

Main Menu List of projects

Projects >>>

Prof. Guanrong CHEN (EE)

Email : eegchen@cityu.edu.hk

[Research Outputs](#)

More research-related Info.: <http://www.ee.cityu.edu.hk/~gchen/>

[BACK](#)

List of Projects involved in as Principal Investigator

1. [Centre for Chaos and Complex Networks \(9360051, On-going\)](#)
2. [Cooperation on Complex Networks Theory \(9231210, On-going\)](#)
3. [Designing Control Inputs and Inner Couplings for Controllability and Observability of Complex Dynamical Networks \(9042472, On-going\)](#)
4. [Controllability and Observability of Temporally Switching Directed Networks \(9042334, On-going\)](#)
5. [Pinning Controllability and Observability for Directed Networks of Non-identical Linear Node Systems with Multi-channel Connections \(9042198, On-going\)](#)
6. [Controllability and Observability of Evolving Directed Networks with Non-identical Linear Node Dynamics \(9042026, On-going\)](#)
7. [Secure Internet Image Communication via Multi-resolution Chaos Synchronization and Control \(9040565, Completed\)](#)
8. [Studying the Effect of Chaos on Power Converters and Its Application to Noise Reduction \(7001174, Completed\)](#)
9. [Chaos Encryption for Interactive Internet Imaging \(9410011, Completed\)](#)
10. [Developing a Chaos-Based Encryption Scheme for Internet Conferencing \(9040785, Completed\)](#)
11. [Developing an On-line Chaos-based Image Encryption Technology for Real-time Secure Internet Applications \(9040676, Completed\)](#)
12. [Designing Chaos Generators via Feedback Control Method for Engineering Applications \(9040579, Completed\)](#)
13. [Secure Internet Communication Based on Chaos-pattern Synchronization and Control \(9050166, Completed\)](#)
14. [Chaos Encryption for Interactive Internet Imaging \(9620004, Completed\)](#)
15. [Chaos-based Encryption for Real-time Interactive Video Communications over the Internet \(7001702, Completed\)](#)
16. [Modelling the Complex Internet Topology \(7001593, Completed\)](#)
17. [Implementation of a Chaotic Stream Encryption Scheme on a Chip \(9050180, Completed\)](#)
18. [Complex Dynamical Networks: Modeling, Control and Synchronization \(9040995, Completed\)](#)
19. [Pinning Control of Complex Dynamical Networks \(7001962, Completed\)](#)
20. [Improving the Synchronizability of Complex Dynamical Networks \(7002134, Completed\)](#)
21. [Qualitative Analysis, Bifurcation and Applications of the Generalized Lorenz System \(9050199, Completed\)](#)
22. [Design and Analysis of Boolean Functions Basis for Cellular Nonlinear Networks \(7002274, Completed\)](#)
23. [A Karhunen-Loeve Decomposition Approach to Chaotic Networks Synchronization \(7002453, Completed\)](#)

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

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

1. [Integration of Intelligence-based Control, Diagnosis and Reconfiguration with Application to Industrial Curing Oven \(7001055, Completed\)](#)
2. [Performance-oriented Intelligent Multivariable Control for a Class of Semiconductor Packaging Processes \(9040507, Completed\)](#)
3. [Integrated Modelling, Design and Intelligent Control of Epoxy Dispensing System for Semiconductor Packaging Process \(9040599, Completed\)](#)
4. [Analytical Study for the Chaotic Behaviour of Congestion Control in TCP/IP \(9040586, Completed\)](#)
5. [Secure WDM Communication System Based on Synchronized Optical Chaos in Fibre \(9040707, Completed\)](#)
6. [Developing a Novel Approach for Controlling Thermal Behavior of IC Packaging Process \(7001430, Completed\)](#)
7. [Electronic Message Authentication Using a High-Dimensional Chaotic Map \(9040802, Completed\)](#)
8. [Performance and Stability Analyses of the New Proportional Differential \(PD\) based Active Queue Management \(AQM\) Scheme for Internet Data Flow Control \(9040920, Completed\)](#)
9. [A More Robust Fuzzy-PID Control with Inherent Optimal Adaptation for Complex Industrial Processes \(9040916, Completed\)](#)
10. [Development and Application of a Model-Free Synchronous Control Methodology for Multi-Axis Motions \(7001755, Completed\)](#)
11. [Intelligence-based Hybrid Spectral/fuzzy Modelling and Control for Complex Distributed Parameter Processes \(9041015, Completed\)](#)
12. [A Novel Scheme Based on Hyperchaotic Dynamics for Highly Secured Real-time E-commerce Systems \(9041029, Completed\)](#)
13. [A Decision Support Technique for Systems with Incomplete and Imprecise Data \(9041041, Completed\)](#)
14. [A Novel Three-domain Fuzzy Control System with Application to Tempo-spatial Processes in Industry \(9041139, Completed\)](#)
15. [Implication of Internet Connectivity on Minimum Cost Network Provisioning with Variation in Traffic Demands \(7002011, Completed\)](#)
16. [A Study of Fast Chaos-based Image Encryption Schemes \(7002216, Completed\)](#)
17. [A 3D Intelligent Modelling, Learning and Control for Complex Tempo-spatial Processes in the Production Industry \(9041362, Completed\)](#)
18. [Spatio-temporal Multi-models Based Process Monitoring and Control \(9041571, Completed\)](#)