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Projects >>>

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List of Projects involved in as Principal Investigator

1. [Centre for Chaos and Complex Networks \(9360051, On-going\)](#)
2. [Designing Control Inputs and Inner Couplings for Controllability and Observability of Complex Dynamical Networks \(9042472, On-going\)](#)
3. [Controllability and Observability of Temporally Switching Directed Networks \(9042334, On-going\)](#)
4. [Toward Stronger Controllability Robustness of Complex Networks \(7005061, On-going\)](#)
5. [Cooperation on Complex Networks Theory \(9231210, Expired\)](#)
6. [Pinning Controllability and Observability for Directed Networks of Non-identical Linear Node Systems with Multi-channel Connections \(9042198, Expired\)](#)
7. [Controllability and Observability of Evolving Directed Networks with Non-identical Linear Node Dynamics \(9042026, Expired\)](#)
8. [Secure Internet Image Communication via Multi-resolution Chaos Synchronization and Control \(9040565, Completed\)](#)
9. [Studying the Effect of Chaos on Power Converters and Its Application to Noise Reduction \(7001174, Completed\)](#)
10. [Chaos Encryption for Interactive Internet Imaging \(9410011, Completed\)](#)
11. [Developing a Chaos-Based Encryption Scheme for Internet Conferencing \(9040785, Completed\)](#)
12. [Developing an On-line Chaos-based Image Encryption Technology for Real-time Secure Internet Applications \(9040676, Completed\)](#)
13. [Designing Chaos Generators via Feedback Control Method for Engineering Applications \(9040579, Completed\)](#)
14. [Secure Internet Communication Based on Chaos-pattern Synchronization and Control \(9050166, Completed\)](#)
15. [Chaos Encryption for Interactive Internet Imaging \(9620004, Completed\)](#)
16. [Chaos-based Encryption for Real-time Interactive Video Communications over the Internet \(7001702, Completed\)](#)
17. [Modelling the Complex Internet Topology \(7001593, Completed\)](#)
18. [Implementation of a Chaotic Stream Encryption Scheme on a Chip \(9050180, Completed\)](#)
19. [Complex Dynamical Networks: Modeling, Control and Synchronization \(9040995, Completed\)](#)
20. [Pinning Control of Complex Dynamical Networks \(7001962, Completed\)](#)
21. [Improving the Synchronizability of Complex Dynamical Networks \(7002134, Completed\)](#)
22. [Qualitative Analysis, Bifurcation and Applications of the Generalized Lorenz System \(9050199, Completed\)](#)
23. [Design and Analysis of Boolean Functions Basis for Cellular Nonlinear Networks \(7002274, Completed\)](#)

24. [A Karhunen-Loeve Decomposition Approach to Chaotic Networks Synchronization](#) (7002453, Completed)
25. [Graph-theoretic Approach to Network Synchronizability Analysis](#) (9041335, Completed)
26. [Dynamical Analysis and Global Control of Internet Data Traffic](#) (9050207, Completed)
27. [Stochastic Chen's System: Stability and Applications](#) (9052002, Completed)
28. [Transceiver Designs for Multi-Antenna Relaying Channels with Statistical Feedback](#) (9041689, Completed)
29. [Algorithms Design and Analysis for Binary Neural Networks and Cellular Nonlinear Networks](#) (9041556, Completed)
30. [Distributed Pinning-Control Flocking Algorithms for Complex Networked Systems](#) (9041658, Completed)
31. [Distributed Coordination Control of Mobile Multi-agent Systems](#) (9041760, Completed)
32. [Modelling and Dynamical Analysis of Information Network Topologies](#) (9231159, Completed)

List of Projects involved in as Co-Principal Investigator / Co-Investigator

1. [LoRa IoT Platform for Smart City Technology and Applications Development](#) (9443004, On-going)
2. [Integration of Intelligence-based Control, Diagnosis and Reconfiguration with Application to Industrial Curing Oven](#) (7001055, Completed)
3. [Performance-oriented Intelligent Multivariable Control for a Class of Semiconductor Packaging Processes](#) (9040507, Completed)
4. [Integrated Modelling, Design and Intelligent Control of Epoxy Dispensing System for Semiconductor Packaging Process](#) (9040599, Completed)
5. [Analytical Study for the Chaotic Behaviour of Congestion Control in TCP/IP](#) (9040586, Completed)
6. [Secure WDM Communication System Based on Synchronized Optical Chaos in Fibre](#) (9040707, Completed)
7. [Developing a Novel Approach for Controlling Thermal Behavior of IC Packaging Process](#) (7001430, Completed)
8. [Electronic Message Authentication Using a High-Dimensional Chaotic Map](#) (9040802, Completed)
9. [Performance and Stability Analyses of the New Proportional Differential \(PD\) based Active Queue Management \(AQM\) Scheme for Internet Data Flow Control](#) (9040920, Completed)
10. [A More Robust Fuzzy-PID Control with Inherent Optimal Adaptation for Complex Industrial Processes](#) (9040916, Completed)
11. [Development and Application of a Model-Free Synchronous Control Methodology for Multi-Axis Motions](#) (7001755, Completed)
12. [Intelligence-based Hybrid Spectral/fuzzy Modelling and Control for Complex Distributed Parameter Processes](#) (9041015, Completed)
13. [A Novel Scheme Based on Hyperchaotic Dynamics for Highly Secured Real-time E-commerce Systems](#) (9041029, Completed)
14. [A Decision Support Technique for Systems with Incomplete and Imprecise Data](#) (9041041, Completed)
15. [A Novel Three-domain Fuzzy Control System with Application to Tempo-spatial Processes in Industry](#) (9041139, Completed)
16. [Implication of Internet Connectivity on Minimum Cost Network Provisioning with Variation in Traffic Demands](#) (7002011, Completed)
17. [A Study of Fast Chaos-based Image Encryption Schemes](#) (7002216, Completed)

18. [A 3D Intelligent Modelling, Learning and Control for Complex Tempo-spatial Processes in the Production Industry](#) (9041362, Completed)
 19. [Spatio-temporal Multi-models Based Process Monitoring and Control](#) (9041571, Completed)
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