

Rolf KÃ¼mmerli

List of Publications by Year in descending order

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77
papers

4,948
citations

172457

29
h-index

133252

59
g-index

104
all docs

104
docs citations

104
times ranked

5883
citing authors

#	ARTICLE	IF	CITATIONS
1	Quorum sensing triggers the stochastic escape of individual cells from <i>Pseudomonas putida</i> biofilms. <i>Nature Communications</i> , 2015, 6, 5945.	12.8	842
2	Bacterial siderophores in community and host interactions. <i>Nature Reviews Microbiology</i> , 2020, 18, 152-163.	28.6	495
3	Inclusive fitness theory and eusociality. <i>Nature</i> , 2011, 471, E1-E4.	27.8	339
4	Competition for iron drives phytopathogen control by natural rhizosphere microbiomes. <i>Nature Microbiology</i> , 2020, 5, 1002-1010.	13.3	260
5	Division of Labor during Biofilm Matrix Production. <i>Current Biology</i> , 2018, 28, 1903-1913.e5.	3.9	203
6	Viscous medium promotes cooperation in the pathogenic bacterium <i>Pseudomonas aeruginosa</i> . <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2009, 276, 3531-3538.	2.6	200
7	Siderophore cheating and cheating resistance shape competition for iron in soil and freshwater <i>Pseudomonas</i> communities. <i>Nature Communications</i> , 2017, 8, 414.	12.8	186
8	LIMITED DISPERSAL, BUDDING DISPERSAL, AND COOPERATION: AN EXPERIMENTAL STUDY. <i>Evolution; International Journal of Organic Evolution</i> , 2009, 63, 939-949.	2.3	163
9	Switching between apparently redundant iron-uptake mechanisms benefits bacteria in changeable environments. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013, 280, 20131055.	2.6	154
10	Phenotypic plasticity of a cooperative behaviour in bacteria. <i>Journal of Evolutionary Biology</i> , 2009, 22, 589-598.	1.7	147
11	Molecular and regulatory properties of a public good shape the evolution of cooperation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 18921-18926.	7.1	117
12	Gallium-mediated siderophore quenching as an evolutionarily robust antibacterial treatment. <i>Evolution, Medicine and Public Health</i> , 2014, 2014, 18-29.	2.5	106
13	Habitat structure and the evolution of diffusible siderophores in bacteria. <i>Ecology Letters</i> , 2014, 17, 1536-1544.	6.4	98
14	Beyond killing. <i>Evolution, Medicine and Public Health</i> , 2016, 2016, 148-157.	2.5	87
15	Human cooperation in social dilemmas: comparing the Snowdrift game with the Prisoner's Dilemma. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2007, 274, 2965-2970.	2.6	86
16	Resistance to extreme strategies, rather than prosocial preferences, can explain human cooperation in public goods games. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 10125-10130.	7.1	72
17	Cheating fosters species co-existence in well-mixed bacterial communities. <i>ISME Journal</i> , 2017, 11, 1179-1188.	9.8	69
18	Combining antibiotics with antivirulence compounds can have synergistic effects and reverse selection for antibiotic resistance in <i>Pseudomonas aeruginosa</i> . <i>PLoS Biology</i> , 2020, 18, e3000805.	5.6	69

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19	Altruism can evolve when relatedness is low: evidence from bacteria committing suicide upon phage infection. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013, 280, 20123035.	2.6	65
20	Evolutionary dynamics of interlinked public goods traits: an experimental study of siderophore production in <i>Pseudomonas aeruginosa</i> . <i>Journal of Evolutionary Biology</i> , 2015, 28, 29-39.	1.7	62
21	Co-evolutionary dynamics between public good producers and cheats in the bacterium <i>Pseudomonas aeruginosa</i> . <i>Journal of Evolutionary Biology</i> , 2015, 28, 2264-2274.	1.7	62
22	Cost of cooperation rules selection for cheats in bacterial metapopulations. <i>Journal of Evolutionary Biology</i> , 2012, 25, 473-484.	1.7	61
23	Interaction effects of cell diffusion, cell density and public goods properties on the evolution of cooperation in digital microbes. <i>Journal of Evolutionary Biology</i> , 2014, 27, 1869-1877.	1.7	53
24	The physical boundaries of public goods cooperation between surface-attached bacterial cells. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20170631.	2.6	48
25	Collective decision-making in microbes. <i>Frontiers in Microbiology</i> , 2014, 5, 54.	3.5	47
26	Presence of a loner strain maintains cooperation and diversity in well-mixed bacterial communities. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20152682.	2.6	47
27	Sham nepotism as a result of intrinsic differences in brood viability in ants. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2006, 273, 2049-2052.	2.6	45
28	Low spatial structure and selection against secreted virulence factors attenuates pathogenicity in <i>Pseudomonas aeruginosa</i> . <i>ISME Journal</i> , 2018, 12, 2907-2918.	9.8	44
29	The bacterium <i>Pseudomonas aeruginosa</i> senses and gradually responds to interspecific competition for iron. <i>Evolution; International Journal of Organic Evolution</i> , 2018, 72, 1515-1528.	2.3	40
30	Environmental determinants of pyoverdine production, exploitation and competition in natural <i>Pseudomonas</i> communities. <i>Environmental Microbiology</i> , 2018, 20, 3629-3642.	3.8	37
31	Do Bacterial "Virulence Factors" Always Increase Virulence? A Meta-Analysis of Pyoverdine Production in <i>Pseudomonas aeruginosa</i> As a Test Case. <i>Frontiers in Microbiology</i> , 2016, 7, 1952.	3.5	33
32	Repression of competition favours cooperation: experimental evidence from bacteria. <i>Journal of Evolutionary Biology</i> , 2010, 23, 699-706.	1.7	32
33	EXPLAINING THE SOCIOBIOLOGY OF PYOVERDIN PRODUCING <i>PSEUDOMONAS</i> : A COMMENT ON ZHANG AND RAINEY (2013). <i>Evolution; International Journal of Organic Evolution</i> , 2014, 68, 3337-3343.	2.3	31
34	Manipulating virulence factor availability can have complex consequences for infections. <i>Evolutionary Applications</i> , 2017, 10, 91-101.	3.1	29
35	Probing the evolutionary robustness of two repurposed drugs targeting iron uptake in <i>Pseudomonas aeruginosa</i> . <i>Evolution, Medicine and Public Health</i> , 2018, 2018, 246-259.	2.5	28
36	In-vivo microscopy reveals the impact of <i>Pseudomonas aeruginosa</i> social interactions on host colonization. <i>ISME Journal</i> , 2019, 13, 2403-2414.	9.8	28

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37	Model Systems to Study the Chronic, Polymicrobial Infections in Cystic Fibrosis: Current Approaches and Exploring Future Directions. <i>MBio</i> , 2021, 12, e0176321.	4.1	26
38	Harnessing bacterial interactions to manage infections: a review on the opportunistic pathogen <i>Pseudomonas aeruginosa</i> as a case example. <i>Journal of Medical Microbiology</i> , 2020, 69, 147-161.	1.8	26
39	Male and Female Reproductive Success in <i>Macaca sylvanus</i> in Gibraltar: No Evidence for Rank Dependence. <i>International Journal of Primatology</i> , 2005, 26, 1229-1249.	1.9	22
40	Patterns of split sex ratio in ants have multiple evolutionary causes based on different within-colony conflicts. <i>Biology Letters</i> , 2009, 5, 713-716.	2.3	21
41	Individual versus group optimality in the production of secreted bacterial compounds. <i>Evolution; International Journal of Organic Evolution</i> , 2019, 73, 675-688.	2.3	21
42	Siderophores drive invasion dynamics in bacterial communities through their dual role as public good versus public bad. <i>Ecology Letters</i> , 2022, 25, 138-150.	6.4	21
43	Experimental manipulation of queen number affects colony sex ratio investment in the highly polygynous ant <i>Formica exsecta</i> . <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2005, 272, 1789-1794.	2.6	20
44	Contrasting population genetic structure for workers and queens in the putatively unicolonial ant <i>Formica exsecta</i> . <i>Molecular Ecology</i> , 2007, 16, 4493-4503.	3.9	20
45	Reproductive specialization in multiple-queen colonies of the ant <i>Formica exsecta</i> . <i>Behavioral Ecology</i> , 2007, 18, 375-383.	2.2	17
46	Genetic architecture constrains exploitation of siderophore cooperation in the bacterium <i>Burkholderia cenocepacia</i> . <i>Evolution Letters</i> , 2019, 3, 610-622.	3.3	17
47	Understanding policing as a mechanism of cheater control in cooperating bacteria. <i>Journal of Evolutionary Biology</i> , 2019, 32, 412-424.	1.7	16
48	Social Evolution: This Microbe Will Self-Destruct. <i>Current Biology</i> , 2008, 18, R1021-R1023.	3.9	15
49	A Test of Evolutionary Policing Theory with Data from Human Societies. <i>PLoS ONE</i> , 2011, 6, e24350.	2.5	15
50	Strain Background, Species Frequency, and Environmental Conditions Are Important in Determining <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> Population Dynamics and Species Coexistence. <i>Applied and Environmental Microbiology</i> , 2020, 86, .	3.1	14
51	Extreme reproductive specialization within ant colonies: some queens produce males whereas others produce workers. <i>Animal Behaviour</i> , 2007, 74, 1535-1543.	1.9	13
52	Patterns of infant handling and relatedness in Barbary macaques (<i>Macaca sylvanus</i>) on Gibraltar. <i>Primates</i> , 2008, 49, 271-282.	1.1	13
53	Transposable temperate phages promote the evolution of divergent social strategies in <i>Pseudomonas aeruginosa</i> populations. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2019, 286, 20191794.	2.6	13
54	Ecology drives the evolution of diverse social strategies in <i>Pseudomonas aeruginosa</i> . <i>Molecular Ecology</i> , 2021, 30, 5214-5228.	3.9	12

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55	Reproductive parameters vary with social and ecological factors in the polygynous ant <i>Formica exsecta</i> . <i>Oikos</i> , 2008, 117, 580-590.	2.7	11
56	The path to re-evolve cooperation is constrained in <i>Pseudomonas aeruginosa</i> . <i>BMC Evolutionary Biology</i> , 2017, 17, 214.	3.2	11
57	Loss of a pyoverdine secondary receptor in <i>Pseudomonas aeruginosa</i> results in a fitter strain suitable for population invasion. <i>ISME Journal</i> , 2021, 15, 1330-1343.	9.8	10
58	Coordination of siderophore gene expression among clonal cells of the bacterium <i>Pseudomonas aeruginosa</i> . <i>Communications Biology</i> , 2022, 5, .	4.4	10
59	Positive linkage between bacterial social traits reveals that homogeneous rather than specialised behavioral repertoires prevail in natural <i>Pseudomonas</i> communities. <i>FEMS Microbiology Ecology</i> , 2020, 96, .	2.7	9
60	Local adaptation, geographical distance and phylogenetic relatedness: Assessing the drivers of siderophore-mediated social interactions in natural bacterial communities. <i>Journal of Evolutionary Biology</i> , 2021, 34, 1266-1278.	1.7	9
61	A comprehensive method to elucidate pyoverdines produced by fluorescent <i>Pseudomonas</i> spp. by UHPLC-HR-MS/MS. <i>Analytical and Bioanalytical Chemistry</i> , 2022, 414, 2671-2685.	3.7	9
62	'Evolution-Proofing' Antibacterials. <i>Evolution, Medicine and Public Health</i> , 2014, 2014, 134-135.	2.5	7
63	Defying bacteriophages: Contrasting altruistic with individual-based resistance mechanisms in <i>Escherichia coli</i> . <i>Communicative and Integrative Biology</i> , 2013, 6, e25159.	1.4	6
64	Single-Cell Imaging Reveals That <i>Staphylococcus aureus</i> Is Highly Competitive Against <i>Pseudomonas aeruginosa</i> on Surfaces. <i>Frontiers in Cellular and Infection Microbiology</i> , 2021, 11, 733991.	3.9	6
65	Cheat invasion causes bacterial trait loss in lung infections. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 10577-10578.	7.1	5
66	Antagonistic interactions subdue inter-species green-beard cooperation in bacteria. <i>Journal of Evolutionary Biology</i> , 2020, 33, 1245-1255.	1.7	5
67	Between-Year Variation in Population Sex Ratio Increases with Complexity of the Breeding System in Hymenoptera. <i>American Naturalist</i> , 2011, 177, 835-846.	2.1	4
68	Microbial Mutualism: Will You Still Need Me, Will You Still Feed Me?. <i>Current Biology</i> , 2020, 30, R1041-R1043.	3.9	3
69	Enforced specialization fosters mutual cheating and not division of labour in the bacterium <i>Pseudomonas aeruginosa</i> . <i>Journal of Evolutionary Biology</i> , 2022, 35, 719-730.	1.7	1
70	Social insects "superorganisms or just superb organisms?. <i>Current Biology</i> , 2009, 19, R105-R107.	3.9	0
71	Losing out to improve group fitness. <i>ELife</i> , 2021, 10, .	6.0	0
72	Title is missing!. , 2020, 18, e3000805.		0

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73	Title is missing!. , 2020, 18, e3000805.		0
74	Title is missing!. , 2020, 18, e3000805.		0
75	Title is missing!. , 2020, 18, e3000805.		0
76	Title is missing!. , 2020, 18, e3000805.		0
77	Title is missing!. , 2020, 18, e3000805.		0