

Publications

Journal Papers in Year 2011

1. KY Lum, J Xu, LH Xie and AP Loh, "A Novel UIO-based Approach for Fault Detection and Isolation in Finite Frequency Domain", *International Journal of Control, Automation and Systems*, Vol. 9, No. 3, pp. 601-605, January 2011.
2. D Zhang, L Yu and QG Wang, "Fault detection for a class of network-based nonlinear systems with communication constraints and random packet dropouts", *International Journal of Adaptive control and Signal Processing*, pp. 181-186, May 2011.
3. B Yun, G Cai, BM Chen, K Peng and KY Lum, "GPS signal enhancement and attitude determination for a mini and low-cost unmanned aerial vehicle," *Transactions of the Institute of Measurement and Control*, Vol. 33, No. 6, pp. 665–682, August 2011.
4. A Karimodini, H Lin, BM Chen and TH Lee, "Hybrid formation control of the autonomous helicopters," *Mechatronics*, Vol. 21, No. 5, pp. 886–898, August 2011.
5. G Cai, BM Chen, X Dong and TH Lee, "Design and implementation of a robust and nonlinear flight control system for an unmanned helicopter", *Mechatronics*, Vol. 21, No. 5, pp. 803–820, August 2011.
6. X Liu, H Lin and BM Chen, "Null controllability of planar bimodal piecewise linear systems", *International Journal of Control*, Vol. 84, No. 4, pp. 766–782, April 2011.
7. X Dong, BM Chen, G Cai, H Lin and TH Lee, "A comprehensive real-time software system for flight coordination and cooperative control of multiple unmanned aerial vehicles," *International Journal of Robotics and Automation*, Vol. 26, No. 1, pp. 49–63, February 2011.
8. CY Lai, C Xiang and TH Lee, "Input-Output Transition Models for Discrete-Time Switched Linear and Nonlinear Systems", *Control & Intelligent Systems*, Vol. 39, No.1, pp. 47-59, 2011.
9. Y Su, KK Tan and TH Lee, "Model predictive control for systems with stochastic multiplicative uncertainty and probabilistic constraints", *Automatica*, Vol. 47, No. 2, pp. 427-428, February 2011.
10. JH Zhou, CK Pang, ZW Zhong and FL Lewis, "Tool Wear Monitoring Using Acoustic Emissions for Dominant Feature Identification", *IEEE Transactions on instrumentation and measurement*, Vol. 60, No. 2, pp. 547-559, February 2011.
11. TH Lee, KK Tan and S Huang, "Adaptive Friction Compensation with a Dynamical Friction Model", *IEEE-ASME Transactions on Mechatronics*, Vol.16, No. 1, pp.133-140, February 2011.
12. KR Qin and C Xiang, "Hysteresis Modeling for Calcium-mediated Ciliary Beat Frequency in Airway Epithelial Cells", *Mathematical Biosciences*, Vol. 229, No. 1, pp. 101-108, January 2011.
13. C Xiang, L Cao, QG Wang and TH Lee, "General Framework for delay compensation for input-delay systems via predictive control design", *Control and Intelligent System*, Vol. 39, No. 2, pp. 129-140, 2011.
14. WC Teck, WW Tan, "Non-singleton genetic fuzzy logic system for arrhythmias classification", *Engineering Applications of Artificial Intelligence*, Vol. 24, No. 2, pp. 251-259, March 2011.
15. N Maowen, WW Tan, "Stable adaptive fuzzy PD plus PI controller for nonlinear uncertain systems", *Fuzzy Sets and Systems*, Vol. 179, No. 1, pp. 1-19, September 2011.

16. JH Zhou, CK Pang, FL Lewis, and ZW Zhong, "Dominant Feature Identification for Industrial Fault Detection and Isolation Applications," *Expert Systems with Applications*, Vol. 38, No. 8, pp. 10676-10684, August 2011.
17. SS Ge, Q Zhang, AT Abraham and B Rebsamen, "Simultaneous Path Planning and Topological Mapping (SP2ATM) for Environment Exploration and Goal Oriented Navigation", *Robotics and Autonomous System*, Vol. 59, No. 3-4, pp. 228-242, March 2011.
18. BVE How, SS Ge, and YS Choo, "Control of Coupled Vessel, Crane, Cable and Payload Dynamics for Subsea Installation Operations", *IEEE Transactions on Control System Technology*, Vol. 19, No. 01, pp. 208 – 220, January 2011.
19. H Du, SS Ge and JK Liu, "Adaptive neural network output feedback control for a class of non-affine non-linear systems with unmodelled dynamics", *IET Control Theory and Applications*, Vol. 5, No. 3, pp. 465-477, March 2011.
20. H Du and SS Ge, "Output feedback adaptive neural control for a class of non-affine non-linear systems with a dynamic gain observer", *IET Control Theory and Applications*, Vol. 5, No. 3, pp. 486-497, March 2011.
21. PP San, B Ren, SS Ge, TH Lee, and JK Liu, "Adaptive Neural Network Control of Hard Disk Drives with Hysteresis Friction Nonlinearity", *IEEE Transactions on Control Systems Technology*, Vol. 19, No. 2, pp. 351-358, March 2011.
22. M Chen, SS Ge and B Ren, "Adaptive tracking control of uncertain MIMO nonlinear systems with input constraints", *Automatica*, Vol. 47, No. 3, pp. 452-465, March 2011.
23. W He, SS Ge, BVE How, YS Choo, and KS Hong, "Robust Adaptive Boundary Control of a Flexible Marine Riser with Vessel Dynamics", *Automatica*, Vol. 47, No. 4, pp. 722-732, April 2011.
24. Y Li, C Yang, SS Ge and TH Lee, "Adaptive Output Feedback NN Control of a Class of Discrete-Time MIMO Nonlinear Systems with Unknown Control Directions", *IEEE Transactions on System, Man and Cybernetics, Part B*, Vol. 41, No. 2, pp. 507-517, March 2011.
25. M Rehan, KS Hong and SS Ge, "Stabilization and tracking control for a class of nonlinear systems", *Nonlinear Analysis - Real World Applications*, Vol. 12, No. 3, pp. 1786-1796, June 2011.
26. K Yang, SS Ge, HS He, "Robust line detection using two-orthogonal direction image scanning", *Computer Vision and Image Understanding*, Vol. 115, No. 8, pp. 1207-1222, August 2011.
27. SS Ge, S Zhang and W He, "Modeling and Control of a Vibrating Beam under Unknown Spatiotemporally Varying Disturbance", *International Journal of Control*, Vol. 84, No. 5, pp. 947-960, May 2011.
28. Y Liu, SS Ge, C Li, and Z You, "K-NS: A Classifier by the Distance to the Nearest Subspace", *IEEE Transactions on Neural Networks*, Vol. 22, No. 8, pp. 1256-1268, August 2011.
29. JJ Cabibihan, R Pradipta, SS Ge, "Prosthetic finger phalanges with lifelike skin compliance for low-force social touching interactions", *Journal of NeuroEngineering and Rehabilitation*, Vol. 8, No. 1, pp. 16-22, March 2011.
30. KK Tan, AS Putra, LP Pham, TH Lee, M Salto-tellez and LG Kim, "Development of a Portable Tissue Micro Array Instrument", *Journal of Medical Devices*, Vol. 5, No. 4, pp. 44503, December 2011.
31. S Huang and KK Tan, "A Soft Technique for Measuring Friction Force Using Neural Network", *Sensors & Transducers Journal*, Vol. 133, No. 10, pp. 1-7, October 2011.
32. JJ Cabibihan, "Patient-Specific Prosthetic Fingers by Remote Collaboration—A Case Study", *Public Library of Science (PLoS) ONE*, 6(5): e19508. (IF = 4.411), 2011.

33. J Ham, R Bokhorst, R Cuijpers, D van der Pol and JJ Cabibihan, "Making Robots Persuasive: The Influence of Combining Persuasive Strategies (Gazing and Gestures) by a Storytelling Robot on Its Persuasive Power", *Social Robotics: Springer Berlin / Heidelberg*, pp. 71-83, 2011.
34. H Li, JJ Cabibihan and YK Tan, "Towards an Effective Design of Social Robots (Preface to the Special Issue)", *International Journal of Social Robotics*, vol 3, 4, pp. 333-335, 2011.

Conference Papers in Year 2011

1. F Wang, SK Phang, J Cui, BM Chen and TH Lee, "Search and rescue: a UAV aiding approach", *Proceedings of the 23rd Canadian Congress on Applied Mechanics 2011*, pp. 183-186, 5 - 9 June 2011, Canada.
2. F Hong, CK Pang and G Dai, "Integrated Control Design for High-Performance Mechatronic Systems Using Nyquist Plots", *Proceedings of the 2011 ASME ISPS Conference 2011*, pp. 96-98, 13-14 June 2011, United Kingdom.
3. CK Pang, WE Wong, F Hong, JN Teoh and EH Ong, "Projection of Achievable Track Density and Bit Aspect Ratio for 4 TB/in² Bit Patterned Media on Hard Disk Drives", *Proceedings of the 23rd Canadian Congress on Applied Mechanics 2011*, pp. 61-64, 5 - 9 June 2011, Canada.
4. JX Xu and X Niu, "Analytical control design for a biomimetic robotic fish", *Proceedings of 2011 IEEE International Symposium on Industrial Electronics*, 27 - 30 June 2011, Poland.
5. WY Chen, JX Xu and SK Panda, "A study on automatic machine condition monitoring and fault diagnosis for bearing and unbalanced rotor faults", *Proceedings of 2011 IEEE International Symposium on Industrial Electronics*, 27-30 June 2011, Poland.
6. L Liu, KK Tan, W Liang, S Huang and TH Lee, "Flexible spacecraft jitter and its suppression by steward platform", *Proceedings of the 2011 Canadian Congress of Applied Mechanics*, pp. 57-60, 5-9 June 2011, Canada.
7. J Yuan, KK Tan and TH Lee, "Development of an inexpensive ubiquitous health monitoring system for the elderly", *Proceedings of the 2011 Canadian Congress of Applied Mechanics*, pp. 291-294, 5 - 9 June 2011, Canada.
8. B Wang, BM Chen and TH Lee, "An RPT approach to time-critical path following of an unmanned helicopter", *Proceedings of the 8th Asian Control Conference*, pp. 211-216, 15 -18 May 2011, Taiwan.
9. YZ Tan, CK Pang, F Hong, S Won and TH Lee, "Hysteresis Compensation of Piezoelectric Actuators in Dual-Stage Hard Disk Drives", *Proceedings of the 8th ASCC 2011*, pp. 1024-1029, 15 - 18 May 2011, Taiwan.
10. CK Pang, JH Zhou, ZW Zhong and FL Lewis, "Industrial Fault Detection and Isolation Using Dominant Feature Identification", *Proceedings of the 8th ASCC 2011*, pp. 1018-1023, 15-18 May 2011, Taiwan.
11. M Chamanbaz, V Venkatakrisnan, QG Wang and YF Liew, "Limitations to achieve high bandwidth control in hard disk drive servo systems", *APMRC Digest 2010*, pp. 1-2, January 2011, Singapore.
12. G Cai, B Wang, BM Chen and TH Lee, "Design and implementation of an unmanned rotorcraft flight control system using RPT control approach", *Proceedings of the 30th Chinese Control Conference*, pp. 6492-6497, July 2011, China.

13. Y Li, SS Ge, C Yang, X Li and KP Tee, "Impedance Control for Safe Human-Robot Interaction", *Proceedings of the 2011 IEEE International Conference on Robotics and Automation (ICRA 2011)*, 9-13 May 2011, China.
14. Y Li, SS Ge and C Yang, "Impedance Control for Multi-Point Human-Robot Interaction", *Proceedings of the 8th Asian Control Conference (ASCC 2011)*, pp. 1187-1192, 15-18 May 2011, Taiwan.
15. SS Ge, X Li and P Yaozhang, "Fusion of CSP-derived features and Time-Domain Parameters for mind robotics control", *Proceeding of the 8th Asian Control Conference (ASCC 2011)*, pp. 79-84, 15-18 May 2011, Taiwan.
16. XS Hu, KS Hong, SS Ge and MY Jeong, "Extended General Linear Model Based On-Line Brain Activation Mapping", *IEEE International Symposium on Biomedical Imaging: from Nano to Macro (ISBI'11)*, pp. 2002-2005, March 30-April 02, 2011, USA.
17. XS Hu, KS Hong and SS Ge, "Wavelet packet entropy based brain activation mapping by near infrared spectroscopy", *Human Brain Mapping Conference*, 26-30 June 2011, Canada.
18. XS Hu, KS. Hong and SS Ge, "Wavelet packet entropy based brain activation mapping using near infrared spectroscopy", *International Conference on Advanced Mechatronic Systems*, 11-13 August 2011, China.
19. X Zheng and BM Chen, "Identification of stock market forces in the system adaptation framework", *Proceedings of the 9th IEEE International Conference on Control and Automation*, pp. 340-347, 19-21 December 2011, USA.
20. K Tang, B Wang, W Kang and BM Chen, "Minimum time control of helicopter UAVs using computational dynamic optimization", *Proceedings of the 9th IEEE International Conference on Control and Automation*, pp. 848-852, 19-21 December 2011, USA.
21. S Zhao, F Lin, K Peng, KY Lum, BM Chen and TH Lee, "Vision-aided inertial navigation for unmanned aerial vehicles in unknown environments", *Proceedings of the 2011 Chinese Automation Congress*, 8-13 November 2011, China.
22. A Karimoddini, X Dong, G Cai, F Lin, H Lin, BM Chen and TH Lee, "A composed hybrid structure or the autonomous flight control of unmanned helicopters", *Proceedings of the 18th IFAC World Congress*, pp. 2632-2637, August-September 2011, Italy.