

## Curriculum Vitae

### Current position

Professor  
 Center for Complex Networks and Systems Research  
 Luddy School of Informatics, Computing, and Engineering  
 Indiana University  
 Luddy Center for Artificial Intelligence  
 1015 East 11th St., Room 2032, Bloomington, IN 47408  
 Email: [filiradi@indiana.edu](mailto:filiradi@indiana.edu), [f.radicchi@gmail.com](mailto:f.radicchi@gmail.com)  
 Web page: <http://homes.luddy.indiana.edu/filiradi/>

### Education

Ph.D. in Physics, School of Engineering and Sciences, Jacobs University, Bremen, Germany	October 19, 2007
M.S. (Laurea) in Physics, Department of Physics, University of Rome "Tor Vergata," Italy	July 11, 2003

### Professional experience

Professor, Center for Complex Networks and Systems Research, Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington IN, USA	July 2023 - present
Associate Professor, Center for Complex Networks and Systems Research, Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington IN, USA	July 2017 – June 2023
Assistant Professor, Center for Complex Networks and Systems Research, Luddy School of Informatics and Computing, Indiana University, Bloomington IN, USA	Aug. 2013- June 2017
"Ramón y Cajal" Senior Researcher, University Rovira i Virgili, Tarragona, Spain	Jan. 2012 - July 2013
Postdoctoral Fellow, Amaral Lab, Department of Chemical & Biological Engineering, Northwestern University, Evanston, USA	Oct. 2010 - Dec. 2011
Research Scientist, Complex Networks & Systems, Institute for Scientific Interchange Foundation, Torino, Italy	Jun. 2007 - Sep. 2010

### Leadership experience

Chair of the admission committee of the graduate program in Data Science, Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington IN, USA	July 2019 - present
Director of the Center for Complex Networks and Systems Research (CNetS), Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington IN, USA	July 2023 – present
Director of the Ph.D. Informatics track in Complex Systems and Networks, Luddy School of Informatics, Computing, and Engineering, Indiana University, Bloomington IN, USA	July 2019 – June 2023

**Teaching experience**

I369: <i>Performance Analytics</i> , Indiana University, USA	Fall 2023
I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2023
I369: <i>Performance Analytics</i> , Indiana University, USA	Fall 2022
I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2022
I369: <i>Performance Analytics</i> , Indiana University, USA	Spring 2022
I201: <i>Math. Foundations of Informatics</i> , Indiana University, USA	Fall 2021
I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2021
I369: <i>Performance Analytics</i> , Indiana University, USA	Spring 2021
I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2020
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I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2019
I369: <i>Performance Analytics</i> , Indiana University, USA	Spring 2019
I709: <i>Seminars II in Complex Systems</i> , Indiana University, USA	Fall 2018
I369: <i>Performance Analytics</i> , Indiana University, USA	Spring 2018
I601: <i>Introduction to Complex Systems</i> , Indiana University, USA	Fall 2017
I369: <i>Performance Analytics</i> , Indiana University, USA	Spring 2017
I201: <i>Math. Foundations of Informatics</i> , Indiana University, USA	Fall 2016
I400: <i>Performance Analytics</i> , Indiana University, USA	Spring 2016
I601: <i>Introduction to Complex Systems</i> , Indiana University, USA	Fall 2015
I400: <i>Performance Analytics</i> , Indiana University, USA	Spring 2015
I400: <i>Introduction to network science</i> , Indiana University, USA	Fall 2014
I400: <i>Performance Analytics</i> , Indiana University, USA	Spring 2014
I601: <i>Introduction to Complex Systems</i> , Indiana University, USA	Fall 2013
<i>Classical physics</i> , University Rovira i Virgili, Tarragona, Spain	Fall 2012
<i>Computer science and statistical physics</i> , Jacobs University Bremen, Germany	Fall 2005
<i>Statistical mechanics of complex networks</i> , Jacobs University Bremen, Germany	Fall 2004
<i>Dynamics of non-linear systems: Applications for social and biological problems</i> , Consiglio Nazionale delle Ricerche (CNR), Rome, Italy	Spring 2004
Didactic laboratory of Physics, University of Rome "Tor Vergata", Italy	Fall 2000/Spring 2001

**Mentoring****Graduate students**

Daniel Kaiser	2019 - present
Siddharth Patwardhan	2020 - present
Varun Rao	2021 - present
Minsuk Kim	2022 - present
Sirag Erkol, Ph.D., Postdoctoral researcher at Northwestern University	2017 - 2023

Thomas Parmer, Ph.D.	2019 - 2023
Daniele Notarmuzi, Ph.D., Postdoctoral researcher at the Institute for Theoretical Physics of the Technical University Wien	2018 - 2022

### Visiting graduate students

Yi-Jiao Zhang, Ph.D., Postdoctoral researcher at SUSTech	2019-2021
Weiwei Gu, Ph.D., Assistant professor at Beijing University of Chemical Technology	2017-2019

### Postdoctoral fellows

Dario Mazzilli, Ph.D., Researcher in the Centro Ricerche Enrico Fermi, Italy.	2019- 2020
Ali Faqeeh, Ph.D., Senior postdoctoral researcher in the Department of Computer Science at Aalto University, Finland.	2016 - 2018
Marijn ten Thij, Ph.D. (co-advised with Prof. Johan Bollen), Assistant Professor in Data Fusion at the Department of Data Science and Knowledge Engineering, Maastricht University, Netherlands.	2018 - 2019

### High school students

Cyrus Visser	2023 - present
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### Honors/Awards

Outstanding Referee, American Physical Society	2018
Career Award, National Science Foundation	2016
Junior Scientific Award, Complex Systems Society	2014
Accreditation as Associate Professor, Ministry of Research and University, Italy	2013
Accreditation as Tenured Assistant Professor, Agency for the Quality of the University system (AQU) of Catalunya	2012
"Ramón y Cajal" Fellowship, Ministry of Science and Innovation of Spain	2012

### Grants

"Theoretical and algorithmic approaches to optimization problems on complex networks," U.S. Air Force Office of Scientific Research, FA9550-21-1-0446 (PI)	\$450,000	2021-2024
"Multilayer network embeddings and applications to real-world problems," U.S. Army Research Office, W911NF-21-1-0194 (co-PI)	\$450,000	2021-2024

“An empirical investigation of the Goodhart effect for the widespread introduction of (alt)metrics,” National Science Foundation, SMA-1636636 (Co-PI)	\$471,469	2016-2020
“EAGER: Collaborative Research: The Productivity of Science: Structural Characteristics and the Pace of Scientific Advance”, National Science Foundation, SMA-1646459 (Co-PI)	\$58,246	2016-2017
“Structural and dynamical transitions in networks of networks,” U.S. Army Research Office, W911NF-16-1-0104 (PI)	\$375,000	2016-2020
“CAREER: Network Theory of Critical Interdependent Infrastructures,” National Science Foundation, CMMI-1552487 (PI)	\$577,778	2016-2021
“Big Science Survey,” National Science Foundation, SMA-1446078 (PI)	\$178,000	2014-2016
“Ramón y Cajal” grant, Ministry of Science and Innovation, Spain (PI)	187,000€	2012-2013

### Professional services

#### Memberships

American Physical Society	2014-present
Complex Systems Society	2012-present
Network Science Society	2012-present

#### Committees

Council of the Complex Systems Society	2022-2025
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#### Referee for scientific journals

Advances in Complex Systems, Computer Physics Communications, European Journal of Physics B, European Journal of Data Science, Europhysics Letters (EPL), IEEE Transactions on Control of Network Systems, Journal of Complex Networks, Journal of Computational Science, Journal of Economic Interaction and Coordination, Journal of Graph Algorithms and Applications, Journal of Informetrics, Journal of Physics A, Journal of Quantitative Analysis of Sports, Journal of Statistical Mechanics, Journal of Statistical Physics, Journal of the American Society for Information Science and Technology, Mathematical Social Science, Nature, Nature Communications, Nature Physics, Nature Scientific Reports, Networks and Spatial Economics, Physica A, Physical Review Letters, Physical Review E, Physical Review X, PloS ONE, Proceedings of the National Academy of Sciences USA, Reviews of Modern Physics, Science Advances, Scientometrics, Social Networks, World Wide Web Conference.

**Reviewer and panelist for funding agencies**

US Air Force Office of Scientific Research; National Science Foundation; US Army Research Office; The National Academies of Sciences, Engineering and Medicine; Polish Academy of Sciences; Israel Science Foundation; Austrian Academy of Sciences.

**Editorial Board**

Journal of Informetrics (2016-2019), Physical Review E (2019-), Quantitative Science Studies (2019-), Journal of Physics: Complexity (2019-2022).

**Academic Editor**

PloS ONE, IEEE Transactions on Network Science and Engineering

**Program Committees, Workshops, Conferences**

- CompleNet 2024, International Conference on Complex Networks, Exter, UK, April 2024.
- NetSci-X 2024, International School and Conference on Network Science, Venezia, Italy, January 2024.
- Complex Networks 2023, Menton, France, November 2023.
- NetSci 2023, International School and Conference on Network Science, Vienna, Austria, July 2023.
- ISSI 2023, Bloomington, IN, July 2023.
- NetSci-X 2023, International School and Conference on Network Science, Buenos Aires, Argentina, February 2023.
- CCS 2022, International Conference of the Complex Systems Society, Palma, Spain, October 2022.
- Satellite chair, NetSci 2022, Shanghai, China, June 2022.
- NetSci 2022, Shanghai, China, June 2022.
- Organizer of the invited session “Network Theory and Applications to Complex Systems”, APS March meeting 2022, Chicago, USA, March 2022.
- NetSciX 2022, Porto, Portugal, January 2022.
- Complex Networks 2021, Madrid, Spain, December 2021.
- CCS 2021, International Conference of the Complex Systems Society, Lyon, France, October 2021.
- CCS 2020, International Conference of the Complex Systems Society, online edition, December 2020.
- NetSci 2020, online edition, September 2020.
- NetSciX 2020, Tokyo, Japan, January 2020.
- Complex Networks 2019, Lisbon, Portugal, December 2019.
- CompleNet 2019, Tarragona, Spain, March 2019.
- WWW 2018, Lyon, France, April 2018.
- NetSci 2018, Paris, France, June 2018.
- NetSciX 2018, Hangzhou, China, January 2018.
- WWW 2017, Perth, Australia, April 2017.
- Satellite chair, NetSci 2017, Indianapolis, USA, June 2017.
- NetSci 2016, Seoul, Korea, June 2016.
- IC2S2, International Conference on Computational Social Science, Evanston, USA, June 2016.
- 7<sup>th</sup> Workshop on Complex Networks “CompleNet 2016”, Dijon, France, March 2016.
- CCS 2015, International Conference of the Complex Systems Society, Tempe, USA, September 2015.
- IC2S2, International Conference on Computational Social Science, Helsinki, Finland, June 2015.

- Organizer of the workshop “Quantum frontiers in network science”, NetSci 2014, Berkeley, USA, June 2014.
- Organizer of the workshop “The web of science: Current trends and future perspectives”, ACM Web Science 2014, Bloomington, USA, June 2014.
- Publication chair, ACM Web Science 2014, Bloomington, USA, June 2014.
- 4<sup>th</sup> Workshop on Complex Networks “CompleNet 2013”, Berlin, Germany, March 2013.
- International Workshop on Complex Networks and their Applications, Sorrento, Italy, November 2012.
- 3<sup>rd</sup> Workshop on Complex Networks “CompleNet 2012”, Melbourne, USA, March 2012.
- HT 2008, The Nineteenth ACM Conference on Hypertext and Hypermedia, Torino, Italy, 2008

### **Invited and contributed talks (last 8 years)**

- Contributed talk, StatPhys28, Tokyo, Japan, August 2023.
- Contributed talk, SIAM Conference on Optimization 2023, Seattle, WA, June 2023.
- Invited talk, CompleNet 2023, Aveiro, Portugal, April 2023.
- Invited talk, APS March Meeting, Las Vegas, NV, March 2023.
- Invited lecture, NetSci-X 2023, Buenos Aires, Argentina, February 2023.
- Invited talk, Workshop “CCEGN 2022, Critical and collective effects in graphs and networks,” Cape Cod, Massachusetts, June 2022
- Invited talk, Focus topic “The statistical physics of real-world networks,” APS March meeting 2021, online edition, March 2021.
- Invited talk, Workshop “MixNext2020,” CCS 2020, online edition, December 2020.
- Invited talk, NetSci 2020, online edition, September 2020.
- Contributed talk, CCS 2019, Singapore, Singapore, September 2019.
- Contributed talk, NetSci 2019, Burlington, Vermont, May 2019.
- Invited talk, SIAM DS, Snow Bird, Utah, April 2019.
- Invited talk, DPG Spring Meeting, Regensburg, Germany, April 2019.
- Invited talk, Workshop “International Workshop on Theoretical perspectives in network science,” Seoul, South Korea, December 2018.
- Invited talk, Workshop “DOOCN-XI: Dynamics On and Of Complex Networks,” CCS 2018, Thessaloniki, Greece, September 2018.
- Contributed talk, CCS 2018, Thessaloniki, Greece, September 2018.
- Contributed talk, NetSci 2018, Paris, France, June 2018.
- Invited talk, NetSciX 2018, Hangzhou, China, January 2018.
- Invited lecture, CCS 2018, Cancun, Mexico, September 2018.
- Invited talk, Workshop “Social influence in networks,” NetSci 2017, Indianapolis, USA, June 2017.
- Contributed talk, CCS 2016, Amsterdam, Netherland, September 2016.
- Contributed talk, Netsci 2016, Seoul, Korea, June 2016.
- Invited talk, Northwestern Institute on Complex Systems, Evanston, USA, December 2015.
- Invited talk, Workshop “Quantifying science”, CCS 2015, Tempe, USA, September 2015.
- Contributed talk, CCS 2015, Tempe, USA, September 2015.
- Invited talk, Workshop “Physics of multilayered complex networks”, NetSci 2015, Zaragoza, Spain, June 2015.
- Contributed talk, NetSci 2015, Zaragoza, Spain, June 2015.

## Publications

### Research papers

1. O. Artime, M. Grassia, M. De Domenico, J.P. Gleeson, H.A. Makse, G. Mangioni, M. Perc and F. Radicchi, *Robustness and resilience of complex networks*, Nature Reviews Physics (2024).  
<https://www.nature.com/articles/s42254-023-00676-y>
2. S. Patwardhan, V.K. Rao, S. Fortunato and F. Radicchi, *Epidemic spreading in group-structured populations*, Phys. Rev. X **13**, 041054 (2023).  
<https://journals.aps.org/prx/abstract/10.1103/PhysRevX.13.041054>
3. T. Parmer and F. Radicchi, *Dynamical methods for target control of biological networks*, R. Soc. Open Sci. **10**, 230542 (2023).  
<https://doi.org/10.1098/rsos.230542>
4. G.T. Cantwell, A. Kirkley and F. Radicchi, *Heterogeneous message passing for heterogeneous networks*, Phys. Rev. E **108**, 034310 (2023).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.108.034310>
5. S. Patwardhan, F. Radicchi and S. Fortunato, *Influence Maximization: Divide and Conquer*, Phys. Rev. E **107**, 054306 (2023).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.107.054306>
6. H. Sun, F. Radicchi, J. Kurths and G. Bianconi, *The dynamic nature of percolation on networks with triadic interactions*, Nat. Commun. **14**, 1308 (2023).  
<https://www.nature.com/articles/s41467-023-37019-5>
7. S. Erkol, S. Sikdar, F. Radicchi and S. Fortunato, *Consistency pays off in science*, Quantitative Science Studies 1-6 (2023).  
[https://direct.mit.edu/qss/article/doi/10.1162/qss\\_a\\_00252/115369/Consistency-pays-off-in-science](https://direct.mit.edu/qss/article/doi/10.1162/qss_a_00252/115369/Consistency-pays-off-in-science)
8. D. Kaiser, S. Patwardhan and F. Radicchi, *Multiplex reconstruction with partial information*, Phys. Rev. E **107**, 024309 (2023).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.107.024309>
9. D. Notarmuzi, A. Flammini, C. Castellano and F. Radicchi, *Critical avalanches of susceptible-infected-susceptible dynamics in finite networks*, Phys. Rev. E **107**, 024310 (2023).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.107.024310>
10. G. Bianconi *et al.*, *Complex systems in the spotlight: next steps after the 2021 Nobel Prize in Physics*, J., Phys. Complex. **4**, 010201 (2023).  
<https://iopscience.iop.org/article/10.1088/2632-072X/ac7f75>
11. S. Osat, F. Papadopoulos, A.S. Teixeira and F. Radicchi, *Embedding-aided network dismantling*, accepted for publication in Phys. Rev. Research **5**, 013076 (2023).  
<https://journals.aps.org/prresearch/abstract/10.1103/PhysRevResearch.5.013076>
12. S. Erkol, D. Mazzilli and F. Radicchi, *Effective submodularity of influence maximization on temporal networks*, Phys. Rev. E **106**, 034301 (2022).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.106.034301>
13. T. Parmer, L.M. Rocha and F. Radicchi, *Influence maximization in Boolean networks*, Nat. Commun. **13**, 3457 (2022).  
<https://www.nature.com/articles/s41467-022-31066-0>

14. D. Notarmuzi, C. Castellano, A. Flammini, D. Mazzilli and F. Radicchi, *Universality, criticality and complexity of information propagation in social media*, Nat. Commun. **13**, 1308 (2022).  
<https://www.nature.com/articles/s41467-022-28964-8>
15. Y-J. Zhang, K-C. Yang and F. Radicchi, *Systematic comparison of graph embedding methods in practical tasks*, Phys. Rev. E **104**, 044315 (2021).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.104.044315>
16. F.N. Silva, D.A. Vega-Oliveros, X. Yan, A. Flammini, F. Menczer, F. Radicchi, B. Kravitz and S. Fortunato, *Detecting climate teleconnections with Granger causality*, Geophys. Res. Lett. **48**, e2021GL094707 (2021).  
<https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2021GL094707>
17. W. Gu, A. Tandon, Y.Y. Ahn and F. Radicchi, *Principled approach to the selection of the embedding dimension of networks*, Nat. Commun. **12**, 3772 (2021).  
<https://www.nature.com/articles/s41467-021-23795-5>
18. A. Tandon, A. Albeshri, T. Thayanathan, W. Alhalabi, F. Radicchi and S. Fortunato, *Community detection using graph embeddings*, Phys. Rev. E **103**, 022316 (2021).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.103.022316>
19. S. Erkol and F. Radicchi, *Who is the best coach of all time? A network-based assessment of the career performance of professional sports coaches*, J. Complex Netw. **9**, cnab012 (2021).  
<https://academic.oup.com/comnet/article-abstract/9/1/cnab012/6251550>
20. D. Notarmuzi, C. Castellano, A. Flammini, D. Mazzilli and F. Radicchi, *Percolation theory of self-exciting temporal processes*, Phys. Rev. E **103**, L020302 (2021).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.103.L020302>
21. Y-J. Zhang, K-C. Yang and F. Radicchi, *Model-free hidden geometry of complex networks*, Phys. Rev. E **103**, 012305 (2021).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.103.012305>
22. D. Mazzilli and F. Radicchi, *Combinatorial approach to epidemic processes on networks*, Eur. J. Phys. B **94**, 15 (2021).  
[https://epjb.epj.org/articles/epjb/abs/2021/01/10051\\_2020\\_Article\\_29/10051\\_2020\\_Article\\_29.html](https://epjb.epj.org/articles/epjb/abs/2021/01/10051_2020_Article_29/10051_2020_Article_29.html)
23. F. Radicchi and G. Bianconi, *Epidemic plateau in critical SIR dynamics with non-trivial initial conditions*, Phys. Rev. E **102**, 052309 (2020).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.102.052309>
24. S. Erkol, D. Mazzilli and F. Radicchi, *Influence maximization on temporal networks*, Phys. Rev. E **102**, 042307 (2020).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.102.042307>
25. F. Radicchi, C. Castellano, A. Flammini, M.A. Munoz, D. Notarmuzi, *Classes of critical avalanche dynamics in complex networks*. Phys. Rev. Research **2**, 033171 (2020).  
<https://journals.aps.org/presearch/abstract/10.1103/PhysRevResearch.2.033171>
26. S. Osat, F. Radicchi and F. Papadopoulos, *k-core structure of real multiplex networks*. Phys. Rev. Research **2**, 023176 (2020).  
<https://journals.aps.org/presearch/abstract/10.1103/PhysRevResearch.2.023176>
27. F. Radicchi, D. Krioukov, H. Hartle and G. Bianconi, *Classical Information Theory of Networks*. J. Phys. Complex. **1**, 025001 (2020).  
<https://iopscience.iop.org/article/10.1088/2632-072X/ab9447>



28. S. Erkol, C. Castellano and F. Radicchi, *Systematic comparison between methods for the detection of influential spreaders in complex networks*, *Sci. Rep.* **9**, 15095 (2019).  
<https://www.nature.com/articles/s41598-019-51209-6>
29. K. Bathina and F. Radicchi, *Error-correcting decoders for community detection*, *Appl. Netw. Sci.* **4**, 9 (2019).  
<https://appliednetsci.springeropen.com/articles/10.1007/s41109-019-0114-7>
30. S. Milojević, F. Radicchi and J. Walsh, *Reply to Hanlon: Transitions in science careers*, *Proc. Natl. Acad. Sci. USA*, doi/10.703/pnas.1911168116 (2019).  
<https://www.pnas.org/content/early/2019/08/07/1911168116>
31. A. Faqeeh, S. Osat, F. Radicchi and J.P. Gleeson, *Emergence of power-laws in noncritical neuronal systems*, *Phys. Rev. E* **100**, 010401(R) (2019).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.100.010401>
32. S. Lim, F. Radicchi, M. de Reus, M.P. van den Heuvel and O. Sporns, *Discordant attributes of structural and functional brain connectivity in two-layer multiplex network*, *Sci. Rep.* **9**, 2885 (2019).  
<https://www.nature.com/articles/s41598-019-39243-w>
33. S. Milojević, F. Radicchi and J. Walsh, *Changing Demographics of Scientific Careers: The Rise of the Temporary Workforce*, *Proc. Natl. Acad. Sci. USA* **115**, 12616-12623 (2018).  
<https://www.pnas.org/content/115/50/12616>
34. F. Coghi, F. Radicchi and G. Bianconi, *Controlling the uncertain response of real multiplex to random damage*, *Phys. Rev. E* **98**, 062317 (2018).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.98.062317>
35. S. Erkol, A. Faqeeh and F. Radicchi, *Influence maximization in noisy networks*, *EPL* **123**, 58007 (2018).  
<http://iopscience.iop.org/article/10.1209/0295-5075/123/58007>
36. X. Yan, L. Jeub, A. Flammini, F. Radicchi and S. Fortunato, *Weight thresholding on complex networks*, *Phys. Rev. E* **98**, 042304 (2018).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.98.042304>
37. A. Faqeeh, S. Osat and F. Radicchi, *Characterizing the analogy between hyperbolic embedding and community structure of complex networks*, *Phys. Rev. Lett.* **121**, 098301 (2018).  
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.121.098301>
38. F. Radicchi and C. Castellano, *Uncertainty reduction for stochastic processes on complex networks*, *Phys. Rev. Lett.* **120**, 198301 (2018).  
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.120.198301>
39. S. Osat and F. Radicchi, *Observability transition in multiplex networks*, *Physica A* **503**, 745-761 (2018).  
<https://www.sciencedirect.com/science/article/pii/S0378437118302310>
40. S. Fortunato, C. T. Bergstrom, K. Börner, J. A. Evans, D. Helbing, S. Milojević, A. M. Petersen, F. Radicchi, R. Sinatra, B. Uzzi, A. Vespignani, L. Waltman, D. Wang, A.-L. Barabási, *Science of science*, *Science* **359**, eaao0185 (2018).  
<http://science.sciencemag.org/content/359/6379/eaao0185>
41. F. Radicchi, *Decoding communities in networks*, *Phys. Rev. E* **97**, 022316 (2018).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.97.022316>

42. S. Osat, A. Faqeeh and F. Radicchi, *Optimal percolation on multiplex networks*, Nat. Commun. **8**, 1540 (2017).  
<https://www.nature.com/articles/s41467-017-01442-2>
43. F. Radicchi and G. Bianconi, *Redundant interdependencies boost the robustness of multilayer networks*, Phys. Rev. X **7**, 011013 (2017).  
<http://journals.aps.org/prx/abstract/10.1103/PhysRevX.7.011013>
44. F. Radicchi and C. Castellano, *Fundamental difference between superblockers and superspreaders in networks*, Phys. Rev. E **95**, 012318 (2017)  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.95.012318>
45. F. Radicchi, A. Weissman and J. Bollen, *Quantifying the ground-truth impact of scientific publications*, J. Informetr. **11**, 704–712 (2017).  
<http://www.sciencedirect.com/science/article/pii/S1751157717300846>
46. S. Milojević, J. Bar-Ilan and F. Radicchi, *Citation success index – An Intuitive pair-wise journal comparison metric*, J. Informetr. **11**, 223-231 (2017).  
<http://www.sciencedirect.com/science/article/pii/S1751157716301936>
47. G. Bianconi and F. Radicchi, *Percolation in real multiplex networks*, Phys. Rev. E **94**, 060301(R) (2016).  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.94.060301>
48. X. H. T. Zeng, J. Duch, M. Sales-Pardo, J. A. G. Moreira, F. Radicchi, H. V. Ribeiro, T. K. Woodruff and L. A. N. Amaral, *Differences in collaboration patterns across discipline, career stage, and gender*, PloS Biol. **14**, e1002573 (2016).  
<http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002573>
49. Y. Yang and F. Radicchi, *Observability transition in real networks*, Phys. Rev. E **94**, 030301(R) (2016).  
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.94.030301>
50. F. Radicchi and C. Castellano, *Leveraging percolation theory to identify influential spreaders in real networks*, Phys. Rev. E **93**, 030302(R) (2016).  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.93.062314>
51. F. Radicchi and C. Castellano, *Beyond the locally tree-like approximation for percolation on real networks*, Phys. Rev. E **93**, 030302(R) (2016).  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.93.030302>
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**Book chapters**

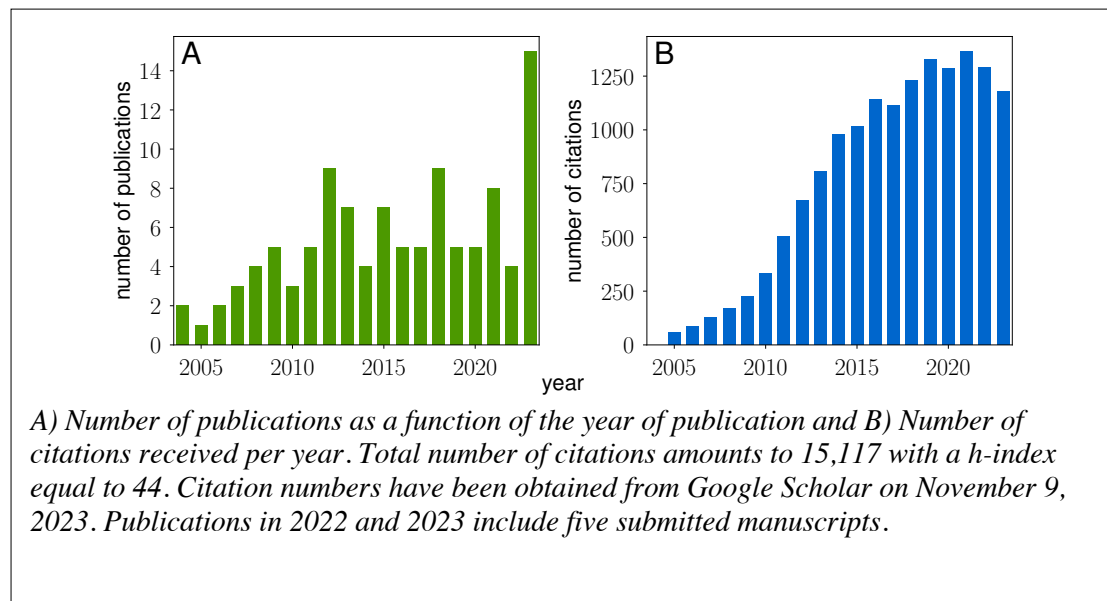
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105. S. Patwardhan, M. Barthelemy, S. Erkol, S. Fortunato and F. Radicchi, *Symmetry breaking in optimal transport networks*, submitted (2023).
106. S. Kojaku, F. Radicchi, Y.Y. Ahn and S. Fortunato, *Network community detection via neural embeddings*, submitted (2023).
107. C. Boothby, S. Milojević, V. Larivière, F. Radicchi and C.R. Sugimoto, *Consistent churn of early career researchers: an analysis of turnover and replacement in the scientific workforce*, submitted (2022).
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109. D. Kaiser, S. Patwardhan, M. Kim and F. Radicchi, *Reconstruction of multiplex networks via graph embeddings*, submitted (2023).

## Research Impact

### Productivity and impact



### In the press

1. The paper *Epidemic spreading in group-structured populations*, *Phys. Rev. X* **13**, 041054 (2023) has been featured by *Physics*.
2. The paper *Changing Demographics of Scientific Careers: The Rise of the Temporary Workforce*, *Proc. Natl. Acad. Sci. USA* **115**, 12616-12623 (2018) has been featured by *PhysOrg*, *Science*, *the Washington Post*, *CNBC*, and many other newspapers and blogs. The paper is listed in the Altmetric top 100 of year 2019.
3. The paper *Percolation in real interdependent networks*, *Nature Phys.* **11**, 597-602 (2015) has been featured by *PhysOrg* and *Homeland Security Today*.
4. The paper *Defining and identifying sleeping beauties in science*, *Proc. Natl. Acad. Sci. USA* **112**, 7426-7431 (2015) has been featured by *Nature*, *New York Times*, *PhysOrg* and many other newspapers and blogs.
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6. The paper *A paradox in community detection*, *EPL* **106**, 38001 (2014) has been featured by *Phys.org*.
7. The paper *Universality of scholarly impact metrics*, *J. Informetr.* **7**, 924-932 (2013) has been featured by *Nature News* and *Scientific American*.
8. The paper *In science "there is no bad publicity": Papers criticized in comments have high scientific impact*, *Nature Scientific Reports* **2**, 815 (2012) has been featured by the web blogs *FrancisTheMule* and *Tikalón*.

9. The paper *Universality, limits and predictability of gold-medal performances at the Olympic Games*, Plos ONE **7**, e40335 (2012) has been featured by *The Guardian*, *Wired*, *Huffington Post*, *Artze Zeitung* and *SmartNews*.
10. The paper *Rationality, irrationality and escalating behavior in lowest unique bid auctions*, PloS ONE **7**, e29910 (2012) has been featured by *Northwestern University press*, *PhysOrg*, *Physch* and *NSF press*.
11. The paper *Who is the best player ever? A complex network analysis of the history of professional tennis*, PloS ONE **6**, e17249 (2011), has been featured by *Thomson Reuters*, *BBC Radio*, *The Wall Street Journal*, *Tennis.com*, *Eurosport UK*, *Eurosport ES*, *Eurosport IT*, *Eurosport DE*, *physicsworld.com*, *PhysOrg.com*, *RT*, *The Daily Forehand*, *NBC Sport*, *Bild*, *FOX News*, *The Independent*, *L.A. Times*, *Blick*, *El Universo*, *La Repubblica*, *Il Tempo*, *Il Sole 24 ore*, *Il Secolo XIX*, *Express*, *The Bleacher Report*, *Ansa*, *Federazione Italiana Tennis*, *El Comercio*, *Timpul*, *Il Fatto Quotidiano*, *Daily India*, *UbiTennis*, *Northwestern University News*, *El Comercial*, and many other newspapers and web sites worldwide.
12. The paper *Diffusion of scientific credits and the ranking of scientists*, Phys. Rev. E **80**, 056103 (2009) has been featured by *Physics spotlighting exceptional research* and *Nature News*, and the web sites *physicsworld.com* and *pro-physik.de*.
13. The paper *Universality of citation distributions: towards an objective measure of scientific impact*, Proc. Natl. Acad. Sci. USA **105**, 17268-17272 (2008) has been featured in *Nature News* and *Nature Nanotechnology*.
14. The paper *Complex Networks Renormalization: Flows and Fixed Points*, Phys. Rev. Lett. **101**, 148701 (2008) has been highlighted by an *Editors' Suggestion* (assigned to articles dealing with topics potentially interesting for all physicists) and featured by *Physics spotlighting exceptional research*.

### Scientific websites

1. <https://coachscore.luddy.indiana.edu>
2. <http://tennisprestige.luddy.indiana.edu/>
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