James Sharpe

List of Publications by Year in Descending Order

93 papers	5,843 citations	39 h-index	75 g-index
104 ext. papers	7,071 ext. citations	8.2 avg, IF	5.84 L-index

#	Paper	IF	Citations
93	Arrested coalescence of multicellular aggregates.. *Soft Matter*, **2022**, 18, 3771-3780	3.6	1
92	Salivary gland macrophages and tissue-resident CD8 T cells cooperate for homeostatic organ surveillance. *Science Immunology*, **2020**, 5,	28	28
91	Topologically selective islet vulnerability and self-sustained downregulation of markers for □cell maturity in streptozotocin-induced diabetes. *Communications Biology*, **2020**, 3, 541	6.7	10
90	ViceCT and whiceCT for simultaneous high-resolution visualization of craniofacial, brain and ventricular anatomy from micro-computed tomography. *Scientific Reports*, **2020**, 10, 18772	4.9	0
89	ya||a: GPU-Powered Spheroid Models for Mesenchyme and Epithelium. *Cell Systems*, **2019**, 8, 261-266.e3	10.6	15
88	Toward Controllable Morphogenesis in Large Robot Swarms. *IEEE Robotics and Automation Letters*, **2019**, 4, 3386-3393	4.2	5
87	Wolpert’s French Flag: what’s the problem?. *Development (Cambridge)*, **2019**, 146,	6.6	18
86	Sequences Generated by Powers of the kth-order Fibonacci Recurrence Relation. *American Mathematical Monthly*, **2018**, 125, 443-446	0.3	
85	A quantitative method for staging mouse embryos based on limb morphometry. *Development (Cambridge)*, **2018**, 145,	6.6	6
84	The Rho regulator Myosin IXb enables nonlymphoid tissue seeding of protective CD8 T cells. *Journal of Experimental Medicine*, **2018**, 215, 1869-1890	16.6	15
83	Quantification of gene expression patterns to reveal the origins of abnormal morphogenesis. *ELife*, **2018**, 7,	8.9	5
82	Attenuation artifacts in light sheet fluorescence microscopy corrected by OPTiSPIM. *Light: Science and Applications*, **2018**, 7, 70	16.7	18
81	Perspective: The promise of multi-cellular engineered living systems. *APL Bioengineering*, **2018**, 2, 040901	6.6	74
80	Synthetic circuits reveal how mechanisms of gene regulatory networks constrain evolution. *Molecular Systems Biology*, **2018**, 14, e8102	12.2	15
79	A spectrum of modularity in multi-functional gene circuits. *Molecular Systems Biology*, **2017**, 13, 925	12.2	33
78	Antigen Availability and DOCK2-Driven Motility Govern CD4 T Cell Interactions with Dendritic Cells In Vivo. *Journal of Immunology*, **2017**, 199, 520-530	5.3	9
77	Migratory appendicular muscles precursor cells in the common ancestor to all vertebrates. *Nature Ecology and Evolution*, **2017**, 1, 1731-1736	12.3	16

76	Computer modeling in developmental biology: growing today, essential tomorrow. *Development (Cambridge)*, **2017**, 144, 4214-4225	6.6	54
75	The fin-to-limb transition as the re-organization of a Turing pattern. *Nature Communications*, **2016**, 7, 11582	17.4	60
74	pMHC affinity controls duration of CD8+ T cell-DC interactions and imprints timing of effector differentiation versus expansion. *Journal of Experimental Medicine*, **2016**, 213, 2811-2829	16.6	56
73	Light sheet fluorescence microscopy for in situ cell interaction analysis in mouse lymph nodes. *Journal of Immunological Methods*, **2016**, 431, 1-10	2.5	23
72	Geometric Morphometrics on Gene Expression Patterns Within Phenotypes: A Case Example on Limb Development. *Systematic Biology*, **2016**, 65, 194-211	8.4	11
71	High-throughput mathematical analysis identifies Turing networks for patterning with equally diffusing signals. *ELife*, **2016**, 5,	8.9	72
70	A Local, Self-Organizing Reaction-Diffusion Model Can Explain Somite Patterning in Embryos. *Cell Systems*, **2015**, 1, 257-69	10.6	53
69	Data-driven modelling of a gene regulatory network for cell fate decisions in the growing limb bud. *Molecular Systems Biology*, **2015**, 11, 815	12.2	29
68	Decrease in Cell Volume Generates Contractile Forces Driving Dorsal Closure. *Developmental Cell*, **2015**, 33, 611-21	10.2	69
67	Positional information and reaction-diffusion: two big ideas in developmental biology combine. *Development (Cambridge)*, **2015**, 142, 1203-11	6.6	221
66	Dynamics of gene circuits shapes evolvability. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 2103-8	11.5	31
65	A shift in anterior-posterior positional information underlies the fin-to-limb evolution. *ELife*, **2015**, 4,	8.9	38
64	Design principles of stripe-forming motifs: the role of positive feedback. *Scientific Reports*, **2014**, 4, 5003	4.9	14
63	Immobilized chicks as a model system for early-onset developmental dysplasia of the hip. *Journal of Orthopaedic Research*, **2014**, 32, 777-85	3.8	39
62	Joint shape morphogenesis precedes cavitation of the developing hip joint. *Journal of Anatomy*, **2014**, 224, 482-9	2.9	19
61	Developmental biology: Cells unite by trapping a signal. *Nature*, **2014**, 515, 41-2	50.4	
60	OPTiSPIM: integrating optical projection tomography in light sheet microscopy extends specimen characterization to nonfluorescent contrasts. *Optics Letters*, **2014**, 39, 1053-6	3	35
59	A unified design space of synthetic stripe-forming networks. *Nature Communications*, **2014**, 5, 4905	17.4	80

58	ESCRT-II/Vps25 constrains digit number by endosome-mediated selective modulation of FGF-SHH signaling. *Cell Reports*, **2014**, 9, 674-87	10.6	8
57	On the concept of mechanism in development **2014**, 56-78		23
56	Senescence is a developmental mechanism that contributes to embryonic growth and patterning. *Cell*, **2013**, 155, 1119-30	56.2	657
55	Naive B-cell trafficking is shaped by local chemokine availability and LFA-1-independent stromal interactions. *Blood*, **2013**, 121, 4101-9	2.2	28
54	A GDF5 point mutation strikes twice--causing BDA1 and SYNS2. *PLoS Genetics*, **2013**, 9, e1003846	6	28
53	Near infrared optical projection tomography for assessments of βcell mass distribution in diabetes research. *Journal of Visualized Experiments*, **2013**, e50238	1.6	28
52	Mechanistic explanations for restricted evolutionary paths that emerge from gene regulatory networks. *PLoS ONE*, **2013**, 8, e61178	3.7	8
51	Intravital imaging of hair-cell development and regeneration in the zebrafish. *Frontiers in Neuroanatomy*, **2013**, 7, 33	3.6	15
50	Image processing assisted algorithms for optical projection tomography. *IEEE Transactions on Medical Imaging*, **2012**, 31, 1-15	11.7	38
49	Hox genes regulate digit patterning by controlling the wavelength of a Turing-type mechanism. *Science*, **2012**, 338, 1476-80	33.3	247
48	Turing patterns in development: what about the horse part?. *Current Opinion in Genetics and Development*, **2012**, 22, 578-84	4.9	62
47	A global "imaging"view on systems approaches in immunology. *European Journal of Immunology*, **2012**, 42, 3116-25	6.1	26
46	Quantitative measurements in 3-dimensional datasets of mouse lymph nodes resolve organ-wide functional dependencies. *Computational and Mathematical Methods in Medicine*, **2012**, 2012, 128431	2.8	13
45	Image formation by linear and nonlinear digital scanned light-sheet fluorescence microscopy with Gaussian and Bessel beam profiles. *Biomedical Optics Express*, **2012**, 3, 1492-505	3.5	58
44	In-silico organogenesis: measuring and modelling vertebrate limb development. *FASEB Journal*, **2012**, 26, 337.3	0.9	
43	Two ways to use imaging: focusing directly on mechanism, or indirectly via behaviour?. *Current Opinion in Genetics and Development*, **2011**, 21, 523-9	4.9	4
42	Budding behaviors: Growth of the limb as a model of morphogenesis. *Developmental Dynamics*, **2011**, 240, 1054-62	2.9	39
41	Control of pelvic girdle development by genes of the Pbx family and Emx2. *Developmental Dynamics*, **2011**, 240, 1173-89	2.9	22

40	A landmark-free morphometric staging system for the mouse limb bud. *Development (Cambridge)*, **2011**, 138, 1227-34	6.6	25
39	N-myc controls proliferation, morphogenesis, and patterning of the inner ear. *Journal of Neuroscience*, **2011**, 31, 7178-89	6.6	44
38	Optical projection tomography of vertebrate embryo development. *Cold Spring Harbor Protocols*, **2011**, 2011, 586-94	1.2	19
37	A computational clonal analysis of the developing mouse limb bud. *PLoS Computational Biology*, **2011**, 7, e1001071	5	25
36	Preparation of mouse embryos for optical projection tomography imaging. *Cold Spring Harbor Protocols*, **2011**, 2011, 664-9	1.2	17
35	Scapula development is governed by genetic interactions of Pbx1 with its family members and with Emx2 via their cooperative control of Alx1. *Development (Cambridge)*, **2010**, 137, 2559-69	6.6	53
34	Quantification and three-dimensional imaging of the insulitis-induced destruction of beta-cells in murine type 1 diabetes. *Diabetes*, **2010**, 59, 1756-64	0.9	70
33	The role of spatially controlled cell proliferation in limb bud morphogenesis. *PLoS Biology*, **2010**, 8, e1000420	9.7	143
32	An atlas of gene regulatory networks reveals multiple three-gene mechanisms for interpreting morphogen gradients. *Molecular Systems Biology*, **2010**, 6, 425	12.2	124
31	Mechanobiology of embryonic skeletal development: Insights from animal models. *Birth Defects Research Part C: Embryo Today Reviews*, **2010**, 90, 203-13		109
30	Clonal analysis in mice underlines the importance of rhombomeric boundaries in cell movement restriction during hindbrain segmentation. *PLoS ONE*, **2010**, 5, e10112	3.7	28
29	Genetic background influences embryonic lethality and the occurrence of neural tube defects in Men1 null mice: relevance to genetic modifiers. *Journal of Endocrinology*, **2009**, 203, 133-42	4.7	36
28	Gene expression analysis of canonical Wnt pathway transcriptional regulators during early morphogenesis of the facial region in the mouse embryo. *Gene Expression Patterns*, **2009**, 9, 296-305	1.5	12
27	Evidence that Fgf10 contributes to the skeletal and visceral defects of an Apert syndrome mouse model. *Developmental Dynamics*, **2009**, 238, 376-85	2.9	38
26	Live optical projection tomography. *Organogenesis*, **2009**, 5, 211-6	1.7	37
25	Optical Projection Tomography **2009**, 199-224		2
24	In vitro whole-organ imaging: 4D quantification of growing mouse limb buds. *Nature Methods*, **2008** , 5, 609-12	21.6	72
23	3D representation of Wnt and Frizzled gene expression patterns in the mouse embryo at embryonic day 11.5 (Ts19). *Gene Expression Patterns*, **2008**, 8, 331-48	1.5	67

22	Localization and fate of Fgf10-expressing cells in the adult mouse brain implicate Fgf10 in control of neurogenesis. *Molecular and Cellular Neurosciences*, **2008**, 37, 857-68	4.8	37
21	High-resolution three-dimensional imaging of islet-infiltrate interactions based on optical projection tomography assessments of the intact adult mouse pancreas. *Journal of Biomedical Optics*, **2008**, 13, 054070	3.5	41
20	Fluorescence lifetime optical projection tomography. *Journal of Biophotonics*, **2008**, 1, 390-4	3.1	33
19	FishNet: an online database of zebrafish anatomy. *BMC Biology*, **2007**, 5, 34	7.3	47
18	Tomographic molecular imaging and 3D quantification within adult mouse organs. *Nature Methods*, **2007**, 4, 31-3	21.6	152
17	Cell tracing reveals a dorsoventral lineage restriction plane in the mouse limb bud mesenchyme. *Development (Cambridge)*, **2007**, 134, 3713-22	6.6	55
16	Resolution improvement in emission optical projection tomography. *Physics in Medicine and Biology* , **2007**, 52, 2775-90	3.8	67
15	Three-dimensional imaging of Drosophila melanogaster. *PLoS ONE*, **2007**, 2, e834	3.7	54
14	Spleen versus pancreas: strict control of organ interrelationship revealed by analyses of Bapx1-/- mice. *Genes and Development*, **2006**, 20, 2208-13	12.6	60
13	Visualizing plant development and gene expression in three dimensions using optical projection tomography. *Plant Cell*, **2006**, 18, 2145-56	11.6	113
12	3D modelling, gene expression mapping and post-mapping image analysis in the developing human brain. *Brain Research Bulletin*, **2005**, 66, 449-53	3.9	24
11	Correction of artefacts in optical projection tomography. *Physics in Medicine and Biology*, **2005**, 50, 4645-68	3.8	75
10	3 dimensional modelling of early human brain development using optical projection tomography. *BMC Neuroscience*, **2004**, 5, 27	3.2	56
9	Optical projection tomography. *Annual Review of Biomedical Engineering*, **2004**, 6, 209-28	12	136
8	EMAP and EMAGE: a framework for understanding spatially organized data. *Neuroinformatics*, **2003** , 1, 309-25	3.2	95
7	Optical projection tomography as a new tool for studying embryo anatomy. *Journal of Anatomy*, **2003**, 202, 175-81	2.9	124
6	Optical projection tomography as a tool for 3D microscopy and gene expression studies. *Science*, **2002**, 296, 541-5	33.3	897
5	3D confocal reconstruction of gene expression in mouse. *Mechanisms of Development*, **2001**, 100, 59-63	1.7	40

4	Identification of sonic hedgehog as a candidate gene responsible for the polydactylous mouse mutant Sasquatch. *Current Biology*, **1999**, 9, 97-100	6.3	115
3	Reprogramming Hox expression in the vertebrate hindbrain: influence of paraxial mesoderm and rhombomere transposition. *Neuron*, **1996**, 16, 487-500	13.9	176
2	Other Organs311-332		
1	Cellular mechanisms of chick limb bud morphogenesis		1