# Francesco Sorrentino

List of Publications by Year
in descending order



| 68 | 2,413 | 331670 21 | 206112 48 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 69 | 69 | 69 | 1910 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Cluster synchronization and isolated desynchronization in complex networks with symmetries. Nature Communications, 2014, 5, 4079. | 12.8 | 418 |
| 2 | Controllability of complex networks via pinning. Physical Review E, 2007, 75, 046103. | 2.1 | 382 |
| 3 | Complete characterization of the stability of cluster synchronization in complex dynamical networks. Science Advances, 2016, 2, e1501737. | 10.3 | 174 |
| 4 | Adaptive Synchronization of Dynamics on Evolving Complex Networks. Physical Review Letters, 2008, 100, 114101. | 7.8 | 134 |
| 5 | Network synchronization of groups. Physical Review E, 2007, 76, 056114. | 2.1 | 119 |
| 6 | Synchronization of hypernetworks of coupled dynamical systems. New Journal of Physics, 2012, 14, 033035. | 2.9 | 109 |
| 7 | Experimental Observations of Group Synchrony in a System of Chaotic Optoelectronic Oscillators. Physical Review Letters, 2013, 110, 064104. | 7.8 | 91 |
| 8 | Synchronization of dynamical hypernetworks: Dimensionality reduction through simultaneous block-diagonalization of matrices. Physical Review E, 2012, 86, 056102. | 2.1 | 70 |
| 9 | Inhibition Causes Ceaseless Dynamics in Networks of Excitable Nodes. Physical Review Letters, 2014, 112, 138103. | 7.8 | 67 |
| 10 | Energy scaling of targeted optimal control of complex networks. Nature Communications, 2017, 8, 15145. | 12.8 | 63 |
| 11 | Symmetries and cluster synchronization in multilayer networks. Nature Communications, 2020, 11, 3179. | 12.8 | 60 |
| 12 | Symmetry- and input-cluster synchronization in networks. Physical Review E, 2018, 97, 042217. | 2.1 | 59 |
| 13 | Structural permeability of complex networks to control signals. Nature Communications, 2015, 6, 8349. | 12.8 | 57 |
| 14 | Synchronization states and multistability in a ring of periodic oscillators: Experimentally variable coupling delays. Chaos, 2013, 23, 043117. | 2.5 | 43 |
| 15 | Approximate cluster synchronization in networks with symmetries and parameter mismatches. Chaos, 2016, 26, 094823. | 2.5 | 40 |
| 16 | SYNCHRONIZABILITY AND SYNCHRONIZATION DYNAMICS OF WEIGHED AND UNWEIGHED SCALE FREE NETWORKS WITH DEGREE MIXING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 2419-2434. | 1.7 | 36 |
| 17 | Locally Optimal Control of Complex Networks. Physical Review Letters, 2017, 119, 268301. | 7.8 | 32 |
| 18 | Adaptive synchronization of coupled chaotic oscillators. Physical Review E, 2009, 80, 056205. | 2.1 | 29 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | The stability of adaptive synchronization of chaotic systems. Chaos, 2010, 20, 013103. | 2.5 | 28 |
| 20 | Cluster Synchronization in Multilayer Networks: A Fully Analog Experiment with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>L</mml:mi><mml:mi>C</mml:mi></mml:math> Oscillators with Physically Dissimilar Coupling. Physical Review Letters, 2019, 122, 014101. | 7.8 | 28 |
| 21 | Using synchronization of chaos to identify the dynamics of unknown systems. Chaos, 2009, 19, 033108. | 2.5 | 26 |
| 22 | Estimation of communication-delays through adaptive synchronization of chaos. Chaos, Solitons and Fractals, 2012, 45, 35-46. | 5.1 | 20 |
| 23 | Symmetry effects on naturally arising chimera states in mechanical oscillator networks. Chaos, 2016, 26, 116307. | 2.5 | 20 |
| 24 | Symmetry induced group consensus. Chaos, 2019, 29, 073101. | 2.5 | 18 |
| 25 | Using synchronism of chaos for adaptive learning of time-evolving network topology. Physical Review E, 2009, 79, 016201. | 2.1 | 17 |
| 26 | Prediction of Optimal Drug Schedules for Controlling Autophagy. Scientific Reports, 2019, 9, 1428. | 3.3 | 17 |
| 27 | Analyzing synchronized clusters in neuron networks. Scientific Reports, 2020, 10, 16336. | 3.3 | 17 |
| 28 | On Node Controllability and Observability in Complex Dynamical Networks. , 2019, 3, 847-852. | | 14 |
| 29 | Group Consensus in Multilayer Networks. IEEE Transactions on Network Science and Engineering, 2020, 7, 2016-2026. | 6.4 | 13 |
| 30 | One-way dependent clusters and stability of cluster synchronization in directed networks. Nature Communications, 2021, 12, 4073. | 12.8 | 13 |
| 31 | Controlling Symmetries and Clustered Dynamics of Complex Networks. IEEE Transactions on Network Science and Engineering, 2021, 8, 282-293. | 6.4 | 13 |
| 32 | Optimal control of complex networks: Balancing accuracy and energy of the control action. Chaos, 2017, 27, 041103. | 2.5 | 12 |
| 33 | Symmetries in the time-averaged dynamics of networks: Reducing unnecessary complexity through minimal network models. Chaos, 2019, 29, 011101. | 2.5 | 12 |
| 34 | Identification of delays and discontinuity points of unknown systems by using synchronization of chaos. Physical Review E, 2010, 81, 066218. | 2.1 | 11 |
| 35 | Optimal regulation of blood glucose level in Type I diabetes using insulin and glucagon. PLoS ONE, 2019, 14, e0213665. | 2.5 | 11 |
| 36 | Control Distance and Energy Scaling of Complex Networks. IEEE Transactions on Network Science and Engineering, 2020, 7, 726-736. | 6.4 | 11 |

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|---|---|---|---|
| 37 | Cluster synchronization of networks via a canonical transformation for simultaneous block diagonalization of matrices. Chaos, 2021, 31, 111102. | 2.5 | 11 |
| 38 | Dynamic synchronization of a time-evolving optical network of chaotic oscillators. Chaos, 2010, 20, 043142. | 2.5 | 9 |
| 39 | Matryoshka and disjoint cluster synchronization of networks. Chaos, 2022, 32, 041101. | 2.5 | 8 |
| 40 | Stability analysis of reservoir computers dynamics via Lyapunov functions. Chaos, 2019, 29, 103147. | 2.5 | 7 |
| 41 | Data-driven optimized control of the COVID-19 epidemics. Scientific Reports, 2021, 11, 6525. | 3.3 | 7 |
| 42 | Generating Graphs with Symmetry. IEEE Transactions on Network Science and Engineering, 2019, 6, 836-843. | 6.4 | 6 |
| 43 | Modal Decomposition of the Linear Swing Equation in Networks With Symmetries. IEEE Transactions on Network Science and Engineering, 2021, 8, 2482-2494. | 6.4 | 6 |
| 44 | Reservoir computing with random and optimized time-shifts. Chaos, 2021, 31, 121103. | 2.5 | 6 |
| 45 | Energy Scaling with Control Distance in Complex Networks. , 2018, , . | | 5 |
| 46 | Generating symmetric graphs. Chaos, 2018, 28, 121102. | 2.5 | 5 |
| 47 | Targeted synchronization in an externally driven population of mechanical oscillators. Chaos, 2018, 28, 111102. | 2.5 | 5 |
| 48 | Selecting energy efficient inputs using graph structure. International Journal of Control, 2023, 96, 987-999. | 1.9 | 5 |
| 49 | Estimating the structure of small dynamical networks from the state time evolution of one node. Physical Review E, 2013, 87, 012915. | 2.1 | 4 |
| 50 | Optimal control of networks in the presence of attackers and defenders. Chaos, 2018, 28, 051103. | 2.5 | 4 |
| 51 | The controllability Gramian of lattice graphs. Automatica, 2020, 114, 108833. | 5.0 | 4 |
| 52 | Controlling network ensembles. Nature Communications, 2021, 12, 1884. | 12.8 | 4 |
| 53 | Group synchrony, parameter mismatches, and intragroup connections. Physical Review E, 2021, 104, 054314. | 2.1 | 4 |
| 54 | Decentralized estimation of topology changes in wireless robotic networks. , 2013, , . | | 3 |

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|---|---|---|---|
| 55 | Control Energy of Lattice Graphs. , 2018, , . | | 3 |
| 56 | An Algorithm for Finding Equitable Clusters in Multi-Layer Networks. , 2020, , . | | 3 |
| 57 | Group Synchrony in an Experimental System of Delay-coupled Optoelectronic Oscillators. IEICE Proceeding Series, 2014, 1, 70-73. | 0.0 | 3 |
| 58 | Supermodal Decomposition of the Linear Swing Equation for Multilayer Networks. IEEE Access, 2022, 10, 72658-72670. | 4.2 | 3 |
| 59 | Stable formation of groups of robots via synchronization. , 2014, , . | | 2 |
| 60 | A Data-Driven Model for Simulating the Evolution of Transmission Line Failure in Power Grids. , 2018, , . | | 2 |
| 61 | Failure of the simultaneous block diagonalization technique applied to complete and cluster synchronization of random networks. Physical Review E, 2022, 105, 014313. | 2.1 | 2 |
| 62 | Looking beyond community structure leads to the discovery of dynamical communities in weighted networks. Scientific Reports, 2022, 12, 4524. | 3.3 | 2 |
| 63 | Mitigating Cascading Failures in Power Grids via Markov Decision-Based Load-Shedding With DC Power Flow Model. IEEE Systems Journal, 2022, 16, 4048-4059. | 4.6 | 2 |
| 64 | Symmetry-driven network reconstruction through pseudobalanced coloring optimization. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 073403. | 2.3 | 2 |
| 65 | Experimental observations of synchronization between two bidirectionally coupled physically dissimilar oscillators. Physical Review E, 2020, 102, 042215. | 2.1 | 1 |
| 66 | Delays induced cluster synchronization in chaotic networks. Chaos, 2020, 30, 121105. | 2.5 | 1 |
| 67 | Controlling consensus in networks with symmetries. International Journal of Control, 2022, 95, 2943-2959. | 1.9 | 0 |
| 68 | Synchronization patterns of an experimental ring of coupled optoelectronic oscillators. IEICE Proceeding Series, 2014, 2, 404-404. | 0.0 | 0 |