

# Alain Barrat

## List of Publications by Year in descending order

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Version: 2024-02-01

81  
papers

13,896  
citations

76326

40  
h-index

69250

77  
g-index

97  
all docs

97  
docs citations

97  
times ranked

9305  
citing authors

#	ARTICLE	IF	CITATIONS
1	Influential groups for seeding and sustaining nonlinear contagion in heterogeneous hypergraphs. Communications Physics, 2022, 5, .	5.3	25
2	A Framework for the Identification of Human Vertical Displacement Activity Based on Multi-Sensor Data. IEEE Sensors Journal, 2022, 22, 8011-8029.	4.7	3
3	Group interactions modulate critical mass dynamics in social convention. Communications Physics, 2022, 5, .	5.3	19
4	Transition from simple to complex contagion in collective decision-making. Nature Communications, 2022, 13, 1442.	12.8	17
5	Modelling COVID-19 in school settings to evaluate prevention and control protocols. Anaesthesia, Critical Care & Pain Medicine, 2022, 41, 101047.	1.4	4
6	The temporal rich club phenomenon. Nature Physics, 2022, 18, 931-938.	16.7	10
7	Impact of contact data resolution on the evaluation of interventions in mathematical models of infectious diseases. Journal of the Royal Society Interface, 2022, 19, .	3.4	4
8	Digital proximity tracing on empirical contact networks for pandemic control. Nature Communications, 2021, 12, 1655.	12.8	70
9	Anatomy of digital contact tracing: Role of age, transmission setting, adoption, and case detection. Science Advances, 2021, 7, .	10.3	53
10	Effect of manual and digital contact tracing on COVID-19 outbreaks: a study on empirical contact data. Journal of the Royal Society Interface, 2021, 18, 20201000.	3.4	56
11	Building surrogate temporal network data from observed backbones. Physical Review E, 2021, 103, 052304.	2.1	9
12	Predicting partially observed processes on temporal networks by Dynamics-Aware Node Embeddings (DyANE). EPJ Data Science, 2021, 10, .	2.8	4
13	Initiating scientific collaborations across career levels and disciplines – a network analysis on behavioral data. International Journal of Computer-Supported Collaborative Learning, 2021, 16, 151.	3.0	4
14	From temporal network data to the dynamics of social relationships. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20211164.	2.6	13
15	The physics of higher-order interactions in complex systems. Nature Physics, 2021, 17, 1093-1098.	16.7	287
16	Relevance of temporal cores for epidemic spread in temporal networks. Scientific Reports, 2020, 10, 12529.	3.3	18
17	On the Challenges and Potential of Using Barometric Sensors to Track Human Activity. Sensors, 2020, 20, 6786.	3.8	20
18	Dynamic core-periphery structure of information sharing networks in entorhinal cortex and hippocampus. Network Neuroscience, 2020, 4, 946-975.	2.6	17

#	ARTICLE	IF	CITATIONS
19	Measuring social networks in primates: wearable sensors versus direct observations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190737.	2.1	28
20	Detecting social (in)stability in primates from their temporal co-presence network. Animal Behaviour, 2019, 157, 239-254.	1.9	24
21	Simplicial models of social contagion. Nature Communications, 2019, 10, 2485.	12.8	367
22	The structured backbone of temporal social ties. Nature Communications, 2019, 10, 220.	12.8	37
23	Mining (maximal) Span-cores from Temporal Networks. , 2018, , .		34
24	Are the different layers of a social network conveying the same information?. EPJ Data Science, 2018, 7, .	2.8	12
25	Simplicial Activity Driven Model. Physical Review Letters, 2018, 121, 228301.	7.8	100
26	Generalized voterlike model on activity-driven networks with attractiveness. Physical Review E, 2018, 98, 022303.	2.1	14
27	Estimating the outcome of spreading processes on networks with incomplete information: A dimensionality reduction approach. Physical Review E, 2018, 98, 012317.	2.1	10
28	Can co-location be used as a proxy for face-to-face contacts?. EPJ Data Science, 2018, 7, .	2.8	146
29	Robust Modeling of Human Contact Networks Across Different Scales and Proximity-Sensing Techniques. Lecture Notes in Computer Science, 2017, , 536-551.	1.3	15
30	Estimating the epidemic risk using non-uniformly sampled contact data. Scientific Reports, 2017, 7, 9975.	3.3	12
31	Contact diaries versus wearable proximity sensors in measuring contact patterns at a conference: method comparison and participantsâ€™ attitudes. BMC Infectious Diseases, 2016, 16, 341.	2.9	50
32	Impact of spatially constrained sampling of temporal contact networks on the evaluation of the epidemic risk. European Journal of Applied Mathematics, 2016, 27, 941-957.	2.9	11
33	Epidemic risk from friendship network data: an equivalence with a non-uniform sampling of contact networks. Scientific Reports, 2016, 6, 24593.	3.3	10
34	Recalibrating disease parameters for increasing realism in modeling epidemics in closed settings. BMC Infectious Diseases, 2016, 16, 676.	2.9	9
35	Quantifying social contacts in a household setting of rural Kenya using wearable proximity sensors. EPJ Data Science, 2016, 5, 21.	2.8	51
36	How to Estimate Epidemic Risk from Incomplete Contact Diaries Data?. PLoS Computational Biology, 2016, 12, e1005002.	3.2	12

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37	Data on face-to-face contacts in an office building suggest a low-cost vaccination strategy based on community linkers. <i>Network Science</i> , 2015, 3, 326-347.	1.0	157
38	Is Web Content a Good Proxy for Real-Life Interaction?. , 2015, , .		13
39	Compensating for population sampling in simulations of epidemic spread on temporal contact networks. <i>Nature Communications</i> , 2015, 6, 8860.	12.8	54
40	Enhancing the evaluation of pathogen transmission risk in a hospital by merging hand-hygiene compliance and contact data: a proof-of-concept study. <i>BMC Research Notes</i> , 2015, 8, 426.	1.4	14
41	Contact Patterns in a High School: A Comparison between Data Collected Using Wearable Sensors, Contact Diaries and Friendship Surveys. <i>PLoS ONE</i> , 2015, 10, e0136497.	2.5	337
42	Combining High-Resolution Contact Data with Virological Data to Investigate Influenza Transmission in a Tertiary Care Hospital. <i>Infection Control and Hospital Epidemiology</i> , 2015, 36, 254-260.	1.8	83
43	Face-to-Face Interactions. , 2015, , 37-57.		11
44	Measuring contact patterns with wearable sensors: methods, data characteristics and applications to data-driven simulations of infectious diseases. <i>Clinical Microbiology and Infection</i> , 2014, 20, 10-16.	6.0	76
45	Mitigation of infectious disease at school: targeted class closure vs school closure. <i>BMC Infectious Diseases</i> , 2014, 14, 695.	2.9	150
46	Contact Patterns among High School Students. <i>PLoS ONE</i> , 2014, 9, e107878.	2.5	209
47	An infectious disease model on empirical networks of human contact: bridging the gap between dynamic network data and contact matrices. <i>BMC Infectious Diseases</i> , 2013, 13, 185.	2.9	90
48	Immunization strategies for epidemic processes in time-varying contact networks. <i>Journal of Theoretical Biology</i> , 2013, 337, 89-100.	1.7	71
49	Empirical temporal networks of face-to-face human interactions. <i>European Physical Journal: Special Topics</i> , 2013, 222, 1295-1309.	2.6	40
50	Gender homophily from spatial behavior in a primary school: A sociometric study. <i>Social Networks</i> , 2013, 35, 604-613.	2.1	83
51	Fingerprinting temporal networks of close-range human proximity. , 2013, , .		5
52	Bootstrapping under constraint for the assessment of group behavior in human contact networks. <i>Physical Review E</i> , 2013, 88, 052812.	2.1	3
53	Modeling Temporal Networks Using Random Itineraries. <i>Physical Review Letters</i> , 2013, 110, 158702.	7.8	29
54	Temporal Networks of Face-to-Face Human Interactions. <i>Understanding Complex Systems</i> , 2013, , 191-216.	0.6	22

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55	Activity clocks: spreading dynamics on temporal networks of human contact. <i>Scientific Reports</i> , 2013, 3, 3099.	3.3	49
56	Estimating Potential Infection Transmission Routes in Hospital Wards Using Wearable Proximity Sensors. <i>PLoS ONE</i> , 2013, 8, e73970.	2.5	266
57	Optimizing surveillance for livestock disease spreading through animal movements. <i>Journal of the Royal Society Interface</i> , 2012, 9, 2814-2825.	3.4	117
58	The Making of <i>&lt;i&gt;Sixty-Nine Days of Close Encounters at the Science Gallery&lt;/i&gt;</i> . <i>Leonardo</i> , 2012, 45, 285-285.	0.3	20
59	On the dynamics of human proximity for data diffusion in ad-hoc networks. <i>Ad Hoc Networks</i> , 2012, 10, 1532-1543.	5.5	41
60	Random walks on temporal networks. <i>Physical Review E</i> , 2012, 85, 056115.	2.1	173
61	Simulation of an SEIR infectious disease model on the dynamic contact network of conference attendees. <i>BMC Medicine</i> , 2011, 9, 87.	5.5	296
62	Dynamical Patterns of Cattle Trade Movements. <i>PLoS ONE</i> , 2011, 6, e19869.	2.5	173
63	What's in a crowd? Analysis of face-to-face behavioral networks. <i>Journal of Theoretical Biology</i> , 2011, 271, 166-180.	1.7	626
64	Social network dynamics of face-to-face interactions. <i>Physical Review E</i> , 2011, 83, 056109.	2.1	93
65	Close Encounters in a Pediatric Ward: Measuring Face-to-Face Proximity and Mixing Patterns with Wearable Sensors. <i>PLoS ONE</i> , 2011, 6, e17144.	2.5	193
66	High-Resolution Measurements of Face-to-Face Contact Patterns in a Primary School. <i>PLoS ONE</i> , 2011, 6, e23176.	2.5	552
67	Link Creation and Profile Alignment in the aNobii Social Network. , 2010, , .		37
68	Social Dynamics in Conferences: Analyses of Data from the Live Social Semantics Application. <i>Lecture Notes in Computer Science</i> , 2010, , 17-33.	1.3	29
69	The Live Social Semantics application: a platform for integrating face-to-face presence with on-line social networking. , 2010, , .		15
70	Dynamics of Person-to-Person Interactions from Distributed RFID Sensor Networks. <i>PLoS ONE</i> , 2010, 5, e11596.	2.5	605
71	Live Social Semantics. <i>Lecture Notes in Computer Science</i> , 2009, , 698-714.	1.3	42
72	K-core decomposition of Internet graphs: hierarchies, self-similarity and measurement biases. <i>Networks and Heterogeneous Media</i> , 2008, 3, 371-393.	1.1	169

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73	Modeling the Worldwide Spread of Pandemic Influenza: Baseline Case and Containment Interventions. PLoS Medicine, 2007, 4, e13.	8.4	572
74	Nonequilibrium phase transition in negotiation dynamics. Physical Review E, 2007, 76, 051102.	2.1	71
75	Vulnerability of weighted networks. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P04006-P04006.	2.3	84
76	Nonequilibrium dynamics of language games on complex networks. Physical Review E, 2006, 74, 036105.	2.1	159
77	Dynamical patterns of epidemic outbreaks in complex heterogeneous networks. Journal of Theoretical Biology, 2005, 235, 275-288.	1.7	390
78	Statistical theory of Internet exploration. Physical Review E, 2005, 71, 036135.	2.1	22
79	Velocity and Hierarchical Spread of Epidemic Outbreaks in Scale-Free Networks. Physical Review Letters, 2004, 92, 178701.	7.8	560
80	The architecture of complex weighted networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3747-3752.	7.1	3,160
81	Weighted Evolving Networks: Coupling Topology and Weight Dynamics. Physical Review Letters, 2004, 92, 228701.	7.8	507