Nasir M Rajpoot

List of Publications by Citations

155 papers	6,630 citations	32 h-index	79 g-index
171 ext. papers	9,241 ext. citations	5.9 avg, IF	6.1 L-index

#	Paper	IF	Citations
155	Diagnostic Assessment of Deep Learning Algorithms for Detection of Lymph Node Metastases in Women With Breast Cancer. *JAMA - Journal of the American Medical Association*, **2017**, 318, 2199-2210	27.4	1165
154	Histopathological image analysis: a review. *IEEE Reviews in Biomedical Engineering*, **2009**, 2, 147-71	6.4	1061
153	Locality Sensitive Deep Learning for Detection and Classification of Nuclei in Routine Colon Cancer Histology Images. *IEEE Transactions on Medical Imaging*, **2016**, 35, 1196-1206	11.7	631
152	A nonlinear mapping approach to stain normalization in digital histopathology images using image-specific color deconvolution. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1729-38	5	316
151	Gland segmentation in colon histology images: The glas challenge contest. *Medical Image Analysis*, **2017**, 35, 489-502	15.4	263
150	Assessment of algorithms for mitosis detection in breast cancer histopathology images. *Medical Image Analysis*, **2015**, 20, 237-48	15.4	245
149	Composition Loss for Counting, Density Map Estimation and Localization in Dense Crowds. *Lecture Notes in Computer Science*, **2018**, 544-559	0.9	166
148	Hover-Net: Simultaneous segmentation and classification of nuclei in multi-tissue histology images. *Medical Image Analysis*, **2019**, 58, 101563	15.4	158
147	Validation of digital pathology imaging for primary histopathological diagnosis. *Histopathology*, **2016**, 68, 1063-72	7.3	132
146	Why rankings of biomedical image analysis competitions should be interpreted with care. *Nature Communications*, **2018**, 9, 5217	17.4	112
145	A Stochastic Polygons Model for Glandular Structures in Colon Histology Images. *IEEE Transactions on Medical Imaging*, **2015**, 34, 2366-78	11.7	110
144	Predicting breast tumor proliferation from whole-slide images: The TUPAC16 challenge. *Medical Image Analysis*, **2019**, 54, 111-121	15.4	109
143	MILD-Net: Minimal information loss dilated network for gland instance segmentation in colon histology images. *Medical Image Analysis*, **2019**, 52, 199-211	15.4	100
142	Artificial intelligence in digital pathology: a roadmap to routine use in clinical practice. *Journal of Pathology*, **2019**, 249, 143-150	9.4	82
141	Automatic detection of diseased tomato plants using thermal and stereo visible light images. *PLoS ONE*, **2015**, 10, e0123262	3.7	81
140	Methods for Segmentation and Classification of Digital Microscopy Tissue Images. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 53	5.8	74
139	A Multi-Organ Nucleus Segmentation Challenge. *IEEE Transactions on Medical Imaging*, **2020**, 39, 1380-1391	11.7	71

138	Micro-Net: A unified model for segmentation of various objects in microscopy images. *Medical Image Analysis*, **2019**, 52, 160-173	15.4	69
137	Fast and accurate tumor segmentation of histology images using persistent homology and deep convolutional features. *Medical Image Analysis*, **2019**, 55, 1-14	15.4	68
136	A Novel Digital Score for Abundance of Tumour Infiltrating Lymphocytes Predicts Disease Free Survival in Oral Squamous Cell Carcinoma. *Scientific Reports*, **2019**, 9, 13341	4.9	52
135	HER2 challenge contest: a detailed assessment of automated HER2 scoring algorithms in whole slide images of breast cancer tissues. *Histopathology*, **2018**, 72, 227-238	7.3	51
134	Glandular Morphometrics for Objective Grading of Colorectal Adenocarcinoma Histology Images. *Scientific Reports*, **2017**, 7, 16852	4.9	46
133	The use of digital pathology and image analysis in clinical trials. *Journal of Pathology: Clinical Research*, **2019**, 5, 81-90	5.3	45
132	Stain Deconvolution Using Statistical Analysis of Multi-Resolution Stain Colour Representation. *PLoS ONE*, **2017**, 12, e0169875	3.7	41
131	Registration of thermal and visible light images of diseased plants using silhouette extraction in the wavelet domain. *Pattern Recognition*, **2015**, 48, 2119-2128	7.7	40
130	A gamma-gaussian mixture model for detection of mitotic cells in breast cancer histopathology images. *Journal of Pathology Informatics*, **2013**, 4, 11	4.4	38
129	Local isotropic phase symmetry measure for detection of beta cells and lymphocytes. *Journal of Pathology Informatics*, **2011**, 2, S2	4.4	38
128	Fast ScanNet: Fast and Dense Analysis of Multi-Gigapixel Whole-Slide Images for Cancer Metastasis Detection. *IEEE Transactions on Medical Imaging*, **2019**, 38, 1948-1958	11.7	38
127	Context-Aware Convolutional Neural Network for Grading of Colorectal Cancer Histology Images. *IEEE Transactions on Medical Imaging*, **2020**, 39, 2395-2405	11.7	37
126	Texture based classification of hyperspectral colon biopsy samples using CLBP **2009**,		36
125	Cellular community detection for tissue phenotyping in colorectal cancer histology images. *Medical Image Analysis*, **2020**, 63, 101696	15.4	34
124	Deep Learning With Sampling in Colon Cancer Histology. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 52	5.8	33
123	PanNuke: An Open Pan-Cancer Histology Dataset for Nuclei Instance Segmentation and Classification. *Lecture Notes in Computer Science*, **2019**, 11-19	0.9	30
122	Adaptive wavelet packet basis selection for zerotree image coding. *IEEE Transactions on Image Processing*, **2003**, 12, 1460-72	8.7	29
121	Persistent Homology for Fast Tumor Segmentation in Whole Slide Histology Images. *Procedia Computer Science*, **2016**, 90, 119-124	1.6	29

120	CGC-Net: Cell Graph Convolutional Network for Grading of Colorectal Cancer Histology Images **2019**,		29
119	A Global Covariance Descriptor for Nuclear Atypia Scoring in Breast Histopathology Images. *IEEE Journal of Biomedical and Health Informatics*, **2015**, 19, 1637-47	7.2	28
118	Digital pathology and artificial intelligence will be key to supporting clinical and academic cellular pathology through COVID-19 and future crises: the PathLAKE consortium perspective. *Journal of Clinical Pathology*, **2021**, 74, 443-447	3.9	28
117	Automatic detection of regions in spinach canopies responding to soil moisture deficit using combined visible and thermal imagery. *PLoS ONE*, **2014**, 9, e97612	3.7	27
116	HyMaP: A hybrid magnitude-phase approach to unsupervised segmentation of tumor areas in breast cancer histology images. *Journal of Pathology Informatics*, **2013**, 4, S1	4.4	27
115	NuClick: A deep learning framework for interactive segmentation of microscopic images. *Medical Image Analysis*, **2020**, 65, 101771	15.4	26
114	Dual-Channel Active Contour Model for Megakaryocytic Cell Segmentation in Bone Marrow Trephine Histology Images. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 2913-2923	5	25
113	Learning Where to See: A Novel Attention Model for Automated Immunohistochemical Scoring. *IEEE Transactions on Medical Imaging*, **2019**, 38, 2620-2631	11.7	25
112	Use of artificial intelligence in diagnosis of head and neck precancerous and cancerous lesions: A systematic review. *Oral Oncology*, **2020**, 110, 104885	4.4	25
111	Context-Aware Learning Using Transferable Features for Classification of Breast Cancer Histology Images. *Lecture Notes in Computer Science*, **2018**, 788-795	0.9	24
110	Using Geodesic Space Density Gradients for Network Community Detection. *IEEE Transactions on Knowledge and Data Engineering*, **2017**, 29, 921-935	4.2	24
109	A multiresolution framework for local similarity based image denoising. *Pattern Recognition*, **2012**, 45, 2938-2951	7.7	23
108	Functional Connectivity Alterations in Epilepsy from Resting-State Functional MRI. *PLoS ONE*, **2015**, 10, e0134944	3.7	23
107	Self-Path: Self-Supervision for Classification of Pathology Images With Limited Annotations. *IEEE Transactions on Medical Imaging*, **2021**, 40, 2845-2856	11.7	23
106	Handcrafted features with convolutional neural networks for detection of tumor cells in histology images **2016**,		20
105	Adaptive discriminant wavelet packet transform and local binary patterns for meningioma subtype classification. *Lecture Notes in Computer Science*, **2008**, 11, 196-204	0.9	20
104	Simultaneous Cell Detection and Classification in Bone Marrow Histology Images. *IEEE Journal of Biomedical and Health Informatics*, **2019**, 23, 1469-1476	7.2	20
103	Novel digital signatures of tissue phenotypes for predicting distant metastasis in colorectal cancer. *Scientific Reports*, **2018**, 8, 13692	4.9	20

102	MIMO-Net: A multi-input multi-output convolutional neural network for cell segmentation in fluorescence microscopy images **2017**,		19
101	Cell words: modelling the visual appearance of cells in histopathology images. *Computerized Medical Imaging and Graphics*, **2015**, 42, 16-24	7.6	19
100	Diagnostic concordance and discordance in digital pathology: a systematic review and meta-analysis. *Journal of Clinical Pathology*, **2021**, 74, 448-455	3.9	18
99	Spatiotemporal maps of CaMKII in dendritic spines. *Journal of Computational Neuroscience*, **2012**, 33, 123-39	1.4	16
98	RAMTaB: robust alignment of multi-tag bioimages. *PLoS ONE*, **2012**, 7, e30894	3.7	14
97	Development and validation of a weakly supervised deep learning framework to predict the status of molecular pathways and key mutations in colorectal cancer from routine histology images: a retrospective study. *The Lancet Digital Health*, **2021**, 3, e763-e772	14.4	14
96	Local discriminant wavelet packet basis for texture classification **2003**, 5207, 774		13
95	Dense Steerable Filter CNNs for Exploiting Rotational Symmetry in Histology Images. *IEEE Transactions on Medical Imaging*, **2020**, 39, 4124-4136	11.7	13
94	Multiplex Cellular Communities in Multi-Gigapixel Colorectal Cancer Histology Images for Tissue Phenotyping. *IEEE Transactions on Image Processing*, **2020**, PP,	8.7	13
93	Artificial Intelligence-based methods in head and neck cancer diagnosis: an overview. *British Journal of Cancer*, **2021**, 124, 1934-1940	8.7	13
92	MoNuSAC2020: A Multi-Organ Nuclei Segmentation and Classification Challenge. *IEEE Transactions on Medical Imaging*, **2021**, 40, 3413-3423	11.7	13
91	Hyper-Stain Inspector: A Framework for Robust Registration and Localised Co-Expression Analysis of Multiple Whole-Slide Images of Serial Histology Sections. *Scientific Reports*, **2017**, 7, 5641	4.9	12
90	A model of the spatial tumour heterogeneity in colorectal adenocarcinoma tissue. *BMC Bioinformatics*, **2016**, 17, 255	3.6	12
89	A Spatially Constrained Deep Learning Framework for Detection of Epithelial Tumor Nuclei in Cancer Histology Images. *Lecture Notes in Computer Science*, **2015**, 154-162	0.9	11
88	Pattern Recognition in Histopathological Images: An ICPR 2010 Contest. *Lecture Notes in Computer Science*, **2010**, 226-234	0.9	11
87	Hybrid deep autoencoder with Curvature Gaussian for detection of various types of cells in bone marrow trephine biopsy images **2017**,		10
86	A novel texture descriptor for detection of glandular structures in colon histology images **2015**,		10
85	A novel system for scoring of hormone receptors in breast cancer histopathology slides **2014**,		10

84	Urinary Metabolomic Markers of Protein Glycation, Oxidation, and Nitration in Early-Stage Decline in Metabolic, Vascular, and Renal Health. *Oxidative Medicine and Cellular Longevity*, **2019**, 2019, 4851323	6.7	10
83	Multi-resolution cell orientation congruence descriptors for epithelium segmentation in endometrial histology images. *Medical Image Analysis*, **2017**, 37, 91-100	15.4	9
82	Conceptual data sampling for breast cancer histology image classification. *Computers in Biology and Medicine*, **2017**, 89, 59-67	7	9
81	Bayesian hierarchical clustering for studying cancer gene expression data with unknown statistics. *PLoS ONE*, **2013**, 8, e75748	3.7	9
80	Lizard: A Large-Scale Dataset for Colonic Nuclear Instance Segmentation and Classification **2021**,		9
79	The International Collaboration for Cancer Classification and Research. *International Journal of Cancer*, **2021**, 148, 560-571	7.5	9
78	Toponome imaging system: multiplex biomarkers in oncology. *Trends in Molecular Medicine*, **2012**, 18, 723-31	11.5	8
77	Capturing Cellular Topology in Multi-Gigapixel Pathology Images **2020**,		8
76	Stain deconvolution of histology images via independent component analysis in the wavelet domain **2016**,		8
75	Robust normalization protocols for multiplexed fluorescence bioimage analysis. *BioData Mining*, **2016**, 9, 11	4.3	7
74	DiSWOP: a novel measure for cell-level protein network analysis in localized proteomics image data. *Bioinformatics*, **2014**, 30, 420-7	7.2	7
73	Multi-class stain separation using independent component analysis **2015**,		7
72	BioIMAX: a Web 2.0 approach for easy exploratory and collaborative access to multivariate bioimage data. *BMC Bioinformatics*, **2011**, 12, 297	3.6	7
71	Multilateral filtering: A novel framework for generic similarity-based image denoising **2009**,		7
70	Nuclei Detection Using Mixture Density Networks. *Lecture Notes in Computer Science*, **2018**, 241-248	0.9	7
69	Leveraging Unlabeled Whole-Slide-Images for Mitosis Detection. *Lecture Notes in Computer Science*, **2018**, 69-77	0.9	7
68	A Multi-resolution Deep Learning Framework for Lung Adenocarcinoma Growth Pattern Classification. *Communications in Computer and Information Science*, **2018**, 3-11	0.3	7
67	Discrete Wavelet Diffusion for Image Denoising. *Lecture Notes in Computer Science*, **2008**, 20-28	0.9	7

66	Novel deep learning algorithm predicts the status of molecular pathways and key mutations in colorectal cancer from routine histology images		7
65	Cellular Community Detection for Tissue Phenotyping in Histology Images. *Lecture Notes in Computer Science*, **2018**, 120-129	0.9	7
64	Spatially Constrained Context-Aware Hierarchical Deep Correlation Filters for Nucleus Detection in Histology Images. *Medical Image Analysis*, **2021**, 72, 102104	15.4	7
63	Rota-Net: Rotation Equivariant Network for Simultaneous Gland and Lumen Segmentation in Colon Histology Images. *Lecture Notes in Computer Science*, **2019**, 109-116	0.9	6
62	A bottom-up approach for tumour differentiation in whole slide images of lung adenocarcinoma **2018**,		6
61	Nuclear Instance Segmentation Using a Proposal-Free Spatially Aware Deep Learning Framework. *Lecture Notes in Computer Science*, **2019**, 622-630	0.9	6
60	Geodesic Geometric Mean of Regional Covariance Descriptors as an Image-Level Descriptor for Nuclear Atypia Grading in Breast Histology Images. *Lecture Notes in Computer Science*, **2014**, 101-108	0.9	6
59	VillageFinder: Segmentation of Nucleated Villages in Satellite Imagery **2009**,		6
58	On generating cell exemplars for detection of mitotic cells in breast cancer histopathology images. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 3370-3	0.9	5
57	Hybrid diversification operator-based evolutionary approach towards tomographic image reconstruction. *IEEE Transactions on Image Processing*, **2011**, 20, 1977-90	8.7	5
56	Flexible synapse detection in fluorescence micrographs by modeling human expert grading **2008**,		5
55	MIMONet: Gland Segmentation Using Multi-Input-Multi-Output Convolutional Neural Network. *Communications in Computer and Information Science*, **2017**, 698-706	0.3	5
54	Ethical issues in computational pathology. *Journal of Medical Ethics*, **2021**,	2.5	5
53	An information fusion framework for person localization via body pose in spectator crowds. *Information Fusion*, **2019**, 51, 178-188	16.7	5
52	Localisation of luminal epithelium edge in digital histopathology images of IHC stained slides of endometrial biopsies. *Computerized Medical Imaging and Graphics*, **2015**, 42, 56-64	7.6	4
51	A model of the spatial microenvironment of the colonic crypt **2015**,		4
50	Visual histological assessment of morphological features reflects the underlying molecular profile in invasive breast cancer: a morphomolecular study. *Histopathology*, **2020**, 77, 631-645	7.3	4
49	Classification of lung cancer histology images using patch-level summary statistics **2018**,		4

48	Glyoxalase 1 copy number variation in patients with well differentiated gastro-entero-pancreatic neuroendocrine tumours (GEP-NET). *Oncotarget*, **2017**, 8, 76961-76973	3.3	4
47	Simultaneous automatic scoring and co-registration of hormone receptors in tumor areas in whole slide images of breast cancer tissue slides. *Cytometry Part A: the Journal of the International Society for Analytical Cytology*, **2017**, 91, 585-594	4.6	3
46	Digital Tumor-Collagen Proximity Signature Predicts Survival in Diffuse Large B-Cell Lymphoma. *Lecture Notes in Computer Science*, **2019**, 163-171	0.9	3
45	A fast method for approximate registration of whole-slide images of serial sections using local curvature **2014**,		3
44	Cell phenotyping in multi-tag fluorescent bioimages. *Neurocomputing*, **2014**, 134, 254-261	5.4	3
43	Quantification of cell infection caused by Listeria monocytogenes invasion. *Journal of Biotechnology*, **2011**, 154, 76-83	3.7	3
42	A digital score of tumour-associated stroma infiltrating lymphocytes predicts survival in head and neck squamous cell carcinoma. *Journal of Pathology*, **2021**, 256, 174	9.4	3
41	Tumor Segmentation in Whole Slide Images Using Persistent Homology and Deep Convolutional Features. *Communications in Computer and Information Science*, **2017**, 320-329	0.3	3
40	A Novel Paradigm for Mining Cell Phenotypes in Multi-tag Bioimages Using a Locality Preserving Nonlinear Embedding. *Lecture Notes in Computer Science*, **2012**, 575-583	0.9	3
39	Multi-person Head Segmentation in Low Resolution Crowd Scenes Using Convolutional Encoder-Decoder Framework. *Communications in Computer and Information Science*, **2019**, 82-92	0.3	2
38	A connectivity difference measure for identification of functional neuroimaging markers for epilepsy **2013**,		2
37	Classification of potential nuclei in prostate histology images using shape manifold learning **2007**,		2
36	Video Based Rendering using Surfaces Patches **2007**,		2
35	The Effect of Flexible Parsing for Dynamic Dictionary-Based Data Compression. *Journal of Experimental Algorithmics*, **2001**, 6, 10	1.1	2
34	Simultaneous Nuclear Instance and Layer Segmentation in Oral Epithelial Dysplasia **2021**,		2
33	Semantic annotation for computational pathology: multidisciplinary experience and best practice recommendations.. *Journal of Pathology: Clinical Research*, **2022**,	5.3	2
32	SAFRON: Stitching Across the Frontier Network for Generating Colorectal Cancer Histology Images.. *Medical Image Analysis*, **2021**, 77, 102337	15.4	2
31	Improving COVID-19 Testing Efficiency using Guided Agglomerative Sampling		2

30	. *IEEE Access*, **2021**, 9, 12322-12331	3.5	2
29	Deep learning based digital cell profiles for risk stratification of urine cytology images. *Cytometry Part A: the Journal of the International Society for Analytical Cytology*, **2021**, 99, 732-742	4.6	2
28	Correlation Filters for Detection of Cellular Nuclei in Histopathology Images. *Journal of Medical Systems*, **2017**, 42, 7	5.1	2
27	Significance of Hyperparameter Optimization for Metastasis Detection in Breast Histology Images. *Lecture Notes in Computer Science*, **2018**, 139-147	0.9	2
26	TIAToolbox: An End-to-End Toolbox for Advanced Tissue Image Analytics		2
25	A random polygons model of glandular structures in colon histology images **2015**,		1
24	Anisotropic tubular filtering for automatic detection of acid-fast bacilli in Ziehl-Neelsen stained sputum smear samples **2015**,		1
23	A circumscribing active contour model for delineation of nuclei and membranes of megakaryocytes in bone marrow trephine biopsy images **2015**,		1
22	Surface Estimation and Tracking using Sequential MCMC Methods for Video Based Rendering **2007**,		1
21	Robust Interactive Semantic Segmentation of Pathology Images with Minimal User Input **2021**,		1
20	Feasibility of Training Community Health Workers in the Detection of Oral Cancer.. *JAMA Network Open*, **2022**, 5, e2144022	10.4	1
19	Directional Wavelet Analysis with Fourier-Type Bases for Image Processing **2006**, 123-142		1
18	HydraMix-Net: A Deep Multi-task Semi-supervised Learning Approach for Cell Detection and Classification. *Lecture Notes in Computer Science*, **2020**, 164-171	0.9	1
17	Simultaneous Cell Detection and Classification with an Asymmetric Deep Autoencoder in Bone Marrow Histology Images. *Communications in Computer and Information Science*, **2017**, 829-838	0.3	1
16	How divided is a cell? Eigenphase nuclei for classification of mitotic phase in cancer histology images **2016**,		1
15	Deep Autoencoder Features for Registration of Histology Images. *Communications in Computer and Information Science*, **2018**, 371-378	0.3	1
14	Cells are Actors: Social Network Analysis with Classical ML for SOTA Histology Image Classification. *Lecture Notes in Computer Science*, **2021**, 288-298	0.9	1
13	Stain-Robust Mitotic Figure Detection for the Mitosis Domain Generalization Challenge. *Lecture Notes in Computer Science*, **2022**, 48-52	0.9	1

12	Nucleus Classification in Histology Images Using Message Passing Network. *Medical Image Analysis*, **2022**, 102480	15.4	1
11	All You Need is Color: Image Based Spatial Gene Expression Prediction Using Neural Stain Learning. *Communications in Computer and Information Science*, **2021**, 437-450	0.3	0
10	SlideGraph+: Whole Slide Image Level Graphs to Predict HER2 Status in Breast Cancer. *Medical Image Analysis*, **2022**, 102486	15.4	0
9	A novel framework for exploratory analysis of highly variable morphology of migrating epithelial cells. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 3463-6	0.9	
8	Estimation of Dense, Non-rigid Motion Fields from a Multi-camera Array Using a Hierarchical Mixture Model. *Lecture Notes in Computer Science*, **2008**, 11-21	0.9	
7	Train Small, Generate Big: Synthesis of Colorectal Cancer Histology Images. *Lecture Notes in Computer Science*, **2020**, 164-173	0.9	
6	Automated Segmentation and Tracking of Dynamic Focal Adhesions in Time-Lapse Fluorescence Microscopy. *Lecture Notes in Computer Science*, **2012**, 648-655	0.9	
5	Classification of Well Log Data Using Vanishing Component Analysis. *Pure and Applied Geophysics*, **2020**, 177, 2719-2737	2.2	
4	Subcellular protein expression models for microsatellite instability in colorectal adenocarcinoma tissue images. *BMC Bioinformatics*, **2016**, 17, 430	3.6	
3	L1-Regularized Neural Ranking for Risk Stratification and Its Application to Prediction of Time to Distant Metastasis in Luminal Node Negative Chemotherapy Naïve Breast Cancer Patients. *Communications in Computer and Information Science*, **2021**, 390-400	0.3	
2	Lessons from a breast cell annotation competition series for school pupils.. *Scientific Reports*, **2022**, 12, 7792	4.9	
1	Generative models for synthesis of colorectal cancer histology images **2022**, 491-516		