

PERSONAL INFORMATION



Giulio Cimini

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WORK EXPERIENCE

November 2022 (ongoing)

Associate Professor

Physics Department, Università di Roma "Tor Vergata"

June 2020 (ongoing)

Research Associate

"Enrico Fermi" Research Center

November 2019 – November 2022

Senior Assistant Professor (RTD-B)

Physics Department, Università di Roma "Tor Vergata"

January 2019 – November 2019

Researcher

Institute for Complex Systems (ISC) - Italian National Research Council (CNR)

November 2015 – December 2018

Assistant Professor (RTD-A)

NETWORKS unit, IMT School for Advanced Studies

March 2014 – October 2015

Postdoctoral fellow

Institute for Complex Systems (ISC) - Italian National Research Council (CNR)

March 2013 – February 2014

Postdoctoral fellow

Mathematics Department, Universidad Carlos III de Madrid

EDUCATION AND TRAINING

September 2009 – February 2013

PhD in Theoretical and Interdisciplinary Physics

Université de Fribourg (Switzerland)

Thesis: *Physics of evolving complex systems: models, algorithms and applications*

October 2006 – February 2009

Master of Science in Physics

Università "Sapienza" di Roma (Italy) – grade: 110/110 cum laude

September 2003 – September 2006

Bachelor degree in Physics (110/110 cum laude)

Università "Sapienza" di Roma (Italy) – grade: 110/110 cum laude

September 1998 – July 2003

Diploma di Maturità (100/100 cum laude)

Liceo Scientifico Statale di Roma "A. Avogadro" (Italy) – grade: 100/100 cum laude

TEACHING EXPERIENCE

AA 22/23

Laboratory of Numerical Calculus and Informatics

Course for the Bachelor in Physics (Università di Roma Tor Vergata)

AA 19/20 to 22/23

Optimization and Statistical Mechanics

Course for the Master in Physics (Università di Roma Tor Vergata)

- AA 20/21 PCTO (Paths for Transversal Skills and Orientation) in Big Data
Lab activities for High School students
- AA 18/19 Mechanics
Exercises for Bachelor in Physics ("Sapienza" Università di Roma)
- AA 17/18 Complex Networks for Data Science
Course for the PhD in Data Science (SNS Pisa) and in Systems Science (IMT Lucca)
- AA 15/16 Advanced Theory of Complex Networks; Economic and Financial Networks
Courses for the PhD in Economics, Management and Data Science (IMT Lucca)
- AA 14/15, 18/19 Physics of Complex Systems
Lectures and Tutoring of Master Students in Physics ("Sapienza" Università di Roma)
- AA 12/13 Computational Physics and Complex Networks
Proseminars/Ateliers for Master in Physics (Université de Fribourg)
- AA 11/12 Thermodynamics, Statistical Mechanics
Exercises and Lectures for Bachelor / Master in Physics (Université de Fribourg)
- AA 10/11 Mathematical Methods for Physics
Exercises for Bachelor in Physics (Université de Fribourg)

RESEARCH GRANTS

- 2022 *Deep'n'Rec: Adversarial Deep Learning for Network Reconstruction*
Principal Investigator – Progetto di Ricerca Scientifica d'Ateneo 2021, Tor Vergata – 10 000 EUR
- 2021 *Complexity in Epidemiology*
Principal Investigator – Centro "Enrico Fermi" research project, 3-year plan 2021-23 – 90 000 EUR
- 2020 *Reconstructing the dependency network of financial institutions for controlling systemic risk*
Principal Investigator – CNR/JSPS joint research project – 36 000 EUR (declined)
- 2019 *Optimized Reconstruction of Complex Networks (ORCS)*
Principal Investigator – PAI (progetto di attività integrate), IMT Lucca – 20 000 EUR
- 2014 *Human Behavior on Networks: New Models for New Experiments*
Individual grant – fellowship of the Swiss National Science Foundation – 47 000 CHF (declined)
- 2013 *Human Behavior on Networks: Connecting Models and Experiments*
Individual grant – fellowship of the Swiss National Science Foundation – 42 800 CHF

BIBLIOMETRIC INDICATORS

	Web of Science	Scopus	Google Scholar
Publications	47	53	76
Citations	1002	1109	1879
H-index	16	17	23
Normalized H *	1.45	1.54	2.09

* computed by dividing H-index by years from first publication

ADDITIONAL INFORMATION

- Scientific Qualifications (Italy) Theoretical Physics of Fundamental Interactions (sc 02/A2, associate professor)
Theoretical Physics of Matter (sc 02/B2, associate professor)
Applied Physics, Didactics and History of Physics (sc 02/D1, associate professor)
- Honours and Awards 2013: Swiss National Science Foundation: fellowship for prospective researchers
2014: Swiss National Science Foundation: advanced postdoc mobility [declined]

Institutional Roles	<p>Board member of the PhD in Data Science Università di Roma Tor Vergata – AA 22/23</p> <p>Member of Steering Committee for Didactics Physics Department, Università di Roma Tor Vergata – AA 20/21, 21/22</p> <p>Board member of the PhD in Data Science Scuola Normale Superiore di Pisa – AA 17/18, 18/19, 19/20, 20/21</p>
Role in Scientific Societies	<p>2017-2023: Council member of the Complex Systems Society</p> <p>2019-2022: Board member of the Network Science Society</p> <p>2021-2022: Member of the steering committee of CCS/Italy</p>
Participation in Research Projects	<p><i>SoBigData Research Infrastructure</i> (H2020-EU.1.4.1.2 #654024)</p> <p><i>Center of Excellence for Global Systems Science</i> (H2020-EU.1.4.1.3. #676547)</p> <p><i>Dolphins</i>: Distributed Global Financial Systems for Society (H2020-EU.1.2.2. #640772)</p> <p><i>Simpol</i>: Financial Systems Simulation and Policy Modelling (FP7-ICT #610704)</p> <p><i>Growthcom</i>: Growth and Innovation Policy-Modelling (FP7-ICT #611272)</p> <p><i>CRISIS-LAB</i>: Controllo delle Crisi nei Sistemi Socio Economici Complessi (MIUR PNR)</p> <p><i>New Models of Growing Networks</i> (SNSF #143272)</p> <p><i>Evolving and adaptive networks</i> (SNSF #132253)</p> <p><i>Quality Collectives</i>: Socially Intelligent Systems for Quality (FP7-ICT #231200)</p> <p><i>Liquid Publication</i>: Innovating the Scientific Knowledge Object Lifecycle (FP7-ICT #213360)</p>
Supervised Students	<p>Giulia De Palma, Anna Mancini, Gioacchino Mauri <i>Master of Science in Physics</i>, Università di Roma Tor Vergata</p> <p>Massimiliano Bassi, Alessandro Carra, Benedetta Castagna, Lorenzo Cirigliano, Luca Didomenico, Martina Formichini, Francesca Giuffrida, Giulia Poce, Matteo Serafino <i>Master of Science in Physics</i>, Università "Sapienza" di Roma</p> <p>Valentina Macchiati <i>Master of Science in Physics</i>, ISI foundation Turin</p> <p>Gianmarco Ricciardi <i>Master of Science in Physics</i>, Università di Pavia</p> <p>Leonardo Niccolò Ialongo <i>Master of Science in Engineering</i>, Università "Sapienza" of Rome</p> <p>Antonio Desiderio, Anna Mancini, Lavinia Rossi-Mori <i>PhD in Physics</i>, Università di Roma Tor Vergata</p> <p>Alessandro Ferracci, Matteo Serri <i>PhD in Economics</i>, Università "Sapienza" di Roma</p> <p>Giuseppe Brandi <i>PhD in Economics</i>, LUISS Università di Roma</p> <p>Daniele D'Armiento <i>PhD in Artificial Intelligence</i>, Scuola Normale Superiore di Pisa</p> <p>Massimiliano Fessina <i>PhD in Systems Science</i>, IMT Lucca</p> <p>Giacomo Rapisardi <i>PhD in Computer Science and System Engineering</i>, IMT Lucca</p> <p>Matteo Serafino <i>PhD in Economics, Networks and Business Administration</i>, IMT Lucca</p>

Invited Conference Talks

Statistical physics of financial networks

Statistical Physics of Complex Systems (EPS SNPD conference), 10/09/2021, Trieste (Italy)

Unfolding the innovation system for the development of countries

NetSciX'20 Special Workshop on Economic & Financial Networks, 23/01/2020, Tokyo (Japan)

What do central counterparties default funds really cover? A network-based stress test answer

II FINEXUS Conference on Financial Networks and Sustainability, 19/01/2018, Zurich (Switzerland)

Algorithms for reputation and quality in scientific e-communities

APS March Meeting, 16/03/2017, New Orleans (Louisiana)

Agent-based dynamics of shocks propagation on reconstructed financial networks

I International Conference on Synthetic Populations, 22/02/2017, Lucca (Italy)

Statistically validated network of portfolio overlaps and systemic risk

I FINEXUS Conference on Financial Networks and Sustainability, 12/01/2017, Zurich (Switzerland)

Credit & funding shocks in interbank markets

I Conference on Global System Science & Policy, 28/11/2016, London (United Kingdom)

Invited Research Seminars

Statistical physics of networks and applications

Statistical Physics @CaFoscari & Friends, 10/12/2021, Venice (Italy)

The statistical physics of networks and applications in finance

INFN Theory seminar, 03/02/2020, INFN section Tor Vergata, Rome (Italy)

How the interbank market becomes systemically dangerous: an agent-based network model of financial distress propagation

Bank of England research seminar, 27/06/2017, London (United Kingdom)

Learning dynamics explains human behavior in Prisoner's Dilemma on networks

LABSS seminar, 29/05/2014, Institute of Cognitive Science and Technologies (ISTC-CNR) Rome (Italy)

Human behavior in Prisoner's Dilemma is explained by learning dynamics

BECS seminar, 26/06/2013, Aalto University (Finland)

Physics of evolving complex systems: models, algorithms and applications

ISC seminar, 06/06/2013, Institute of Complex Systems (ISC-CNR) Rome (Italy)

Temporal effects in the growth of networks

GISC Workshop, 08/02/2013, Universidad Carlos III Madrid (Spain)

School Lectures & Tutorials

Statistical validation for bipartite network projections

Training for Joint research Center of EU commission, 23/11/2020, [online]

Network sensitivity of systemic risk (project tutor)

I Workshop "Complexity 72h", 07-11/05/2018, Lucca (Italy)

Game theory on networks

I School "New Trends in Statistical Physics", 07/07/2017, Corfù (Greece)

Complex network reconstruction from partial information via fitness-based ERG modeling

"Socio-Economic Complex Systems" (GROWTHCOM Project School), 6-12/09/2015, Lipari (Italy)

Meta-validation of bipartite network projections

- CCS'22 International Conference on Complex Systems, 21/10/2022, Palma de Mallorca (Spain)
- V Workshop "Complex networks: from socio-economic systems to biology and brain", 01/09/2016, Lipari (Italy)
- Networks 2021 Intl. School and Conference on Network Science, 06/09/2021, Washington DC [online]

Scale-free networks revealed from finite-size scaling

- APS March Meeting, 06/03/2020, Denver (Colorado)
- IV Workshop "Complex networks: from socio-economic systems to biology and brain", 15/07/2019, Lipari (Italy)

Grand Canonical ensemble of weighted networks

- NetSciX'20 Intl. School and Conference on Network Science, 21/01/2020, Tokyo (Japan)
- CCS'19 International Conference on Complex Systems, 01/10/2019, Singapore

Unfolding the innovation system for the development of countries

- CCS'19 International Conference on Complex Systems, 01/10/2019, Singapore
- CCS/Italy'19 Italian Regional Conference on Complex Systems, 01/07/2019, Trento (Italy)
- NetSci'19 International Conference on Network Science, 30/05/2019, Burlington (USA)

Maximum-entropy reconstruction of economic and financial networks

- "Complex Financial Networks and Systemic Risk" @CCS'17, 20/09/2017, Cancun (Mexico)
- CompleNet'16 International Conference on Complex Networks, 24/03/2016, Dijon (France)
- XX Convegno Nazionale di Fisica Statistica e dei Sistemi Complessi, 29/06/2015, Parma (Italy)

What do central counterparties default funds really cover? A network-based stress test answer

- CCS'17 International Conference on Complex Systems, 19/09/2017, Cancun (Mexico)

Statistically validated network of portfolio overlaps and systemic risk

- CCS'17 International Conference on Complex Systems, 18/09/2017, Cancun (Mexico)
- CompleNet'17 International Workshop on Complex Networks, 22/03/2017, Dubrovnik (Croatia)
- CCS'16 International Conference on Complex Systems, 22/09/2016, Amsterdam (Netherlands)
- I Workshop "Complex networks: from socio-economic systems to biology and brain", 01/09/2016, Lipari (Italy)
- XXI Convegno Nazionale di Fisica Statistica e dei Sistemi Complessi, 27/06/2016, Parma (Italy)

Algorithms for reputation and quality in scientific e-communities

- "Statistical Physics for the Digital Economy" @ΣΦ'17, 12/07/2017, Corfù (Greece)

Entangling credit & funding shocks in interbank markets

- ΣΦ'17 International Conference on Statistical Physics, 10/07/2017, Corfù (Greece)
- CompleNet'17 International Workshop on Complex Networks, 22/03/2017, Dubrovnik (Croatia)
- CCS'16 International Conference on Complex Systems, 19/09/2016, Amsterdam (Netherlands)

The scientific competitiveness of nations

- FISMAT'15 Italian National Conference on Condensed Matter Physics, 29/09/2015, Palermo (Italy)
- ICCSS'15 International Conference on Computational Social Science, 11/06/2015, Helsinki (Finland)
- NetSci'15 International Conference on Network Science, 05/06/2015, Zaragoza (Spain)
- NetSciX'15 Intl. School and Conference on Network Science, 15/01/2015, Rio de Janeiro (Brazil)

Reconstructing topological properties of complex networks using the fitness model

- SEDNAM @SOCINFO'14 Intl. Conference on Social Informatics, 10/11/2014, Barcelona (Spain)
- ΣΦ'14 International Conference on Statistical Physics, 09/07/2014, Rhodes (Greece)

Learning dynamics explains human behavior in Prisoner's Dilemma on networks

- DPG Spring Meeting, 03/04/2014, Dresden (Germany)
- ECCS'13 European Conference on Complex Systems, 19/09/2013, Barcelona (Spain)

Quality, trust and reputation: ranking on a multi-layer network

- ISMIS'12 XX Intl. Symposium on Methodologies for Intelligent Systems, 04/12/2012, Macau (China)

The role of taste affinity in agent-based models for social recommendation

- Workshop "Agent-Based Models & Complex Techno-Social Systems", 04/07/2012, Zurich (Switzerland)

Newsbag, an adaptive model for news recommendation

- EU-China Workshop on Complexity Science, 16/09/2011, University of Fribourg (Switzerland)

SERVICE ACTIVITY

Conferences & Schools Organization	<p>VII Workshop “Complexity in Economics and Finance” @CCS’22 (Palma, Spain, 19/10/2022)</p> <p>CCS2020 - Conference on Complex Systems (4-11/12/2020 - online)</p> <p>NetSci2020 - International School and Conference on Network Science (Rome, Italy, 17-25/09/2020 - online) general chair</p> <ul style="list-style-type: none">- First online NetSci conference, with more than 700 attendees- 12 invited speakers + 3 keynote speakers for COVID-19 thematic plenary- 6 school speakers and 22 satellite events- 630 submitted contributions, resulting in 220 talks and 200 posters- The event took place using different online tools: Brelia for virtual environment, Zoom and Streamyard for webinars, Vimeo for live streaming of content, Slack for real-time interactions <p>II School “New Trends in Statistical Physics” (Lipari, Italy, 17-18/07/2018)</p> <p>XXIII Convegno Nazionale di Fisica Statistica e dei Sistemi Complessi chair of young researchers session (Parma, Italy, 20-22/06/2018)</p> <p>III Workshop “Complex Networks: From Socio-Economic Systems to Biology and Brain” (Lipari, Italy, 10-16/07/2018)</p> <p>II Workshop “Complex Networks: From Socio-Economic Systems to Biology and Brain” (Lipari, Italy, 08-14/09/2017)</p> <p>IV Workshop “Statistical Physics of Financial and Economic Networks” @NetSci’19 (Burlington, Vermont, 28/05/2019)</p> <p>III Workshop “Statistical Physics of Financial and Economic Networks” @NetSci’18 (Paris, France, 11-12/06/2018)</p> <p>II Workshop “Statistical Physics of Financial and Economic Networks” @NetSci’17 (Indianapolis, Indiana, 19/06/2017)</p> <p>I Workshop “Statistical Physics of Financial and Economic Networks” @StatPhys’26 (Paris, France, 15-16/07/2016)</p> <p>EU-China Workshop on Complexity Science (Fribourg, Switzerland, 14-19/09/2011)</p>
Program Committee	<p>CCS’22 (Palma De Mallorca, Spain, 17-21/10/2022)</p> <p>NetSciX’22 (Porto, Portugal, 08-11/02/2022)</p> <p>PASC21 (Geneva, Switzerland, 05-08/07/2021)</p> <p>CompleNet’20 (Exeter, UK, 31/03-04/04/2020)</p> <p>NetSciX’20 (Tokyo, Japan, 20-23/01/2020)</p> <p>NetSci’18 (Paris, France, 11-15/06/2018)</p> <p>CompleNet’18 (Boston, USA, 05-08/03/2018)</p>
Peer-Reviewing	<p>Europhysics Letters, Journal of Informetrics, Journal of Statistical Mechanics, Journal of the Royal Society Interface, Mathematical Finance, Nature Physics, Physical Review Letters, Physical Review X, PLoS ONE, Quantitative Finance, Scientometrics, Scientific Reports, and many others. Full list at https://www.webofscience.com/wos/author/record/234301</p> <p>WoS Top reviewers in Cross-Field - September 2018</p>
Editorial Activity	<p>Editor of Complexity (ISSN 1099-0526)</p> <p>Editor of Frontiers in Physics (ISSN 2296-424X)</p> <p>Guest Editor of Entropy (ISSN 1099-4300), special issue “Complexity in Economics & Finance”</p> <p>Guest Editor of Games (ISSN 2073-4336), special issue “Evolutionary Network Games”</p>
OUTREACH & PRESS	
Comunicato stampa CREF (2022)	<p>Un approccio di meta-validazione nelle proiezioni di reti bipartite</p>
Wired.it (2021)	<p>Dando priorità alle prime dosi di vaccino potremmo ridurre i decessi negli over 80?</p>
Comunicato stampa CNR (2019)	<p>Massima entropia e reti complesse: dalla finanza alla biologia</p>

Il Tirreno (2019)	Finanza, complessità e fisica statistica: una ricerca di IMT e CNR
Phys.org (2019)	Common frame for analyzing complex systems in Physics and Economics
Risk.net (2018)	'Cover 2' CCP reserve standard inadequate – study
Risk.net (2017)	Basel III has aided system stability, interbank models suggest
MeJudice (2017)	Complexe lessen voor bankiers en toezichhouders
Il Fatto Quotidiano Blog (2015)	Ricerca scientifica: tanto spendi, tanto ottieni
Il Fatto Quotidiano Blog (2015)	I ricercatori più bravi in matematica? Gli studi premiano gli italiani (ditelo ai politici)
Science is News (2014)	Cooperation is learned through practice, according to a mathematical model
Physics Synopsis (2011)	You don't cite me anymore

PUBLICATIONS

- [1] G. Cimini, M. Medo, T. Zhou, D. Wei, and Y.-C. Zhang. Heterogeneity, quality, and reputation in an adaptive recommendation model. *The European Physical Journal B*, 80(2):201–208, 2011. doi:10.1140/epjb/e2010-10716-5
- [2] D. Wei, T. Zhou, G. Cimini, P. Wu, W. Liu, and Y.-C. Zhang. Effective mechanism for social recommendation of news. *Physica A: Statistical Mechanics and its Applications*, 390:2117–2126, 2011. doi:10.1016/j.physa.2011.02.005
- [3] M. Medo, G. Cimini, and S. Gualdi. Temporal effects in the growth of networks. *Physical Review Letters*, 107:238701, 2011. doi:10.1103/PhysRevLett.107.238701
- [4] C. H. Yeung, G. Cimini, and C.-H. Jin. Dynamics of movie competition and popularity spreading in recommender systems. *Physical Review E*, 83:016105, 2011. doi:10.1103/PhysRevE.83.016105
- [5] T. Zhou, M. Medo, G. Cimini, Z.-K. Zhang, and Y.-C. Zhang. Emergence of scale-free leadership structure in social recommender systems. *PLoS ONE*, 6(7):e20648, 2011. doi:10.1371/journal.pone.0020648
- [6] G. Cimini, D. Chen, M. Medo, L. Lü, Y.-C. Zhang, and T. Zhou. Enhancing topology adaptation in information-sharing social networks. *Physical Review E*, 85:046108, 2012. doi:10.1103/PhysRevE.85.046108
- [7] H. Liao, G. Cimini, and M. Medo. Measuring quality, reputation and trust in online communities. In *Foundations of Intelligent Systems*, volume 7661 of *Lecture Notes in Computer Science*, pages 405–414. Springer Berlin Heidelberg, 2012. ISBN 978-3-642-34623-1. doi:10.1007/978-3-642-34624-8_46
- [8] A. Zeng and G. Cimini. Removing spurious interactions in complex networks. *Physical Review E*, 85:036101, 2012. doi:10.1103/PhysRevE.85.036101
- [9] D. Chen, A. Zeng, G. Cimini, and Y.-C. Zhang. Adaptive social recommendation in a multiple category landscape. *The European Physical Journal B*, 86(2):61, 2013. doi:10.1140/epjb/e2012-30899-9
- [10] G. Cimini, A. Zeng, M. Medo, and D. Chen. The role of taste affinity in agent-based models for social recommendation. *Advances in Complex Systems*, 16(04n05):1350009, 2013. doi:10.1142/S0219525913500094
- [11] G. Cimini and A. Sánchez. Learning dynamics explains human behaviour in prisoner's dilemma on networks. *Journal of the Royal Society Interface*, 11:20131186, 2014. doi:10.1098/rsif.2013.1186
- [12] G. Cimini, A. Gabrielli, and F. Sylos Labini. The scientific competitiveness of nations. *PLoS ONE*, 9(12):e113470, 2014. doi:10.1371/journal.pone.0113470
- [13] H. Liao, R. Xiao, G. Cimini, and M. Medo. Network-driven reputation in online scientific communities. *PLoS ONE*, 9(12):e112022, 2014. doi:10.1371/journal.pone.0112022
- [14] G. Cimini and A. Sánchez. How evolutionary dynamics affects network reciprocity in prisoner's dilemma. *Journal of Artificial Societies and Social Simulation*, 18(2):22, 2015. ISSN 1460-7425. doi:10.18564/jasss.2726
- [15] G. Cimini, C. Castellano, and A. Sánchez. Dynamics to equilibrium in network games: Individual behavior and global response. *PLoS ONE*, 10(3):e0120343, 2015a. doi:10.1371/journal.pone.0120343

- [16] G. Cimini, T. Squartini, A. Gabrielli, and D. Garlaschelli. Estimating topological properties of weighted networks from limited information. *Physical Review E*, 92:040802, 2015b. doi:[10.1103/PhysRevE.92.040802](https://doi.org/10.1103/PhysRevE.92.040802)
- [17] G. Cimini, T. Squartini, D. Garlaschelli, and A. Gabrielli. Systemic risk analysis on reconstructed economic and financial networks. *Scientific Reports*, 5:15758, 2015c. doi:[10.1038/srep15758](https://doi.org/10.1038/srep15758)
- [18] G. Cimini, T. Squartini, N. Musmeci, M. Puliga, A. Gabrielli, D. Garlaschelli, S. Battiston, and G. Caldarelli. Reconstructing topological properties of complex networks using the fitness model. In *Social Informatics*, volume 8852 of *Lecture Notes in Computer Science*, pages 323–333. Springer International Publishing, 2015d. ISBN 978-3-319-15167-0. doi:[10.1007/978-3-319-15168-7_41](https://doi.org/10.1007/978-3-319-15168-7_41)
- [19] M. Dilucca, G. Cimini, A. Semmoloni, A. Deiana, and A. Giansanti. Codon bias patterns of e. coli's interacting proteins. *PLoS ONE*, 10(11):e0142127, 2015. doi:[10.1371/journal.pone.0142127](https://doi.org/10.1371/journal.pone.0142127)
- [20] G. Cimini and M. Serri. Entangling credit and funding shocks in interbank markets. *PLoS ONE*, 11(8):e0161642, 2016. doi:[10.1371/journal.pone.0161642](https://doi.org/10.1371/journal.pone.0161642)
- [21] G. Cimini, A. Zaccaria, and A. Gabrielli. Investigating the interplay between fundamentals of national research systems: Performance, investments and international collaborations. *Journal of Informetrics*, 10(1):200–211, 2016. doi:[10.1016/j.joi.2016.01.002](https://doi.org/10.1016/j.joi.2016.01.002)
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- [23] M. Medo and G. Cimini. Model-based evaluation of scientific impact indicators. *Physical Review E*, 94:032312, 2016. doi:[10.1103/PhysRevE.94.032312](https://doi.org/10.1103/PhysRevE.94.032312)
- [24] M. Serri, G. Caldarelli, and G. Cimini. How the interbank market becomes systemically dangerous: an agent-based network model of financial distress propagation. *Journal of Network Theory in Finance*, 3:1–18, 2017. doi:[10.21314/JNTF.2017.025](https://doi.org/10.21314/JNTF.2017.025)
- [25] G. Cimini. Evolutionary network games: Equilibria from imitation and best response dynamics. *Complexity*, 2017:7259032, 2017. doi:[10.1155/2017/7259032](https://doi.org/10.1155/2017/7259032)
- [26] A. Patelli, G. Cimini, E. Pugliese, and A. Gabrielli. The scientific influence of nations on global scientific and technological development. *Journal of Informetrics*, 11(4):1229–1237, 2017. doi:[10.1016/j.joi.2017.10.005](https://doi.org/10.1016/j.joi.2017.10.005)
- [27] T. Squartini, A. Almog, G. Caldarelli, I. van Lelyveld, D. Garlaschelli, and G. Cimini. Enhanced capital-asset pricing model for the reconstruction of bipartite financial networks. *Physical Review E*, 96:032315, 2017a. doi:[10.1103/PhysRevE.96.032315](https://doi.org/10.1103/PhysRevE.96.032315)
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- [29] G. Brandi, R. D. Clemente, and G. Cimini. Epidemics of liquidity shortages in interbank markets. *Physica A: Statistical Mechanics and its Applications*, 507:255–267, 2018. doi:[10.1016/j.physa.2018.05.104](https://doi.org/10.1016/j.physa.2018.05.104)
- [30] M. Dilucca, G. Cimini, and A. Giansanti. Essentiality, conservation, evolutionary pressure and codon bias in bacterial genomes. *Gene*, 663:178–188, 2018. doi:[10.1016/j.gene.2018.04.017](https://doi.org/10.1016/j.gene.2018.04.017)
- [31] S. Kojaku, G. Cimini, G. Caldarelli, and N. Masuda. Structural changes in the interbank market across the financial crisis from multiple core–periphery analysis. *Journal of Network Theory in Finance*, 4(3):33–51, 2018. doi:[10.21314/JNTF.2018.044](https://doi.org/10.21314/JNTF.2018.044)
- [32] G. Rapisardi, A. Arenas, G. Caldarelli, and G. Cimini. Multiple structural transitions in interacting networks. *Physical Review E*, 98:012302, 2018. doi:[10.1103/PhysRevE.98.012302](https://doi.org/10.1103/PhysRevE.98.012302)
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Rome, 30/11/2022