# Sandip Roy

## List of Publications by Year
## in descending order

| | | | |
|---|---|---|---|
| 95<br>papers | 1,200<br>citations | 567281<br>15<br>h-index | 454955<br>30<br>g-index |
| 95<br>all docs | 95<br>docs citations | 95<br>times ranked | 1023<br>citing authors |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 1 | Sleep function: Toward elucidating an enigma. Sleep Medicine Reviews, 2016, 28, 46-54. | 8.5 | 280 |
| 2 | Constructing consensus controllers for networks with identical general linear agents. International Journal of Robust and Nonlinear Control, 2011, 21, 1237-1256. | 3.7 | 129 |
| 3 | A network model for activity-dependent sleep regulation. Journal of Theoretical Biology, 2008, 253, 462-468. | 1.7 | 59 |
| 4 | A Scalable Methodology for Evaluating and Designing Coordinated Air-Traffic Flow Management Strategies Under Uncertainty. IEEE Transactions on Intelligent Transportation Systems, 2008, 9, 644-656. | 8.0 | 54 |
| 5 | Tumor necrosis factor enhances the sleepâ€like state and electrical stimulation induces a wakeâ€like state in coâ€cultures of neurons and glia. European Journal of Neuroscience, 2015, 42, 2078-2090. | 2.6 | 46 |
| 6 | A control-theoretic perspective on the design of distributed agreement protocols. International Journal of Robust and Nonlinear Control, 2007, 17, 1034-1066. | 3.7 | 37 |
| 7 | Static decentralized control of a single-integrator network with Markovian sensing topology. Automatica, 2005, 41, 1867-1877. | 5.0 | 33 |
| 8 | Network design problems for controlling virus spread. , 2007, , . | | 29 |
| 9 | A Network Control Theory Approach to Modeling and Optimal Control of Zoonoses: Case Study of Brucellosis Transmission in Sub-Saharan Africa. PLoS Neglected Tropical Diseases, 2011, 5, e1259. | 3.0 | 29 |
| 10 | Sparse Resource Allocation for Linear Network Spread Dynamics. IEEE Transactions on Automatic Control, 2017, 62, 1714-1728. | 5.7 | 27 |
| 11 | Graph-theoretic characterisations of zeros for the inputâ€"output dynamics of complex network processes. International Journal of Control, 2014, 87, 940-950. | 1.9 | 25 |
| 12 | On inference of network time constants from impulse response data: graph-theoretic Cramer-Rao bounds. , 2009, , . | | 24 |
| 13 | On time-scale designs for networks. International Journal of Control, 2009, 82, 1313-1325. | 1.9 | 23 |
| 14 | Vulnerability of Network Synchronization Processes: A Minimum Energy Perspective. IEEE Transactions on Automatic Control, 2016, 61, 2525-2530. | 5.7 | 22 |
| 15 | Uncertainty Evaluation Through Mapping Identification in Intensive Dynamic Simulations. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2010, 40, 1094-1104. | 2.9 | 21 |
| 16 | Vulnerable links and secure architectures in the stabilization of networks of controlled dynamical systems. , 2012, , . | | 18 |
| 17 | An Individual-Based Model of Transmission of Resistant Bacteria in a Veterinary Teaching Hospital. PLoS ONE, 2014, 9, e98589. | 2.5 | 18 |
| 18 | The Design of Multi-Lead-Compensators for Stabilization and Pole Placement in Double-Integrator Networks. IEEE Transactions on Automatic Control, 2010, 55, 2870-2875. | 5.7 | 17 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | On the Complexity and Approximability of Optimal Sensor Selection and Attack for Kalman Filtering. IEEE Transactions on Automatic Control, 2021, 66, 2146-2161. | 5.7 | 15 |
| 20 | On the structure of graph edge designs that optimize the algebraic connectivity. , 2008, , . | | 13 |
| 21 | Stabilization of a Class of Sandwich Systems Via State Feedback $ $. IEEE Transactions on Automatic Control, 2010, 55, 2156-2160. | 5.7 | 12 |
| 22 | On the Complexity and Approximability of Optimal Sensor Selection for Kalman Filtering. , 2018, , . | | 12 |
| 23 | Modal Barriers to Controllability in Networks with Linearly-Coupled Homogeneous Subsystems. IFAC-PapersOnLine, 2018, 51, 130-135. | 0.9 | 11 |
| 24 | Situational Awareness for Dynamical Network Processes Using Incidental Measurements. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 304-316. | 10.8 | 10 |
| 25 | Resilient Sensor Placement for Kalman Filtering in Networked Systems: Complexity and Algorithms. IEEE Transactions on Control of Network Systems, 2020, 7, 1870-1881. | 3.7 | 10 |
| 26 | Toward a Control Theory for Networks. International Journal of Robust and Nonlinear Control, 2007, 17, 897-897. | 3.7 | 9 |
| 27 | Interactions among control channels in dynamical networks. , 2017, , . | | 9 |
| 28 | A wake-like state in vitro induced by transmembrane TNF/soluble TNF receptor reverse signaling. Brain, Behavior, and Immunity, 2021, 94, 245-258. | 4.1 | 9 |
| 29 | The neuron-specific interleukin-1 receptor accessory protein alters emergent network state properties in Vitro. Neurobiology of Sleep and Circadian Rhythms, 2019, 6, 35-43. | 2.8 | 9 |
| 30 | Explicit precompensator design for invariant-zero cancellation. International Journal of Control, 2009, 82, 808-811. | 1.9 | 8 |
| 31 | Explicit State-Estimation Error Calculations for Flag Hidden Markov Models. IEEE Transactions on Signal Processing, 2016, 64, 4444-4454. | 5.3 | 8 |
| 32 | Distributed Decision-Making Algorithms with Multiple Manipulative Actors: A Feedback-Control Perspective. , 2018, , . | | 8 |
| 33 | Cost of fairness in disease spread control. , 2012, , . | | 7 |
| 34 | Comments on â€œUpper and Lower Bounds for Controllable Subspaces of Networks of Diffusively Coupled Agentsâ€. IEEE Transactions on Automatic Control, 2018, 63, 2306-2306. | 5.7 | 7 |
| 35 | Impacts of High and Low Gain Controllers on Remote Channels in Dynamical Networks. , 2018, , . | | 7 |
| 36 | The design of multi-lead-compensators for stabilization and pole placement in double-integrator networks under saturation. , 2009, , . | | 6 |

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|---|---------|-----|-----------|
| 37 | Local control and estimation performance in dynamical networks: Structural and graph-theoretic results. , 2017, , . | | 6 |
| 38 | Occupant-Location-Catered Control of IoT-Enabled Building HVAC Systems. IEEE Transactions on Control Systems Technology, 2020, 28, 2572-2580. | 5.2 | 6 |
| 39 | MOMENT-LINEAR STOCHASTIC SYSTEMS. , 2006, , 263-271. | | 6 |
| 40 | On multiple-delay static output feedback stabilization of LTI plants. , 2008, , . | | 5 |
| 41 | Using deliberate-delay decentralized controllers to stop spread dynamics in canonical network models. , 2011, , . | | 5 |
| 42 | Designing linear distributed algorithms with memory for fast convergence. International Journal of Robust and Nonlinear Control, 2012, 22, 1691-1702. | 3.7 | 5 |
| 43 | Occupant-location-catered control of IOT-enabled building HVAC systems. , 2017, , . | | 5 |
| 44 | Graph-Theoretic Analysis of Estimators for Stochastically-Driven Diffusive Network Processes. , 2018, , . | | 5 |
| 45 | Computation of the recoverable region and stabilisation problem in the recoverable region for discrete-time systems. International Journal of Control, 2009, 82, 1870-1881. | 1.9 | 4 |
| 46 | Semiâ€global stabilization of discreteâ€time systems subject to nonâ€right invertible constraints. International Journal of Robust and Nonlinear Control, 2010, 20, 1234-1254. | 3.7 | 4 |
| 47 | On multipleâ€delay output feedback stabilization of LTI plants. International Journal of Robust and Nonlinear Control, 2010, 20, 1299-1305. | 3.7 | 4 |
| 48 | Decentralized control of discreteâ€time linear time invariant systems with input saturation. International Journal of Robust and Nonlinear Control, 2010, 20, 1353-1362. | 3.7 | 4 |
| 49 | A pre- + post- + feedforward compensator design for zero placement. International Journal of Control, 2010, 83, 1839-1843. | 1.9 | 4 |
| 50 | Performance analysis of an influence-model-based graph partitioning algorithm. , 2011, , . | | 4 |
| 51 | Explicit estimation-error-probability computation and sensor design for flag Hidden Markov Models. , 2015, , . | | 4 |
| 52 | Client-Catered Control of Engineered Spaces with Software-Defined Sensors and Actuators. , 2016, , . | | 4 |
| 53 | Optimal Sensor Placement for Kalman Filtering in Stochastically Forced Consensus Networks. , 2018, , . | | 4 |
| 54 | Structural Controllability of Linear Dynamical Networks with Homogeneous Subsystems. IFAC-PapersOnLine, 2019, 52, 25-30. | 0.9 | 4 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 55 | Pole and Residue Estimation from Impulse Response Data: New Error Bounding Techniques. , 2020, , . | | 4 |
| 56 | On time-scale designs for networks. , 2008, , . | | 3 |
| 57 | A class of neutral-type delay differential equations that are effectively retarded. , 2009, , . | | 3 |
| 58 | The ATP-cytokine-adenosine hypothesis: How the brain translates past activity into sleep. Sleep and Biological Rhythms, 2011, 9, 29-33. | 1.0 | 3 |
| 59 | Implications of a dynamical-network's graph on the estimability of its modes. , 2015, , . | | 3 |
| 60 | Network invariants for optimal input detection. , 2016, , . | | 3 |
| 61 | Tighter lower bounds on the error variance of pole and residue estimates from impulse response data: An expository example. , 2017, , . | | 3 |
| 62 | A system response persistence measure for use in ambient data monitoring. , 2017, , . | | 3 |
| 63 | Local open�learand closed‑loop manipulation of multiagent networks. International Journal of Robust and Nonlinear Control, 2019, 29, 1339-1360. | 3.7 | 3 |
| 64 | Stabilization of a class of sandwich nonlinear systems via state feedback. , 2009, , . | | 2 |
| 65 | An alternative approach to designing stabilizing compensators for saturating linear time‑invariant plants. International Journal of Robust and Nonlinear Control, 2010, 20, 1520-1528. | 3.7 | 2 |
| 66 | Semiglobal stabilization of sandwich systems by dynamic output feedback. , 2010, , . | | 2 |
| 67 | State detection from local measurements in network synchronisation processes. International Journal of Control, 2013, 86, 1634-1645. | 1.9 | 2 |
| 68 | Connecting network graph structure to linear-system zero structure. , 2013, , . | | 2 |
| 69 | Majorisations for the eigenvectors of graph-adjacency matrices. International Journal of Control, 2014, 87, 2604-2614. | 1.9 | 2 |
| 70 | A sample-autocorrelation-based approach for monitoring power-system damping from ambient synchrophasor data. , 2017, , . | | 2 |
| 71 | Interactions Among Heterogeneous Manipulative Actors in Distributed Decision-Making Processes: Static and Dynamic Analysis. , 2019, , . | | 2 |
| 72 | Comment on â€œDetecting Topology Variations in Networks of Linear Dynamical Systemsâ€. IEEE Transactions on Control of Network Systems, 2020, 7, 187-188. | 3.7 | 2 |

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|---|---------|-----|-----------|
| 73 | An explicit formula for differences between Laplacian-eigenvector components using coalesced graphs. , 2009, , . | | 1 |
| 74 | Decentralized control of discrete-time linear time invariant systems with input saturation. , 2009, , . | | 1 |
| 75 | A pre- + post- + feedforward compensator design for zero placement. , 2010, , . | | 1 |
| 76 | Kronecker products of defective matrices: Some spectral properties and their implications on observability. , 2012, , . | | 1 |
| 77 | Layers of interacting dynamic networks: Motivation and theory. , 2013, , . | | 1 |
| 78 | Power system severe contingency screening considering renewable energy. , 2016, , . | | 1 |
| 79 | Local open-loop manipulation of multi-agent networks. , 2017, , . | | 1 |
| 80 | Calculating and calibrating a persistence measure for use in monitoring power system vulnerability. , 2017, , . | | 1 |
| 81 | Modal Barriers to Controllability in Networks With Linearly Coupled Homogeneous Subsystems. IEEE Transactions on Automatic Control, 2021, 66, 6187-6193. | 5.7 | 1 |
| 82 | On multiple-delay approximations of multiple-derivative controllers. , 2009, , . | | 1 |
| 83 | Time varying controllers in discrete-time decentralized control. , 2009, , . | | 0 |
| 84 | Designing linear distributed algorithms with memory for fast convergence. , 2009, , . | | 0 |
| 85 | On generating sets of binary random variables with specified first- and second- moments. , 2010, , . | | 0 |
| 86 | Inverse-affine dependence of recovery-time sensitivities on critical disturbance parameters: A nonlinear dynamics explanation. , 2012, , . | | 0 |
| 87 | Feedback control systems with cyber fault-management mechanisms: Modeling and tradeoff analysis for simple examples. , 2017, , . | | 0 |
| 88 | A stochastic flow network model with almost-fractional routing. , 2017, , . | | 0 |
| 89 | Graph-Theoretic Analyses of MIMO Channels in Diffusive Networks. , 2019, , . | | 0 |
| 90 | Control–channel interactions in diffusive dynamical networks: A graph–theoretic perspective. International Journal of Robust and Nonlinear Control, 2020, 30, 8382-8401. | 3.7 | 0 |

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|---|---------|-----|-----------|
| 91 | Using Feedback to Block Controllability at Remote Nodes in Network Synchronization Processes. , 2021, , . | | 0 |
| 92 | Almost-Surgical Eigenstructure Assignment for Linear Time Invariant Systems Using State Feedback. , 2021, , . | | 0 |
| 93 | Controlling Diffusive Network Processes Using Incidental Measurements and Actuation. , 2019, , . | | 0 |
| 94 | Spatial Properties of a Mixed Linear-Nonlinear Model for Opinion Formation in Networks. , 2020, , . | | 0 |
| 95 | Small-Signal Voltage Stability Analysis for Droop Controlled Inverter-based Microgrids: An Algebraic Graph Theory Perspective. , 2021, , . | | 0 |