Computer Modeling of Force-Induced Titin Domain Unfolding. Advances in Experimental Medicine and Biology, 2000, 481, 143-162.	0.8	18
63	Evaluation Framework for Successful Artificial Intelligence–Enabled Clinical Decision Support Systems: Mixed Methods Study. Journal of Medical Internet Research, 2021, 23, e25929.	2.1	17
64	Learning to Translate Sequence and Structure to Function: Identifying DNA Binding and Membrane Binding Proteins. Annals of Biomedical Engineering, 2007, 35, 1043-1052.	1.3	16
65	Multiclass classification of sarcomas using pathway based feature selection method. Journal of Theoretical Biology, 2014, 362, 3-8.	0.8	16
66	Genome-wide sequence-based prediction of peripheral proteins using a novel semi-supervised learning technique. BMC Bioinformatics, 2010, 11, S6.	1.2	15
67	Texture Synthesis Based Thyroid Nodule Detection From Medical Ultrasound Images: Interpreting and Suppressing the Adversarial Effect of In-place Manual Annotation. Frontiers in Bioengineering and Biotechnology, 2020, 8, 599.	2.0	15
68	DNA Damage Response and Repair Gene Alterations Increase Tumor Mutational Burden and Promote Poor Prognosis of Advanced Lung Cancer. Frontiers in Oncology, 2021, 11, 708294.	1.3	15
69	Structure Based Prediction of Binding Residues on DNA-binding Proteins. , 2005, 2005, 2611-4.		14
70	Hemodynamic Phenotypes of Hypertension Based on Cardiac Output and Systemic Vascular Resistance. American Journal of Medicine, 2020, 133, e127-e139.	0.6	14
71	Probing osmolyte participation in the unfolding transition state of a protein. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9759-9764.	3.3	13
72	On the Improvement of Free-Energy Calculation from Steered Molecular Dynamics Simulations Using Adaptive Stochastic Perturbation Protocols. PLoS ONE, 2014, 9, e101810.	1.1	13

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73	A Lesion-Based Response Prediction Model Using Pretherapy PET/CT Image Features for Y90 Radioembolization to Hepatic Malignancies. Technology in Cancer Research and Treatment, 2017, 16, 620-629.	0.8	13
74	Identification of human circadian genes based on time course gene expression profiles by using a deep learning method. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2018, 1864, 2274-2283.	1.8	13
75	Efforts to reduce the disparity between permanent residents and temporary migrants: Stop TB experiences in Shanghai, China. Tropical Medicine and International Health, 2015, 20, 1033-1040.	1.0	12
76	A novel joint analysis framework improves identification of differentially expressed genes in cross disease transcriptomic analysis. BioData Mining, 2018, 11, 3.	2.2	12
77	VCFâ€Server: A webâ€based visualization tool for highâ€throughput variant data mining and management. Molecular Genetics & Genomic Medicine, 2019, 7, e00641.	0.6	12
78	Improving the Diagnosis of Phenylketonuria by Using a Machine Learning–Based Screening Model of Neonatal MRM Data. Frontiers in Molecular Biosciences, 2020, 7, 115.	1.6	12
79	Computational Methods for the Prediction of Microbial Essential Genes. Current Bioinformatics, 2014, 9, 89-101.	0.7	12
80	CO-EXPRESSION AMONG CONSTITUENTS OF A MOTIF IN THE PROTEIN–PROTEIN INTERACTION NETWORK. Journal of Bioinformatics and Computational Biology, 2009, 07, 1-17.	0.3	11
81	Calcium Induced Regulation of Skeletal Troponin — Computational Insights from Molecular Dynamics Simulations. PLoS ONE, 2013, 8, e58313.	1.1	11
82	Classification of Benign and Malignant Thyroid Nodules Using a Combined Clinical Information and Gene Expression Signatures. PLoS ONE, 2016, 11, e0164570.	1.1	11
83	RNA-seq Based Transcription Characterization of Fusion Breakpoints as a Potential Estimator for Its Oncogenic Potential. BioMed Research International, 2017, 2017, 1-8.	0.9	11
84	Analysis of economic burden and its associated factors of twenty-three rare diseases in Shanghai. Orphanet Journal of Rare Diseases, 2019, 14, 233.	1.2	11
85	Association of HIV infection and cognitive impairment in older adults: A meta-analysis. Ageing Research Reviews, 2021, 68, 101310.	5.0	11
86	Current inversions induced by resonant coupling to surface waves in a nanosized water pump. Physical Review E, 2015, 92, 053017.	0.8	10
87	A new method to measure the semantic similarity from query phenotypic abnormalities to diseases based on the human phenotype ontology. BMC Bioinformatics, 2018, 19, 162.	1.2	10
88	Closing Human Reference Genome Gaps: Identifying and Characterizing Gap-Closing Sequences. G3: Genes, Genomes, Genetics, 2020, 10, 2801-2809.	0.8	10
89	Lymphocyte activation gene-3 is associated with programmed death-ligand 1 and programmed cell death protein 1 in small cell lung cancer. Annals of Translational Medicine, 2021, 9, $1468-1468$.	0.7	10
90	Do transportation subsidies and living allowances improve tuberculosis control outcomes among internal migrants in urban Shanghai, China?. Western Pacific Surveillance and Response Journal: WPSAR, 2013, 4, 19-24.	0.3	10

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91	Healthcare seeking behaviour among Chinese elderly. International Journal of Health Care Quality Assurance, 2017, 30, 248-259.	0.2	9
92	Comprehensive Analysis of Ubiquitously Expressed Genes in Humans from A Data-driven Perspective. Genomics, Proteomics and Bioinformatics, 2023, 21, 164-176.	3.0	9
93	Loosely-packed dynamical structures with partially-melted surface being the key for thermophilic argonaute proteins achieving high DNA-cleavage activity. Nucleic Acids Research, 2022, 50, 7529-7544.	6.5	9
94	Improved protein fold assignment using support vector machines. International Journal of Bioinformatics Research and Applications, 2005, 1, 319.	0.1	8
95	Intelligible machine learning with malibu. , 2008, 2008, 3795-8.		8
96	Quantum-Dot-Based Aptamer Beacons for ${m K}^{+}$ Detection. IEEE Sensors Journal, 2013, 13, 1549-1553.	2.4	8
97	A Herpes Simplex Virus Thymidine Kinase-Induced Mouse Model of Hepatocellular Carcinoma Associated with Up-Regulated Immune-Inflammatory-Related Signals. Genes, 2018, 9, 380.	1.0	8
98	Genomic analysis of a spinal muscular atrophy (SMA) discordant family identifies a novel mutation in TLL2, an activator of growth differentiation factor 8 (myostatin): a case report. BMC Medical Genetics, 2019, 20, 204.	2.1	8
99	Steered molecular dynamics simulations of forceâ€induced protein domain unfolding. Proteins: Structure, Function and Bioinformatics, 1999, 35, 453-463.	1.5	8
100	Mining knowledge for the methylation status of CpG islands using alternating decision trees. , 2008, 2008, 3787-90.		7
101	A novel essential domain perspective for exploring gene essentiality. Bioinformatics, 2015, 31, 2921-2929.	1.8	7
102	Integrative Analysis of Membrane Proteome and MicroRNA Reveals Novel Lung Cancer Metastasis Biomarkers. Frontiers in Genetics, 2020, 11, 1023.	1.1	7
103	Relationship of Age With the Hemodynamic Parameters in Individuals With Elevated Blood Pressure. Journal of the American Geriatrics Society, 2020, 68, 1520-1528.	1.3	7
104	Machine Learning for Protein Structure and Function Prediction. Annual Reports in Computational Chemistry, 2008, , 41-66.	0.9	6
105	Identification of cancerâ€related genes and motifs in the human gene regulatory network. IET Systems Biology, 2015, 9, 128-134.	0.8	6
106	Improving accuracy of estimating glomerular filtration rate using artificial neural network: model development and validation. Journal of Translational Medicine, 2020, 18, 120.	1.8	6
107	Improved protein fold assignment using support vector machines. International Journal of Bioinformatics Research and Applications, 2006, 1, 319.	0.1	6
108	Molecular dynamics provides new insights into the mechanism of calcium signal transduction and interdomain interactions in cardiac troponin. FEBS Open Bio, 2021, 11, 1841-1853.	1.0	5

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109	RePhine: An Integrative Method for Identification of Drug Response-related Transcriptional Regulators. Genomics, Proteomics and Bioinformatics, 2021, 19, 534-548.	3.0	5
110	Visual Presentation as a Welcome Alternative to Textual Presentation of Gene Annotation Information. Advances in Experimental Medicine and Biology, 2010, 680, 709-715.	0.8	5
111	Weight spectrum and executive function in adolescents: the moderating role of negative emotions. Child and Adolescent Psychiatry and Mental Health, 2022, 16, 34.	1.2	5
112	Prediction of Specific Protein-DNA Recognition by Knowledge-based Two-body and Three-body Interaction Potentials. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5017-20.	0.5	4
113	An improved machine learning protocol for the identification of correct Sequest search results. BMC Bioinformatics, 2010, 11, 591.	1.2	4
114	Efficient free-energy-profile reconstruction using adaptive stochastic perturbation protocols. Physical Review E, 2011, 84, 056705.	0.8	4
115	A structure-based protocol for learning the family-specific mechanisms of membrane-binding domains. Bioinformatics, 2012, 28, i431-i437.	1.8	4
116	Gut microbiota community adaption during young children fecal microbiota transplantation by 16s rDNA sequencing. Neurocomputing, 2016, 206, 66-72.	3.5	4
117	16S rDNA Gene Sequencing Analysis in Functional Dyspepsia Treated With Fecal Microbiota Transplantation. Journal of Pediatric Gastroenterology and Nutrition, 2017, 64, e80-e82.	0.9	4
118	Demographics, in-hospital analysis, and prevalence of 33 rare diseases with effective treatment in Shanghai. Orphanet Journal of Rare Diseases, 2021, 16, 262.	1.2	4
119	Pitt–Hopkins syndrome: phenotypic and genotypic description of four unrelated patients and structural analysis of corresponding missense mutations. Neurogenetics, 2021, 22, 161-169.	0.7	4
120	Computer simulation of I27 translocation through ClpY reveals a critical role of protein mechanical strength and local stability. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1213-6.	0.5	3
121	CellSim: a novel software to calculate cell similarity and identify their co-regulation networks. BMC Bioinformatics, 2019, 20, 111.	1.2	3
122	Development of a Grid-based Statistical Potential for Protein Structure Prediction., 2005, 2005, 6064-7.		2
123	Knowledgeâ€based threeâ€body potential for transcription factor binding site prediction. IET Systems Biology, 2016, 10, 23-29.	0.8	2
124	Machine-Learning Prediction of Drug-Induced Cardiac Arrhythmia: Analysis of Gene Expression and Clustering. Critical Reviews in Biomedical Engineering, 2018, 46, 245-275.	0.5	2
125	A Novel Joint Gene Set Analysis Framework Improves Identification of Enriched Pathways in Cross Disease Transcriptomic Analysis. Frontiers in Genetics, 2019, 10, 293.	1.1	2
126	Structural feature extraction protocol for classifying reversible membrane binding protein domains. , 2009, 2009, 6735-8.		1

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127	Identifying and characterizing the effects of calendar and environmental conditions on pediatric admissions in Shanghai. Journal of Big Data, 2019, 6, .	6.9	1
128	Functional Site Discovery From Incomplete Training Data: A Case Study With Nucleic Acid–Binding Proteins. Frontiers in Genetics, 2019, 10, 729.	1.1	1
129	Correlations Between Phenotypes and Biological Process Ontologies in Monogenic Human Diseases. Interdisciplinary Sciences, Computational Life Sciences, 2020, 12, 547-554.	2.2	1
130	Improving glomerular filtration rate estimation by semi-supervised learning: a development and external validation study. International Urology and Nephrology, 2021, 53, 1649-1658.	0.6	1
131	Steered molecular dynamics simulations of force-induced protein domain unfolding., 1999, 35, 453.		1
132	Discovering Essential Domains in Essential Genes. Methods in Molecular Biology, 2015, 1279, 235-245.	0.4	1
133	Unfolding of titin domains studied by molecular dynamics simulations. , 2003, , 513-521.		1
134	Inferring Time-Lagged Causality Using the Derivative of Single-Cell Expression. International Journal of Molecular Sciences, 2022, 23, 3348.	1.8	1
135	Association of serum chemokine ligand 21 levels with asthma control in adults. Clinics, 2021, 76, e1713.	0.6	0