Lewi Stone

List of Publications by Citations

154 papers	6,233 citations	40 h-index	76 g-index
164 ext. papers	7,047 ext. citations	7 avg, IF	5.98 L-index

#	Paper	IF	Citations
154	Complex dynamics and phase synchronization in spatially extended ecological systems. *Nature*, **1999**, 399, 354-9	50.4	748
153	The checkerboard score and species distributions. *Oecologia*, **1990**, 85, 74-79	2.9	705
152	El nino chaos: overlapping of resonances between the seasonal cycle and the pacific ocean-atmosphere oscillator. *Science*, **1994**, 264, 72-4	33.3	407
151	Seasonal dynamics of recurrent epidemics. *Nature*, **2007**, 446, 533-6	50.4	189
150	Theoretical examination of the pulse vaccination policy in the SIR epidemic model. *Mathematical and Computer Modelling*, **2000**, 31, 207-215		178
149	Coherence resonance at noisy precursors of bifurcations in nonlinear dynamical systems. *Physical Review E*, **1997**, 56, 270-273	2.4	175
148	Comment on "Network motifs: simple building blocks of complex networks" and "Superfamilies of evolved and designed networks". *Science*, **2004**, 305, 1107; author reply 1107	33.3	169
147	Evolution of cooperation between individuals. *Nature*, **1999**, 400, 226-7	50.4	146
146	Unexpected epidemic thresholds in heterogeneous networks: the role of disease transmission. *Physical Review E*, **2004**, 70, 030902	2.4	109
145	A possible link between El Niño and precipitation in Israel. *Geophysical Research Letters*, **1998**, 25, 3963-3966	4.9	109
144	A model of phytoplankton blooms. *American Naturalist*, **2002**, 159, 156-71	3.7	93
143	CHAOS AND PHASE SYNCHRONIZATION IN ECOLOGICAL SYSTEMS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2000**, 10, 2361-2380	2	93
142	Competitive exclusion, or species aggregation? : An aid in deciding. *Oecologia*, **1992**, 91, 419-424	2.9	93
141	Conditions for a Species to Gain Advantage from the Presence of Competitors. *Ecology*, **1991**, 72, 1964-1972	4.6	87
140	Primary production and phytoplankton in Lake Kinneret: A long-term record (1972-1993). *Limnology and Oceanography*, **1995**, 40, 1064-1076	4.8	78
139	A model for seasonal phytoplankton blooms. *Journal of Theoretical Biology*, **2005**, 236, 276-90	2.3	75
138	From reciprocity to unconditional altruism through signalling benefits. *Proceedings of the Royal Society B: Biological Sciences*, **2003**, 270, 199-205	4.4	71

137	Multiannual forecasting of seasonal influenza dynamics reveals climatic and evolutionary drivers. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 9538-42	11.5	67
136	Male infertility, female fertility and extrapair copulations. *Biological Reviews*, **2009**, 84, 225-44	13.5	67
135	Community-Wide Assembly Patterns Unmasked: The Importance of SpeciesRDiffering Geographical Ranges. *American Naturalist*, **1996**, 148, 997-1015	3.7	67
134	Detection of imperfect population synchrony in an uncertain world. *Journal of Animal Ecology*, **2003**, 72, 953-968	4.7	66
133	Mathematical model of pulsed immunotherapy for superficial bladder cancer. *Bulletin of Mathematical Biology*, **2008**, 70, 2055-76	2.1	64
132	Spatio-temporal transmission patterns of black-band disease in a coral community. *PLoS ONE*, **2009**, 4, e4993	3.7	63
131	GC composition of the human genome: in search of isochores. *Molecular Biology and Evolution*, **2005**, 22, 1260-72	8.3	61
130	Mathematical model of BCG immunotherapy in superficial bladder cancer. *Bulletin of Mathematical Biology*, **2007**, 69, 1847-70	2.1	60
129	Noise-induced synchronization in realistic models. *Physical Review E*, **2003**, 67, 027201	2.4	59
128	Categories of chaos and fractal basin boundaries in forced predatorPprey models. *Chaos, Solitons and Fractals*, **2001**, 12, 265-276	9.3	58
127	Modelling the large-scale yellow fever outbreak in Luanda, Angola, and the impact of vaccination. *PLoS Neglected Tropical Diseases*, **2018**, 12, e0006158	4.8	57
126	Generating uniformly distributed random networks. *Physical Review E*, **2005**, 72, 056708	2.4	53
125	Effects of immigration on the dynamics of simple population models. *Theoretical Population Biology*, **1999**, 55, 227-34	1.2	53
124	Integrated species distribution models: combining presence-background data and site-occupancy data with imperfect detection. *Methods in Ecology and Evolution*, **2017**, 8, 420-430	7.7	52
123	Ecology. Nonlinearity and the Moran effect. *Nature*, **2000**, 406, 846-7	50.4	52
122	Spatio-temporal synchronization of recurrent epidemics. *Proceedings of the Royal Society B: Biological Sciences*, **2003**, 270, 1519-26	4.4	49
121	Seasonal dynamics of the Lake Kinneret food web:The importance of the microbial loop. *Limnology and Oceanography*, **2000**, 45, 350-361	4.8	48
120	Global Spatio-temporal Patterns of Influenza in the Post-pandemic Era. *Scientific Reports*, **2015**, 5, 11013	4.9	42

119	Chaos, Cycles and Spatiotemporal Dynamics in Plant Ecology. *Journal of Ecology*, **1996**, 84, 279	6	42
118	Genomic microsatellites identify shared Jewish ancestry intermediate between Middle Eastern and European populations. *BMC Genetics*, **2009**, 10, 80	2.6	41
117	Mass Coral Reef Bleaching: A Recent Outcome of Increased El Niño Activity?. *Ecology Letters*, **1999**, 2, 325-330	10	41
116	Complexity can enhance stability in competitive systems. *Ecology Letters*, **2001**, 4, 397-400	10	40
115	Positive feedback in aquatic ecosystems. *Trends in Ecology and Evolution*, **1992**, 7, 263-7	10.9	39
114	Seasonal dynamics and thresholds governing recurrent epidemics. *Journal of Mathematical Biology*, **2008**, 56, 827-39	2	38
113	Ecosystem Resilience, Stability, and Productivity: Seeking a Relationship. *American Naturalist*, **1996**, 148, 892-903	3.7	38
112	Modelling seasonal influenza: the role of weather and punctuated antigenic drift. *Journal of the Royal Society Interface*, **2013**, 10, 20130298	4.1	36
111	Perception of musical consonance and dissonance: an outcome of neural synchronization. *Journal of the Royal Society Interface*, **2008**, 5, 1429-34	4.1	36
110	Chaos in the Pacific's coral reef bleaching cycle. *American Naturalist*, **1998**, 152, 447-59	3.7	34
109	Analysis of a Heroin Epidemic Model with Saturated Treatment Function. *Journal of Applied Mathematics*, **2017**, 2017, 1-21	1.1	33
108	The feasibility and stability of large complex biological networks: a random matrix approach. *Scientific Reports*, **2018**, 8, 8246	4.9	32
107	Chaotic oscillations and cycles in multi-trophic ecological systems. *Journal of Theoretical Biology*, **2007**, 248, 382-90	2.3	32
106	Lake Kinneret: A seasonal mode1 for carbon flux through the planktonic biota. *Limnology and Oceanography*, **1993**, 38, 1680-1695	4.8	32
105	Network motifs and their origins. *PLoS Computational Biology*, **2019**, 15, e1006749	5	29
104	Modeling polio as a disease of development. *Journal of Theoretical Biology*, **2005**, 237, 302-15	2.3	29
103	El Niño Chaos: The role of noise and stochastic resonance on the ENSO cycle. *Geophysical Research Letters*, **1998**, 25, 175-178	4.9	29
102	Unexpected coherence and conservation. *Proceedings of the Royal Society B: Biological Sciences*, **2001**, 268, 2595-602	4.4	28

101	Finding the Most Influential Nodes in Pinning Controllability of Complex Networks. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2017**, 64, 685-689	3.5	27
100	Modelling the initial phase of an epidemic using incidence and infection network data: 2009 H1N1 pandemic in Israel as a case study. *Journal of the Royal Society Interface*, **2011**, 8, 856-67	4.1	27
99	Ecological size-frequency distributions: how to prevent and correct biases in spatial sampling. *Limnology and Oceanography: Methods*, **2008**, 6, 144-153	2.6	27
98	On Desert Rodents, Favored States, and Unresolved Issues: Scaling Up and Down Regional Assemblages and Local Communities. *American Naturalist*, **2000**, 156, 322-328	3.7	27
97	Predicting epidemic thresholds on complex networks: limitations of mean-field approaches. *Journal of Theoretical Biology*, **2011**, 288, 21-8	2.3	26
96	Heterogeneity stabilizes reciprocal altruism interactions. *Journal of Theoretical Biology*, **2001**, 209, 87-95	2.3	26
95	Modeling and statistical analysis of the spatio-temporal patterns of seasonal influenza in Israel. *PLoS ONE*, **2012**, 7, e45107	3.7	22
94	Connectivity, cycles, and persistence thresholds in metapopulation networks. *PLoS Computational Biology*, **2010**, 6, e1000876	5	22
93	Inferring extinction risks from sighting records. *Journal of Theoretical Biology*, **2013**, 338, 16-22	2.3	21
92	Modelling the spread of diseases in clustered networks. *Journal of Theoretical Biology*, **2012**, 315, 110-8	2.3	21
91	Positive feedback in aquatic ecosystems: The case of the microbial loop. *Bulletin of Mathematical Biology*, **1993**, 55, 919-936	2.1	20
90	Post-lockdown abatement of COVID-19 by fast periodic switching. *PLoS Computational Biology*, **2021**, 17, e1008604	5	19
89	Multi-stage regulation, a key to reliable adaptive biochemical pathways. *Biophysical Journal*, **2001**, 81, 3016-28	2.9	18
88	Inferring extinctions II: A practical, iterative model based on records and surveys. *Biological Conservation*, **2017**, 214, 328-335	6.2	17
87	Bottom-up excitable models of phytoplankton blooms. *Bulletin of Mathematical Biology*, **2004**, 66, 865-78	2.1	17
86	Fertility assurance through extrapair fertilizations and male paternity defense. *Journal of Theoretical Biology*, **2003**, 221, 103-14	2.3	17
85	The Google matrix controls the stability of structured ecological and biological networks. *Nature Communications*, **2016**, 7, 12857	17.4	16
84	Determinants of periodicity in seasonally driven epidemics. *Journal of Theoretical Biology*, **2012**, 305, 88-95	2.3	16

83	Species-area relationships always overestimate extinction rates from habitat loss: comment. *Ecology*, **2013**, 94, 761-3	4.6	16
82	Emergence and size of the giant component in clustered random graphs with a given degree distribution. *Physical Review Letters*, **2009**, 102, 138701	7.4	16
81	Modeling the Impact of White-Plague Coral Disease in Climate Change Scenarios. *PLoS Computational Biology*, **2015**, 11, e1004151	5	15
80	Spatio-temporal waves and targeted vaccination in recurrent epidemic network models. *Journal of the Royal Society Interface*, **2009**, 6, 749-60	4.1	15
79	Modelling coral reef biodiversity and habitat destruction. *Marine Ecology - Progress Series*, **1996**, 134, 299-302	2.6	15
78	The effects of connectivity on metapopulation persistence: network symmetry and degree correlations. *Proceedings of the Royal Society B: Biological Sciences*, **2015**, 282, 20150203	4.4	14
77	Onset of a pandemic: characterizing the initial phase of the swine flu (H1N1) epidemic in Israel. *BMC Infectious Diseases*, **2011**, 11, 92	4	14
76	Pandemic dynamics and the breakdown of herd immunity. *PLoS ONE*, **2010**, 5, e9565	3.7	14
75	Detecting Nonlinearity in Time Series: Surrogate and Bootstrap Approaches. *Studies in Nonlinear Dynamics and Econometrics*, **2005**, 9,	0.7	14
74	Backward bifurcation and hysteresis in models of recurrent tuberculosis. *PLoS ONE*, **2018**, 13, e0194256	3.7	13
73	The effects of interaction compartments on stability for competitive systems. *Journal of Theoretical Biology*, **2004**, 227, 277-82	2.3	13
72	Complex Synchronization Phenomena in Ecological Systems. *AIP Conference Proceedings*, **2002**,	0	13
71	Percolation of heterogeneous flows uncovers the bottlenecks of infrastructure networks. *Nature Communications*, **2021**, 12, 1254	17.4	13
70	Backward bifurcation in epidemic models: Problems arising with aggregated bifurcation parameters. *Applied Mathematical Modelling*, **2016**, 40, 1669-1675	4.5	12
69	Why do females have so few extra-pair offspring?. *Behavioral Ecology and Sociobiology*, **2011**, 65, 513-523	2.5	12
68	Size-structured demographic models of coral populations. *Journal of Theoretical Biology*, **2007**, 245, 482-93	2.3	11
67	Detecting generalized synchrony: an improved approach. *Physical Review E*, **2003**, 67, 026223	2.4	11
66	Immune response and virus population composition: HIV as a case study. *Proceedings of the Royal Society B: Biological Sciences*, **2002**, 269, 809-15	4.4	11

65	The unexpected dynamics of COVID-19 in Manaus, Brazil: Was herd immunity achieved?		11
64	New estimates of the Zika virus epidemic attack rate in Northeastern Brazil from 2015 to 2016: A modelling analysis based on Guillain-Barr Syndrome (GBS) surveillance data. *PLoS Neglected Tropical Diseases*, **2020**, 14, e0007502	4.8	10
63	Attack rates of seasonal epidemics. *Mathematical Biosciences*, **2012**, 235, 56-65	3.9	10
62	On Fitting a Model to a Population Time Series With Missing Values. *Israel Journal of Ecology and Evolution*, **2006**, 52, 1-10	0.8	10
61	Modelling seasonal influenza in Israel. *Mathematical Biosciences and Engineering*, **2011**, 8, 561-73	2.1	10
60	Hot-Spot Facts and Artifacts-Questioning Israel's Great Biodiversity. *Israel Journal of Ecology and Evolution*, **2009**, 55, 263-279	0.8	9
59	Understanding the connections between species distribution models for presence-background data. *Theoretical Ecology*, **2019**, 12, 73-88	1.6	8
58	Advantageous indirect interactions in systems of competition. *Journal of Theoretical Biology*, **2004**, 228, 367-75	2.3	8
57	The two sides of man-induced changes in littoral marine communities: Eastern Mediterranean and the Red Sea as an example. *Science of the Total Environment*, **2002**, 296, 139-51	10.2	8
56	The stability of mutualism. *Nature Communications*, **2020**, 11, 2648	17.4	7
55	Effective Augmentation of Complex Networks. *Scientific Reports*, **2016**, 6, 25627	4.9	7
54	Modelling transmission of vector-borne pathogens shows complex dynamics when vector feeding sites are limited. *PLoS ONE*, **2012**, 7, e36730	3.7	7
53	Analysis of generalized synchronization in directionally coupled chaotic phase-coherent oscillators by local minimal fluctuations. *Physical Review E*, **2002**, 66, 036208	2.4	7
52	Unusual synchronization of Red Sea fish energy expenditures. *Ecology Letters*, **2003**, 6, 83-86	10	6
51	Extraordinary curtailment of massive typhus epidemic in the Warsaw Ghetto. *Science Advances*, **2020**, 6, eabc0927	14.3	6
50	Controllability of complex networks: Choosing the best driver set. *Physical Review E*, **2018**, 98,	2.4	6
49	Meningitis epidemics shift in sub-Saharan belt. *International Journal of Infectious Diseases*, **2018**, 68, 79-82	0.5	5
48	A novel method for estimating the number of species within a region. *Proceedings of the Royal Society B: Biological Sciences*, **2014**, 281, 20133009	4.4	5

47	Exact epidemic analysis for the star topology. *Physical Review E*, **2013**, 87, 042815	2.4	5
46	Quantifying the Holocaust: Hyperintense kill rates during the Nazi genocide. *Science Advances*, **2019**, 5, eaau7292	14.3	5
45	Modelling heterogeneity in host susceptibility to tuberculosis and its effect on public health interventions. *PLoS ONE*, **2018**, 13, e0206603	3.7	5
44	Spatiotemporal patterns of dengue outbreaks in Sri Lanka. *Infectious Diseases*, **2020**, 52, 350-360	3.1	4
43	A vaccination model for a multi-city system. *Bulletin of Mathematical Biology*, **2012**, 74, 2474-87	2.1	4
42	Predation Risk can Drive Cycles in Zoonotic Disease Prevalence. *Israel Journal of Ecology and Evolution*, **2010**, 56, 281-295	0.8	4
41	Trade up polygyny and breeding synchrony in avian populations. *Journal of Theoretical Biology*, **2006**, 238, 104-10	2.3	4
40	Indiscriminate polyandry and male parental effort. *Bulletin of Mathematical Biology*, **2004**, 66, 47-63	2.1	4
39	Unexpected correspondence between noise-induced and master-slave complete synchronizations. *Physical Review E*, **2003**, 68, 037202	2.4	4
38	The stabilizing role of the Sabbath in pre-monarchic Israel: a mathematical model. *Journal of Biological Physics*, **2015**, 41, 203-21	1.6	3
37	Inferring about the extinction of a species using certain and uncertain sightings. *Journal of Theoretical Biology*, **2018**, 442, 98-109	2.3	3
36	Spatio-temporal synchrony of influenza in cities across Israel: the "Israel is one city" hypothesis. *PLoS ONE*, **2014**, 9, e91909	3.7	3
35	A test for a shift in the boundary of the geographical range of a species. *Biology Letters*, **2014**, 10, 20130868	3.8	3
34	Not so Holy After All. *Israel Journal of Ecology and Evolution*, **2011**, 57, 193-204	0.8	3
33	A CRITICAL SMOOTHING TEST FOR MULTIPLE EQUILIBRIA. *Ecology*, **2003**, 84, 1459-1463	4.6	3
32	Fertility assurance through extrapair fertilization, and male parental effort. *Bulletin of Mathematical Biology*, **2002**, 64, 809-23	2.1	3
31	Biological indicators in marine and coastal waters: a statistical and modelling analysis of the MARS campaign. *Helgoland Marine Research*, **2003**, 57, 272-284	1.8	3
30	Fertility assurance and breeding synchrony. *Bulletin of Mathematical Biology*, **2005**, 67, 875-83	2.1	3

29	Ecological chaos. *Nature*, **1994**, 367, 418-418	50.4	3
28	Modelling COVID-19 Vaccine Breakthrough Infections in Highly Vaccinated Israel – the effects of waning immunity and third vaccination dose		3
27	Pandemic influenza dynamics and the breakdown of herd immunity. *PLOS Currents*, **2009**, 1, RRN1046		3
26	Kemeny-based testing for COVID-19. *PLoS ONE*, **2020**, 15, e0242401	3.7	3
25	Difficulties in benchmarking ecological null models: an assessment of current methods. *Ecology*, **2020**, 101, e02945	4.6	3
24	Analysis of Influenza and RSV dynamics in the community using a Local Transmission Zone approach. *Scientific Reports*, **2017**, 7, 42012	4.9	2
23	Coherence of dengue incidence and climate in the wet and dry zones of Sri Lanka. *Science of the Total Environment*, **2020**, 724, 138269	10.2	2
22	A discrete Markov metapopulation model for persistence and extinction of species. *Journal of Theoretical Biology*, **2016**, 404, 391-397	2.3	2
21	A New Metric to Find the Most Vulnerable Node in Complex Networks **2018**,		2
20	NOISE-INDUCED SYNCHRONIZATION IN MULTITROPHIC CHAOTIC ECOLOGICAL SYSTEMS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2010**, 20, 1779-1788	2	2
19	Can there be a war of all against all?. *Journal of Social and Evolutionary Systems*, **1992**, 15, 315-318		2
18	Bayesian updating to estimate extinction from sequential observation data. *Biological Conservation*, **2019**, 229, 26-29	6.2	2
17	Inferring extinction year using a Bayesian approach. *Methods in Ecology and Evolution*, **2020**, 11, 964-973	7.7	1
16	Distributed Rigidity Recovery in Distance-Based Formations Using Configuration Lattice. *IEEE Transactions on Control of Network Systems*, **2020**, 7, 1547-1558	4	1
15	Complementary predation on metamorphosing species promotes stability in predator–prey systems. *Theoretical Ecology*, **2010**, 3, 153-161	1.6	1
14	What Minimal Models Can Tell: A Reply to van Nes and Scheffer. *American Naturalist*, **2004**, 163, 927-929	3.7	1
13	High-resolution inference of genetic relationships among Jewish populations. *European Journal of Human Genetics*, **2020**, 28, 804-814	5.3	1
12	Using survival theory models to quantify extinctions. *Biological Conservation*, **2020**, 241, 108345	6.2	1

11	Adaptive wavelet estimation of a function from an m-dependent process with possibly unbounded m. *Communications in Statistics - Theory and Methods*, **2019**, 48, 1123-1135	0.5	1
10	Excess pneumonia and influenza death as herald wave of COVID-19 in England and Wales, United Kingdom. *Journal of Infection*, **2021**, 82, 282-327	18.9	1
9	Automated extraction of origin-destination demand for public transportation from smartcard data with pattern recognition. *Transportation Research Part C: Emerging Technologies*, **2021**, 129, 103210	8.4	1
8	The Big Friendly Giant: The Giant Component in Clustered Random Graphs **2009**, 237-252		
7	Reply from stone and weisburd. *Trends in Ecology and Evolution*, **1993**, 8, 36	10.9	
6	Effectiveness of joint species distribution models in the presence of imperfect detection. *Methods in Ecology and Evolution*, **2021**, 12, 1458-1474	7.7	
5	Inferring extinction date of a species using non-homogeneous Poisson processes with a change-point. *Methods in Ecology and Evolution*, **2021**, 12, 530-538	7.7	
4	Kemeny-based testing for COVID-19 **2020**, 15, e0242401		
3	Kemeny-based testing for COVID-19 **2020**, 15, e0242401		
2	Kemeny-based testing for COVID-19 **2020**, 15, e0242401		
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