Karin Frank

List of Publications by Year
in descending order

83 papers	3,684 citations	126858 33 h-index	143943 57 g-index
84 all docs	84 docs citations	84 times ranked	4460 citing authors

#	Article	IF	Citations
1	McComedy: A user-friendly tool for next-generation individual-based modeling of microbial consumer-resource systems. PLoS Computational Biology, 2022, 18, e1009777.	1.5	3
2	MASTIFF: A mechanistic model for cross-scale analyses of the functioning of multiple stressed riverine ecosystems. Ecological Modelling, 2022, 470, 110007.	1.2	0
3	Socio-technical scales in socio-environmental modeling: Managing a system-of-systems modeling approach. Environmental Modelling and Software, 2021, 135, 104885.	1.9	38
4	Informal risk-sharing between smallholders may be threatened by formal insurance: Lessons from a stylized agent-based model. PLoS ONE, 2021, 16, e0248757.	1.1	10
5	Disentangling multiple chemical and non-chemical stressors in a lotic ecosystem using a longitudinal approach. Science of the Total Environment, 2021, 769, 144324.	3.9	24
6	Chlorophyll a relationships with nutrients and temperature, and predictions for lakes across perialpine and Balkan mountain regions. Inland Waters, 2020, 10, 29-41.	1.1	10
7	Implications of behavioral change for the resilience of pastoral systemsâ€"Lessons from an agent-based model. Ecological Complexity, 2019, 40, 100710.	1.4	18
8	Freshwater species distributions along thermal gradients. Ecology and Evolution, 2019, 9, 111-124.	0.8	9
9	Scale effects on the performance of niche-based models of freshwater fish distributions. Ecological Modelling, 2019, 405, 33-42.	1.2	12
10	The potential of models and modeling for social-ecological systems research: the reference frame ModSES. Ecology and Society, 2019, 24, .	1.0	57
11	Disturbance Size Can Be Compensated for by Spatial Fragmentation in Soil Microbial Ecosystems. Frontiers in Ecology and Evolution, 2019, 7, .	1.1	12
12	Ecological Vulnerability Through Insurance? Potential Unintended Consequences of Livestock Drought Insurance. Ecological Economics, 2019, 157, 357-368.	2.9	23
13	Agricultural landscape generators for simulation models: A review of existing solutions and an outline of future directions. Ecological Modelling, 2019, 393, 135-151.	1.2	27
14	Polarization in (post)nomadic resource use in Eastern Morocco: insights using a multi-agent simulation model. Regional Environmental Change, 2019, 19, 489-500.	1.4	6
15	Interregional flows of ecosystem services: Concepts, typology and four cases. Ecosystem Services, 2018, 31, 231-241.	2.3	143
16	Spatiotemporal disturbance characteristics determine functional stability and collapse risk of simulated microbial ecosystems. Scientific Reports, 2018, 8, 9488.	1.6	15
17	Functional Resistance to Recurrent Spatially Heterogeneous Disturbances Is Facilitated by Increased Activity of Surviving Bacteria in a Virtual Ecosystem. Frontiers in Microbiology, 2018, 9, 734.	1.5	9
18	Metabolic in Vivo Labeling Highlights Differences of Metabolically Active Microbes from the Mucosal Gastrointestinal Microbiome between High-Fat and Normal Chow Diet. Journal of Proteome Research, 2017, 16, 1593-1604.	1.8	26

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19	Mycelium-mediated transfer of water and nutrients stimulates bacterial activity in dry and oligotrophic environments. Nature Communications, 2017, 8, 15472.	5.8	109
20	The expansion of short rotation forestry: characterization of determinants with an agentâ€based land use model. GCB Bioenergy, 2017, 9, 1042-1056.	2.5	13
21	Modelling functional resilience of microbial ecosystems: Analysis of governing processes. Environmental Modelling and Software, 2017, 89, 31-39.	1.9	26
22	A framework for mapping and comparing behavioural theories in models of social-ecological systems. Ecological Economics, 2017, 131, 21-35.	2.9	302
23	A critical evaluation of ecological indices for the comparative analysis of microbial communities based on molecular datasets. FEMS Microbiology Ecology, 2017, 93, fiw209.	1.3	44
24	Towards thresholds of disaster management performance under demographic change: exploring functional relationships using agent-based modeling. Natural Hazards and Earth System Sciences, 2016, 16, 2287-2301.	1.5	11
25	Bacterial Dispersal Promotes Biodegradation in Heterogeneous Systems Exposed to Osmotic Stress. Frontiers in Microbiology, 2016, 7, 1214.	1.5	16
26	Viability of cyclic populations. Ecology, 2016, 97, 3143-3153.	1.5	3
27	A spatially explicit assessment of the wind energy potential in response to an increased distance between wind turbines and settlements in Germany. Energy Policy, 2016, 97, 343-350.	4.2	27
28	Governmental response to climate risk: Model-based assessment of livestock supplementation in drylands. Land Use Policy, 2016, 54, 47-57.	2.5	39
29	Livelihood security in face of drought â€“ Assessing the vulnerability of pastoral households. Environmental Modelling and Software, 2016, 75, 414-423.	1.9	59
30	Ecosystem Management Along Ephemeral Rivers: Trading Off Socioâ€Economic Water Supply and Vegetation Conservation under Flood Regime Uncertainty. River Research and Applications, 2016, 32, 219-233.	0.7	10
31	Mycelium-Like Networks Increase Bacterial Dispersal, Growth, and Biodegradation in a Model Ecosystem at Various Water Potentials. Applied and Environmental Microbiology, 2016, 82, 2902-2908.	1.4	42
32	Spatial metrics as indicators of biodegradation benefits from bacterial dispersal networks. Ecological Indicators, 2016, 60, 54-63.	2.6	16
33	Assessing Regional-Scale Impacts of Short Rotation Coppices on Ecosystem Services by Modeling Land-Use Decisions. PLoS ONE, 2016, 11, e0153862.	1.1	24
34	How to avoid unsustainable side effects of managing climate risk in drylands â€” The supplementary feeding controversy. Agricultural Systems, 2015, 139, 153-165.	3.2	34
35	Adapting livestock management to spatio-temporal heterogeneity in semi-arid rangelands. Journal of Environmental Management, 2015, 162, 179-189.	3.8	40
36	Assessing the structural adequacy of alternative ecohydrological models using a pattern-oriented approach. Ecological Modelling, 2015, 316, 52-61.	1.2	5

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37	How do individual farmers' objectives influence the evaluation of rangeland management strategies under a variable climate?. Journal of Applied Ecology, 2014, 51, 483-493.	1.9	42
38	How much climate change can pastoral livelihoods tolerate? Modelling rangeland use and evaluating risk. Global Environmental Change, 2014, 24, 183-192.	3.6	73
39	Species ecology and the impacts of bioenergy crops: an assessment approach with four example farmland bird species. GCB Bioenergy, 2014, 6, 252-264.	2.5	26
40	Highways versus pipelines: contributions of two fungal transport mechanisms to efficient bioremediation. Environmental Microbiology Reports, 2014, 6, 414-414.	1.0	1
41	Pattern-oriented parameterization of general models for ecological application: Towards realistic evaluations of management approaches. Ecological Modelling, 2014, 275, 78-88.	1.2	26
42	Of climate and its resulting tree growth: Simulating the productivity of temperate forests. Ecological Modelling, 2014, 278, 9-17.	1.2	40
43	Testing the focal species approach to making conservation decisions for species persistence. Diversity and Distributions, 2013, 19, 530-540.	1.9	43
44	Species-Specific Traits plus Stabilizing Processes Best Explain Coexistence in Biodiverse Fire-Prone Plant Communities. PLoS ONE, 2013, 8, e65084.	1.1	7
45	Highways versus pipelines: contributions of two fungal transport mechanisms to efficient bioremediation. Environmental Microbiology Reports, 2013, 5, 211-218.	1.0	62
46	Module 8: Management and Viability of Target Species: Modeling and Monitoring. Environmental Science and Engineering, 2013, , 293-303.	0.1	0
47	A review of grassland models in the biofuel context. Ecological Modelling, 2012, 245, 84-93.	1.2	29
48	Bioenergy production and <scp>S</scp>kylark (<scp>A</scp>lauda arvensis) population abundance â€“ a modelling approach for the analysis of landâ€use change impacts and conservation options. GCB Bioenergy, 2012, 4, 713-727.	2.5	28
49	The Relevance of Conditional Dispersal for Bacterial Colony Growth and Biodegradation. Microbial Ecology, 2012, 63, 339-347.	1.4	24
50	Pitfalls and potential of institutional change: Rain-index insurance and the sustainability of rangeland management. Ecological Economics, 2011, 70, 2137-2144.	2.9	48
51	Assessing biodegradation benefits from dispersal networks. Ecological Modelling, 2011, 222, 2552-2560.	1.2	44
52	Dispersal networks for enhancing bacterial degradation in heterogeneous environments. Environmental Pollution, 2011, 159, 2781-2788.	3.7	34
53	Analyzing the effect of stepping stones on target patch colonisation in structured landscapes for Eurasian lynx. Landscape Ecology, 2011, 26, 501-513.	1.9	55
54	Breaking Functional Connectivity into Components: A Novel Approach Using an Individual-Based Model, and First Outcomes. PLoS ONE, 2011, 6, e22355.	1.1	46

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55	Uncertainty in parameterisation and model structure affect simulation results in coupled ecohydrological models. Hydrology and Earth System Sciences, 2009, 13, 1789-1807.	1.9	24
56	Land Use Options â€“ Strategies and Adaptation to Global Change â€“ Terrestrial Environmental Research. Gaia, 2009, 18, 77-80.	0.3	15
57	Relating the philosophy and practice of ecological economics: The role of concepts, models, and case studies in inter- and transdisciplinary sustainability research. Ecological Economics, 2008, 67, 384-393.	2.9	145
58	LEARNING FROM LOCAL KNOWLEDGE: MODELING THE PASTORAL-NOMADIC RANGE MANAGEMENT OF THE HIMBA, NAMIBIA. , 2007, 17, 1857-1875.		49
59	Relevance of rest periods in non-equilibrium rangeland systems â€“ A modelling analysis. Agricultural Systems, 2007, 92, 295-317.	3.2	97
60	Integrating individual movement behaviour into dispersal functions. Journal of Theoretical Biology, 2007, 245, 601-609.	0.8	12
61	Uncertainty and sustainability in the management of rangelands. Ecological Economics, 2007, 62, 251-266.	2.9	113
62	A new method for conservation planning for the persistence of multiple species. Ecology Letters, 2006, 9, 1049-1060.	3.0	126
63	The Viability of Metapopulations: Individual Dispersal Behaviour Matters. Landscape Ecology, 2006, 21, 77-89.	1.9	34
64	Connectivity in Heterogeneous Landscapes: Analyzing the Effect of Topography. Landscape Ecology, 2006, 21, 47-61.	1.9	38
65	Virtual Corridors for Conservation Management. Conservation Biology, 2005, 19, 1997-2003.	2.4	25
66	On the foundation of a general theory of stocks. Ecological Economics, 2005, 55, 155-172.	2.9	29
67	Predicting when animal populations are at risk from roads: an interactive model of road avoidance behavior. Ecological Modelling, 2005, 185, 329-348.	1.2	313
68	Dispersal behaviour in fragmented landscapes: Deriving a practical formula for patch accessibility. Landscape Ecology, 2005, 20, 83-99.	1.9	40
69	Metapopulation Persistence in Heterogeneous Landscapes: Lessons about the Effect of Stochasticity. American Naturalist, 2005, 165, 374-388.	1.0	66
70	StraÃŸen und Wildtierpopulationen in Modellen: Zwei Beispiele fÃ¼r den Beitrag der Modellierung zur Erforschung der Landschaftszerschneidung StraÃŸen und Wildtierpopulationen in Modellen: Zwei Beispiele fÃ¼r den Beitrag der Modellierung zur Erforschung der Landschaftszerschneidung. Gaia, 2005, 14, 107-112.	0.3	3
71	META-X: Generic Software for Metapopulation Viability Analysis. Biodiversity and Conservation, 2004, 13, 165-188.	1.2	35
72	Ecologically Differentiated Rules of Thumb for Habitat Network Design â€“ Lessons from a Formula. Biodiversity and Conservation, 2004, 13, 189-206.	1.2	26

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73	Foray Search: An Effective Systematic Dispersal Strategy in Fragmented Landscapes. American Naturalist, 2003, 161, 905-915.	1.0	92
74	RANKING METAPOPULATION EXTINCTION RISK: FROM PATTERNS IN DATA TO CONSERVATION MANAGEMENT DECISIONS. , 2003, 13, 990-998.		90
75	META-XÂ®-Software for Metapopulation Viability Analysis. , 2003, , .		5
76	A Formula for the Mean Lifetime of Metapopulations in Heterogeneous Landscapes. American Naturalist, 2002, 159, 530-552.	1.0	84
77	Model-based criteria for the effectiveness of conservation strategies â€" an evaluation of incentive programmes in Saxony, Germany. Contributions To Economics, 1999, , 91-106.	0.2	1
78	Title is missing!. Landscape Ecology, 1998, 13, 363-379.	1.9	97
79	Pattern-oriented modelling in population ecology. Science of the Total Environment, 1996, 183, 151-166.	3.9	183
80	On the geometry of normal state trajectories generated by dynamical semigroups. Reports on Mathematical Physics, 1993, 33, 43-56.	0.4	0
81	Combining social network analysis and agent-based modelling to explore dynamics of human interaction: A review. Socio-Environmental Systems Modeling, 0, 2, 16325.	0.0	34
82	Formalising theories of human decision-making for agent-based modelling of social-ecological systems: practical lessons learned and ways forward. Socio-Environmental Systems Modeling, 0, 2, 16340.	0.0	11
83	MORE â€“ Modeling for Resilience Thinking and Ecosystem Stewardship. SSRN Electronic Journal, 0, , .	0.4	6