

## Yeong-Hwa CHANG 張永華

Professor, Department of Electrical Engineering, Chang Gung University  
259 Wen-Hwa 1<sup>st</sup> Rd., Kwei-Shan, Tao-Yuan, Taiwan, R.O.C.  
(O) 886-3-2118800 ext 5697, [yhchang@mail.cgu.edu.tw](mailto:yhchang@mail.cgu.edu.tw)

---

### EDUCATION

- 1995 Ph.D., Electrical and Computer Engineering, The University of Texas at Austin, USA
- 1987 M.S., Control Engineering, National Chiao Tung University, Taiwan
- 1982 B.S., Electrical Engineering, Chung Cheng Institute of Technology, Taiwan

### EXPERIENCE

- 2021- Associate Dean, College of Engineering, Chang Gung University, Taiwan (工學院副院長)
- 2011- Professor, Department of Electrical Engineering, Chang Gung University, Taiwan
- 2013-2019 Director, Computer Center, Chang Gung University, Taiwan (資訊中心主任)
- 2011-2012 Visiting Scholar, School of Electrical and Computer Engineering, Georgia Institute of Technology, USA
- 2010-2011 Head of on-job master program, Department of Electrical Engineering, Chang Gung University, Taiwan (碩士在職專班主任)
- 2010/1 Visiting Scholar, School of Electrical & Electronic Engineering, Nanyang Technological University, Singapore
- 2002-2011 Associate Professor, Department of Electrical Engineering, Chang Gung University, Taiwan
- 2000-2002 Professor and Chairman, Department of Electrical Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan
- 2000-2001 Adjunct Professor, Department of Electrical Engineering, Yuan Ze University, Taiwan
- 1998-2000 Head of electrical program, Department of Electrical Engineering, Chung Cheng Institute of Technology, Taiwan
- 1995-2000 Associate Professor, Department of Electrical Engineering, Chung Cheng Institute of Technology, Taiwan
- 1987-1990 Lecturer, Department of Electrical Engineering, Chung Cheng Institute of Technology, Taiwan

## SUPERVISED RESEARCH PROJECTS (2002-)

- *Development and Implementation of Image Caption System with Deep Learning Algorithms and Edge Computing Scheme* (Supported by Ministry of Science and Technology, Taiwan) August 1, 2021 – July 31, 2022.
- *Application Design and System Integration of the ROS Robot Development and Deep Learning Object Detection* (Supported by Ministry of Science and Technology, Taiwan) August 1, 2019 – July 31, 2020
- *Design and Implementation of Multi-master Multi-slave Cooperative Teleoperation Systems with Force Feedback* (Supported by Ministry of Science and Technology, Taiwan) August 1, 2017 – July 31, 2018
- *Design and Implementation of Adaptive Cooperative Teleoperation Systems with Force Feedback* (Supported by Ministry of Science and Technology, Taiwan) August 1, 2016 – July 31, 2017
- *Design and Implementation of Adaptive Containment Controllers for Euler-Lagrange Multi-robot Systems with Dynamic Surface Control and Type-2 Neuro-fuzzy Network* (Supported by Ministry of Science and Technology, Taiwan) August 1, 2014 – July 31, 2016
- *Fuzzy Sliding-Mode Formation Control for Multi-Robot Dynamic Systems with Switching Topologies and Time Delays* (supported by National Science Council, Taiwan) August 1, 2012 – July 31, 2014
- *Fuzzy Sliding-Model Formation Control of Multi-Robot Systems with Switching Topologies and Time-Delays* (supported by National Science Council, Taiwan) August 1, 2011 – July 31, 2012
- *Dynamic Searching and Guidance of Swarm Robots with Particle Swarm Optimization* (supported by National Science Council, Taiwan) August 1, 2008 – July 31, 2011
- *Development of Surgical Simulation Systems with Haptic Feedback* (supported by Ministry of Economic Affairs, Taiwan) December 1, 2008 – November 30, 2010
- *DSP/FPGA Based Dynamic Balance Control of Robots* (supported by National Science Council, Taiwan) August 1, 2007 – July 31, 2008
- *Development of Intelligent Temperature Control Systems with Networked Monitoring* (supported by National Science Council, Taiwan) November 1, 2006 – October 31, 2007
- *Development of SOPC Based Intellectual Properties of Induction Motor Control Systems* (supported by National Science Council, Taiwan) August 1, 2003 – July 31, 2006
- *Design and Implementation of Network-Based Linear Motor Drive Systems* (supported by National Science Council, Taiwan) August 1, 2002 – July 31, 2003

## TEACHING EXPERIENCE

<b>Chang Gung University</b>	Graduate	Linear Systems, Nonlinear Systems, Robust Control, Fuzzy Control, Neural Network, Adaptive Control, Multivariable Control Systems, Digital Control, Internet of Things, Practice in DSP Application
	Undergraduate	Linear Algebra, Control Engineering, Control Engineering Experiment, Signals and Systems, Logic Design, Logic Design Experiment, Electric

		Circuits, Electronics, Introduction to Internet of Things
<b>Yuan Ze University</b>	Undergraduate	Electronics
<b>Chung Cheng Institute of Technology</b>	Graduate	Linear Systems, Nonlinear Systems, Robust Control, System Identification
	Undergraduate	Electric Circuits, Electrical Machinery, Automatic Control, Digital Control, Numerical Analysis

### JOURNAL PAPERS (SELECTED)

- Y.-H. Chang, Y.-C. Hsieh, Y.-H. Chai, and H.-W. Lin, "Remaining-Useful-Life Prediction for Li-Ion Batteries," *Energies*, vol.16, no.3096, pp.1-22, 2023.
- Y.-H. Chang, C.-Y. Yang, and H.-W. Lin, "Adaptive Fuzzy-Sliding Consensus Control for Euler–Lagrange Systems with Time-Varying Delays," *Complexity*, vol.2022, no.9914940, pp.1-15, 2022.
- Y.-H. Chang and Y.-Y. Zhang, "Deep Learning for Clothing Style Recognition Using YOLOv5," *Micromachines*, vol. 13, no.1678, pp.1-18, 2022.
- Y.-H. Chang, Y.-Jen Chen, R.-H. Huang, and Y.-T. Yu, "Enhanced Image Captioning with Color Recognition Using Deep Learning Methods," *Applied Sciences*, vol.12, no.209, pp.1-15, 2022.
- Y.-H. Chang, N. Sahoo, J.-Y. Chen, S.-Y. Chuang, and H.-W. Lin, "ROS-Based Smart Walker with Fuzzy Posture Judgement and Power Assistance," *Sensors*, vol.21, no.2371, pp.1-19, 2021.
- S.-Y. Chung, N. Sahoo, H.-W. Lin, and Y.-H. Chang, "Predictive Maintenance with Sensor Data Analytics on a Raspberry-based Experimental Platform," *Sensors*, vol.19, no.3884, pp.1-25, 2019.
- N. Sahoo, H.-W. Lin, and Y.-H. Chang, "Design and Implementation of a Walking Stick Aid for Visually Challenged People," *Sensors*, vol.19, no.130, pp.1-17, 2019.
- Y.-H. Chang, C.-I Wu, and H.-W. Lin, "Adaptive Distributed Fault-tolerant Formation Control for Multi-robot Systems under Partial Loss of Actuator Effectiveness," *Int. J. Control, Automation, and Systems*, vol. 16, no. 5, pp.2114-2124, 2018.
- Y.-H. Chang, W.-S. Chan, and C.-I Wu, "Distributed Adaptive Dynamic Surface Containment Control for Uncertain Multiple Euler-Lagrange Systems," *Int. J. Control, Automation, and Systems*, vol. 16, no. 2, pp.403-416, 2018.
- S.-J. Cheng, J.-J. Liu, Y.-H. Chang, C.-M. Fu, C.-H. Hsu, C.-Y. Lee, and C.-W. Chang, "Correlation of Magnetostriction Variation on Magnetic Loss and Noise for Power Transformer," *Journal of Applied Physics*, vol. 117, pp.17E716 1-4, 2015.
- Y.-H. Chang and W.-S. Chan, "Adaptive Dynamic Surface Control for Uncertain Nonlinear Systems with Interval Type-2 Fuzzy Neural Networks," *IEEE Trans. on Cybernetics*, vol. 44, no. 2, pp.293-304, 2014.

- Y.-H. Chang, C.-Y. Yang, W.-S. Chan, H.-W. Lin, and C.-W. Chang, "Adaptive Fuzzy Sliding-Mode Formation Controller Design for Multi-robot Dynamic Systems," *Int. Journal of Fuzzy Systems*, vol. 16, no. 1, pp.121-131, 2014.
- Y.-H. Chang, C.-L. Chen, W.-S. Chan, and H.-W. Lin, "Type-2 Fuzzy Formation Control for Collision-Free Multi-Robot Systems," *Int. Journal of Fuzzy Systems*, vol. 15, no. 4, pp.435-451, 2013.
- H.-W. Lin, W.-S. Chan, C.-W. Chang, C.-Y. Yang, and Y.-H. Chang, "Adaptive Neuro-Fuzzy Formation Control for Leader-Follower Mobile Robots," *Int. Journal of Fuzzy Systems*, vol. 15, no. 3, pp.347-358, 2013.
- C.-H. Hsu, C.-Y. Lee, Y.-H. Chang, F.-J. Lin, C.-M. Fu, and J.-G. Lin, "Effect of Magnetostriction on the Core Loss, Noise, and Vibration of Fluxgate Sensor Composed of Amorphous Materials," *IEEE Trans. on Magnetics*, vol. 49, no. 7, pp.3862-3865, 2013.
- Y.-H. Chang, C.-L. Chen, W.-S. Chan, H.-W. Lin, and C.-W. Chang, "Fuzzy Formation Control and Collision Avoidance for Multi-Agent Systems," *Mathematical Problems in Engineering*, vol. 2013, pp.1-18, <http://dx.doi.org/10.1155/2013/908180>, 2013.
- Y.-H. Chang, W.-S. Chan, and C.-W. Chang, "T-S Fuzzy Model Based Adaptive Dynamic Surface Control for Ball and Beam System," *IEEE Trans. on Industrial Electronics*, vol. 60, no. 6, pp.2251-2263, 2013.
- C. W. Tao, J. S. Taur, C.-W. Chang, and Y.-H. Chang, "Simplified Type-2 Fuzzy Sliding Controller for Wing Rock System," *Fuzzy Sets and Systems*, vol. 27, pp.111-129, 2012.
- Y.-H. Chang, C.-I Wu, H.-C. Chen, C.-W. Chang, and H.-W. Lin, "Fractional Order Integer Sliding-Mode Flux Observer for Direct Field-Oriented Induction Machines," *Int. J. Innovative Computing, Information and Control*, vol. 8, no. 7, 2012.
- Y.-H. Chang, Y.-T. Chen, M.-H. Hung, and A. Y. Chang, "Development of an e-Operation Framework for SOPC-Based Reconfigurable Applications," *Int. J. Innovative Computing, Information and Control*, vol. 8, no. 5(B), pp.3639-3660, 2012.
- Y.-H. Chang, C.-W. Chang, C.-L. Chen, and C.-W. Tao, "Fuzzy Sliding-Mode Formation Control for Multi-Robot Systems: Design and Implementation," *IEEE Trans. on Systems, Man and Cybernetics-Part B*, vol. 42, no. 2, pp.444-457, 2012.
- C.-H. Hsu, Y.-H. Chang, C.-Y. Lee, C.-S. Yao, Y.-L. He, H.-L. Chu, C.-W. Chang, and W.-S. Chan, "Effects of Magnetomechanical Vibrations and Bending Stresses on Three-Phase Three-Leg Transformers with Amorphous Cores," *Journal of Applied Physics*, vol. 111, pp.07E730-1-3, 2012.
- Y.-H. Chang, C.-W. Chang, C.-W. Tao, H.-W. Lin, and J.-S. Taur, "Fuzzy Sliding-Mode Control for Ball and Beam System with Fuzzy Ant Colony Optimization," *Expert Systems with Applications*, vol. 39, no. 3, pp.3624-3633, 2012.

- B.-F. Hsu, Y.-H. Chang, Y.-C. Cheng, S.-K. Lie, C.-C. Lin, C.-H. Hsu, C.-W. Chang, W.-S. Jan, and C.-H. Chou, "Smart Maintenance System for Three-Phase Power Transformer via Fuzzy Logic Approach," *Int. J. of Circuits, Systems and Signal Processing*, vol. 5, no. 4, pp.370-381, 2011.
- Y.-H. Chang, C.-H. Hsu, H.-L. Chu, and C.-P. Tseng, "Influence of Bending Stress on Magnetic Properties of 3-Phase 3-Leg Transformers with Amorphous Cores," *IEEE Trans. on Magnetics*, vol. 47, no. 10, pp.2776-2779, 2011.
- Y.-H. Chang, C.-H. Hsu, H.-L. Chu, and C.-P. Tseng, "Magnetomechanical Vibrations of Three-Phase Three-Leg Transformer with Different Amorphous-Cored Structures," *IEEE Trans. on Magnetics*, vol. 47, no. 10, pp.2780-2783, 2011.
- C. W. Tao, J. Taur, C.-C. Chuang, C.-W. Chang, and Y.-H. Chang, "An Approximation of Interval Type-2 Fuzzy Controllers using Fuzzy Ratio Switching Type-1 Fuzzy Controllers," *IEEE Trans. on Systems, Man and Cybernetics: Part B*, vol. 41, no. 3, pp.828-839, 2011.
- Y.-H. Chang, C.-H. Hsu, H.-W. Lin, and C.-P. Tseng, "Reducing Audible Noise for Distribution Transformer with HB1 Amorphous Core," *Journal of Applied Physics*, vol. 109, pp.07A318-1-3, 2011.
- Y.-H. Chang, W.-S. Chan, C.-W. Chang, and C.-W. Tao, "Adaptive Fuzzy Dynamic Surface Control for Ball and Beam System," *Int. J. Fuzzy Systems*, vol. 13, no. 1, pp.1-7, 2011.
- Y.-H. Chang, C.-I. Wu, H.-W. Lin, and N.-D. Kuo, "Robust Performance Control of Vector-Controlled Induction Motors with Gain-Scheduled Estimation and Input-Output Linearization," *International Journal of Innovative Computing, Information and Control*, vol. 7, no. 1, pp.269-288, 2011.
- C.W. Tao, J.S. Taur, Y.-H. Chang, and C.W. Chang, "A Novel Fuzzy Sliding and Fuzzy Integral Sliding Controller for the Twin Rotor Multi-Input Multi-Output System," *IEEE Trans. on Fuzzy Systems*, vol. 18, no. 5, pp.893-905, 2010.
- Y.-H. Chang, C.-H. Hsu, C.-W. Chang, C.-W. Tao, H.-W. Lin, and C.-P. Tseng, "Influence of Annealing on Magnetic Properties and Sound Levels of Fe-Based Amorphous Cores Transformer," *Int. J. of Electronics, Electrical and Communication Engineering*, vol. 2, no. 1, pp.57-75, 2010.
- Y.-H. Chang, C.-H. Hsu, H.-W. Lin and C.-P. Tseng, "Systematic Study of Low Loss Amorphous Core Transformers: Design, Fabrication and Testing," *International Journal of Intelligent Systems Science and Technology*, vol. 2, no. 1, pp.36-43, 2010.
- Y.-H. Chang, Y.-T. Chen, H.-W. Lin, R.-J. Chen, C.-Y. Yeh, C.-T. Wu, and S.-T. Lee, "Real-Time Deformation of Soft Tissues with Haptic Rendering," *International Journal of Intelligent Systems Science and Technology*, vol. 2, no. 1, pp.50-57, 2010.
- Y.-H. Chang, C.-H. Hsu, and C.-P. Tseng, "Magnetic Properties Improvement of Amorphous Cores using Newly Developed Step-Lap Joints," *IEEE Trans. on Magnetics*, vol. 46, no.6, pp.1791-1794, 2010.
- K.-Y. Chang, W.-B. Wu, Y.-H. Chang, and P.-C. Chen, "Multi-Objective Controller Design for Uncertain Large-Scale Stochastic Systems with Time Delays via LMI Optimizations," *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol. 224, no.

3, pp.247-259, 2010.

Y.-H. Chang, Y.-T. Chen, C.-W. Chang, and C.-L. Lin, "Development Scheme of Haptic-Based System for Interactive Deformable Simulation," *Computer-Aided Design*, vol. 42, pp.414-424, 2010.

Y.-H. Chang, C.W. Chang, W.S. Chan, J.S. Taur, and C.W. Tao, "Robust and Stable Hybrid Fuzzy Control of a Pendulum-Cart System with Particle Swarm Optimization," *Int. J. Fuzzy Systems*, vol. 12, no. 1, pp.48-58, 2010.

Y.-H. Chang, C.W. Chang, J.S. Taur, and C.W. Tao, "Fuzzy Swing-Up and Fuzzy Sliding-Mode Balance Control for A Planetary Gear-Type Inverted Pendulum," *IEEE Trans. on Industrial Electronics*, vol. 56, no. 9, pp.3751-3761, 2009.

Y.-H. Chang, C.W. Chang, H.-W. Lin, and C.W. Tao, "Fuzzy Controller Design for Ball and Beam System with an Improved Ant Colony Optimization," *Proc. of World Academy of Science, Engineering and Technology*, vol.56, pp.616-621, 2009.

Y.-H. Chang, H.-W. Lin, Y.-H. Hu, and J.-H. Lee, "Fuzzy-Scheduling Control of Linear PM Synchronous Motor with Payload Variations," *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol. 222, no. 6, pp.465-479, 2008.

Y.-H. Chang, C.-W. Chang, C.-H. Yang, and C. W. Tao, "Swing Up Balance Control of Planetary Train Type Pendulum with Fuzzy Logic and Energy Compensation," *Int. J. Fuzzy Systems*, vol. 9, no. 2, pp.87-94, 2007.

W.-B. Wu, G. Chen, P.-C. Chen, K.-Y. Chang, and Y.-H. Chang, "Robust Decentralized Control with Multi-Objective Performance Design for Stochastic Large-Scale System via LMI Approach," *Proc. of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol. 221, no. 7, pp.1047-1060, 2007.

Y.-H. Chang, Y.-Y. Wang, P.-C. Chen, and M.-H. Hung, "Fuzzy-Scheduling Integral Control of Induction Servo Motor with Actuator Saturation via LMI Approach," *Int. J. Computer Applications in Technology*, vol.27, no.2/3, pp.107-118, 2006.

Y.-H. Chang, Y.-Y. Wang, P.-C. Chen, and M.-H. Hung, "Regional Stability and  $H_\infty$  Performance Control of Input-Saturated Induction Motor via LMI Approach," *Asian Journal of Control*, vol.7, no.4, pp.368-379, 2005.

C.-D. Yang, C.-C. Luo, S.-J. Liu, and Y.-H. Chang, "Applications of Genetic-Taguchi Algorithm in Flight Control Design," *J. of Aerospace Engineering*, vol.18, no.4, pp.232-241, 2005.

Y.-H. Chang, H.-W. Lin, and G. Chen, "Compensation on Hall Effect Sensor of PWM Switching Control," *J. of Magnetism and Magnetic Materials*, vol. 282, pp.307-310, 2004.

P.-C. Chen, Y.-F. Jeng, Y.-H. Chang, Y.-M. Wang, and G. Chen, "Robust Gain-Scheduled Control of Vertical Takeoff Aircraft with Actuator Saturation via LMI Method," *Asian Journal of Control*, vol.6, no.1, pp.112-122, 2004.

- P.-C. Chen, Y.-H. Chang, Y.-M. Wang, and G. Chen, "Coordinated Power System Stabilizer Design via Gain-Scheduled  $H_\infty$ -Optimization", J. Chinese Institute of Electrical Engineering, vol.10, no.3, pp.235-246, 2003.
- C.-C. Luo, R.-F. Liu, C.-D., Yang, and Y.-H. Chang, "Helicopter  $H_\infty$  Control Design with Robust Flying Quality," Aerospace Science and Technology, vol.7, no.2, pp.159-169, 2003.
- T.-K. Lin, Y.-H. Chang, and D.-R. Huang, "Design Method of 3D Flux Magnetic Leakage Profiles for High Precise Motor Drive," Journal of Applied Physics, vol.91, no.10, pp.6970-6972, 2002.
- Y.-H. Chang, J.-C. Chang, C.-J. Lee, and Y.-Y. Wang, "Modeling and QFT-Based Controller Design of Vector Control Induction Motors," J. Chinese Institute of Engineers, vol.24, no.4, pp.473-485, 2001.
- Y.-H. Chang and J.-C. Chang, "Quantitative Design for Multivariable Systems with Uncertainty," Int. J. Systems Science, vol.32, no.3, pp.331-344, 2001.
- Y.-H. Chang and J.-C. Chang, "Robust Wedge-Stability Analysis and Synthesis of Constrained Continuous Systems by Stability Radii," Int. J. Systems Science, vol.31, no.9, pp.1067-1075, 2000.
- Y.-H. Chang and Y.-Y. Wang, "Self-Tuning Speed Controller Design of Vector Control Induction Motor Drives," J. Chinese Institute of Electrical Engineering, vol.7, no.4, pp.263-273, 2000.
- C.-P. Liu, T.-K. Lin, Y.-H. Chang, C.-S. Yu, K.-T. Wu, S.-J. Wang, T.-F. Ying, and D.-R. Huang, "Study of Eddy Current and Power Loss from Outer-Winding Coils of a Magnetic Position Sensor," J. of Magnetism and Magnetic Materials, vol.209, no.1-3, pp.201-204, 2000.
- T.-K. Lin, Y.-H. Chang, H.-C. Huang, S.-J. Wang, T.-F. Ying, and D.-R. Huang, "The Dynamic Performance Affected by the Axial Magnetic Force for a DVD Spindle Motor," J. of Magnetism and Magnetic Materials, vol.209, no.1-3, pp.183-185, 2000.
- C.-P. Liu, T.-K. Lin, Y.-H. Chang, S.-H. Hu, K.-T. Wu, L.-T. Kuo, H.-C. Huang, T.-F. Ying, and D.-R. Huang, "The Performance of a Single-Phase DC Brushless Motor Utilizing the Ferromagnetic Base Material," J. of Magnetism and Magnetic Materials, vol.209, no.1-3, pp.176-179, 2000.
- Y.-H. Chang, "Robust Regional Stability Analysis of Continuous Time-Delay Systems," IEE Control Theory and Applications, vol.146, no.4, pp.311-318, 1999.
- Y.-H. Chang, J.-C. Chang, and L.-W. Chen, "Quantitative Robust Diagonal Controller Design for MIMO Systems," Journal of Chinese Institute of Engineers, vol.21, no.4, pp.425-440, 1998.
- Y.-H. Chang and G.L. Wise, "Robust Gamma-Stability of Highly Perturbed Systems," IEE Control Theory and Applications, vol.145, no.2, pp.165-176, 1998.
- Y.-H. Chang, "Robust D-Stability Analysis for Discrete-Time Delay Systems via Stability Radii," Journal of Control Systems and Technology, vol.5, no.4, pp.263-276, 1997.
- Y.-H. Chang, T.-T. Lee, and C.-H. Liu, "On-Line Approximation Cartesian Path Trajectory Planning for Robotic Manipulator," IEEE Trans. Systems, Man, and Cybernetics, vol.22, no.3, pp.542-547, 1992.

## WORK IN PROGRESS

Intelligent systems (智慧型系統)  
Exoskeleton robots (外骨骼機器人)  
Machine learning (機器學習)  
Internet of things (物聯網)

## HONORS AND AWARDS

- 2021 Bronze Medal, 21<sup>th</sup> Macronix Golden Silicon Award, Taiwan (銅獎-旺宏金矽獎)
- 2018 Best paper, 2018 Int. Conf. on Applied System Innovation
- 2017 1<sup>st</sup> place, Performance Competition of Field Practice, Chang Gung University
- 2017 Bronze Medal, 17<sup>th</sup> Macronix Golden Silicon Award, Taiwan (銅獎-旺宏金矽獎)
- 2015 Excellence in Teaching Award, Chang Gung University (優良教師教學獎)
- 2015 Winning Award, 15<sup>th</sup> Macronix Golden Silicon Award, Taiwan (優勝-旺宏金矽獎)
- 2014 Honorable Alumni, Chung Cheng Inst. of Technology, National Defense University, Taiwan (中正理工學院校友楷模)
- 2013 1<sup>st</sup> place, Life Science Group, Paper Contest for Virtual Instrument Control, National Instruments Co., Taiwan (NI學術論文競賽-生命科學組第一名)
- 2011 Honorable Mention, Paper Contest for Virtual Instrument Control, National Instruments Co., Taiwan
- 2009 Best paper, 9th WSEAS Int. Conf. on Robotic, Control and Manufacturing Technology
- 2007 Excellence in Teaching Award, Chang Gung University (優良教師教學獎)
- 2007 1<sup>st</sup> place, Paper Contest for Virtual Instrument Control, National Instruments Co., Taiwan
- 2005 Excellent Supervisor in Field Practice, Chang Gung University
- 2004 Excellent Supervisor in Field Practice, Chang Gung University
- 1999 Excellence in Performance Award, Ministry of National Defense, Taiwan
- 1998 Excellence in Teaching Award, Ministry of National Defense, Taiwan
- 1998 Excellence in Teaching Award, Chung Cheng Institute of Technology
- 1997 Excellence in Teaching Award, Chung Cheng Institute of Technology
- 1990 Excellence in Teaching Award, Chung Cheng Institute of Technology

## PROFESSIONAL MEMBERSHIPS AND SERVICES

- IEEE Senior Member (SM'12)
  - IEEE Control Systems Society
  - IEEE Computational Intelligence Society
  - IEEE Industrial Electronics Society
  - IEEE Power Electronics Society
- Automatic Control Society, Taiwan