

Selected Papers

Journal Publications

1. A Karimodini, H Lin, BM Chen and TH Lee, "Hierarchical hybrid modeling and control of an unmanned helicopter", *International Journal of Control*, Vol. 87, No. 9, pp. 1779-1793, September 2014.
2. X Zheng and BM Chen, "Identification of stock market forces in the system adaptation framework", *Information Sciences*, Vol. 265, pp. 105-122, May 2014.
3. SK Phang, K Li, KH Yu, BM Chen and TH Lee, "Systematic design and implementation of a micro unmanned quadrotor system", *Unmanned Systems*, Vol. 2, No. 2, pp. 121-141, April 2014.
4. S Zhao, F Lin, K Peng, BM Chen and TH Lee, "Finite-time stabilization of cyclic formations using bearing-only measurements", *International Journal of Control*, Vol. 87, No. 4, pp. 715-727, April 2014.
5. S Zhao, BM Chen and TH Lee, "Optimal deployment of mobile sensors for target tracking in 2D and 3D spaces", *IEEE/CAA Journal of Automatica Sinica*, Vol. 1, No. 1, pp. 24-30, January 2014.
6. Y Sun, H Lin and BM Chen, "Bisimilarity enforcing supervisory control for deterministic specifications", *Automatica*, Vol. 50, No. 1, pp. 287-290, January 2014.
7. S Zhao, F Lin, K Peng, BM Chen and TH Lee, "Distributed control of angle-constrained circular formation using bearing-only measurements", *Systems & Control Letters*, Vol. 63, No. 1, pp. 12-24, January 2014.
8. C Bi, A Al Mamun, Y Yu, et al, "Vibration study and classification of rotor faults in PM synchronous motor", *Microsystem Technologies*, accepted for publication, available online from May, 2014.
9. M Chamanbaz, E Keikha, V Venkatakrishnan, A Al Mamun and QG Wang, "Design of a probabilistic robust track-following controller for hard disk drive servo systems", *Mechatronics*, accepted for publication, 2014.
10. MA Rahman, A Al Mamun and L Zhang, "Hysteresis analysis of high precision PZT actuator in dual-stage hard disk drive", *Advanced Materials Research*, 875-877, pp. 708-714, 2014.

11. Q Yu, HJ Tang, KC Tan, HZ Li, HY Yu, "A brain-inspired spiking neural network model with temporal encoding and learning", *Neurocomputing*, vol. 138, pp. 3-13, 2014.
12. Su, Nguyen, MJ Zhang, M Johnston and KC Tan, "Genetic programming for evolving reusable due-date assignment models in job shop environment", *Evolutionary Computation*, vol. 22, no. 1, pp. 105-138, 2014.
13. Su, Nguyen, MJ Zhang, M Johnston and KC Tan, "Automatic design of scheduling policies for dynamic multi-objective job shop scheduling via cooperative coevolution genetic programming", *IEEE Transactions on Evolutionary Computation*, vol. 18, no. 2, pp. 193-208, 2014.
14. TJ Teo, H Zhu and CK Pang, "Modeling of a Two Degrees-of-Freedom Moving Magnet Linear Motor for Magnetically Levitated Positioners," *IEEE Transactions on Magnetics*, Vol. 50, No. 12, December 2014.
15. CK Pang and CV Le, "Optimization of Total Energy Consumption in Flexible Manufacturing Systems Using Weighted P-Timed Petri Nets and Dynamic Programming," *IEEE Transactions on Automation Science and Engineering*, Vol. 11, No. 4, pp. 1083-1096, October 2014.
16. CK Pang, TS Ng and CL Sy, "Robust Systems Design Using Dynamic Small Signal Stability and Linear Programming for High-Performance Mechatronics," *Australian Journal of Electrical & Electronics Engineering*, Vol. 11, No. 3, pp. 275-287, September 2014.
17. F Hong and CK Pang, "A Peak Filtering Method with Improved Transient Response for Narrow-Band Disturbance Rejection in Hard Disk Drives," *International Journal of Systems Science*, Vol. 45, No. 2, pp. 109-119, February 2014.
18. C Bi, A Al Mamun, Y Yu, et al, "Vibration study and classification of rotor faults in PM synchronous motor", *Microsystem Technologies*, accepted for publication, available online from May, 2014.
19. M Chamanbaz, E Keikha, V Venkatakrishnan, A Al Mamun and Q.G. Wang, "Design of a probabilistic robust track-following controller for hard disk drive servo systems", *Mechatronics*, accepted for publication, 2014
20. M A Rahman, A Al Mamun and L Zhang, "Hysteresis analysis of high precision PZT actuator in dual-stage hard disk drive", *Advanced Materials Research*, 875-877, pp. 708-714, 2014

Conference Publications

1. M Zhang, F Lin and BM Chen, "Vision-based detection and pose estimation for formation of micro aerial vehicles", *13th International Conference on Control, Automation, Robotics and Vision*, Singapore, pp. 1473-1478, December 2014.
2. P Liu, X Dong and BM Chen, "Development of a comprehensive software system for cargo transportation by unmanned helicopters", *2014 International Conference on Intelligent Unmanned Systems*, Montreal, Canada, Paper 151, September-October 2014.
3. K Li, R Huang, SK Phang, S Lai, F Wang, P Tan, BM Chen and TH Lee, "Vision-based autonomous control of an ultralight quadrotor MAV", *2014 International Micro Air Vehicle Conference and Competition*, Delft, the Netherlands, pp. 50-57, August 2014.
4. F Wang, P Liu, S Zhao, BM Chen, SK Phang, S Lai, TH Lee and CX Cai, "Guidance, navigation and control of an unmanned helicopter for automatic cargo transportation", *33rd Chinese Control Conference*, Nanjing, China, pp. 1013-1020, July 2014.
5. S Zhao, Z Hu, M Yin, KZY Ang, P Liu, F Wang, X Dong, F Lin, BM Chen and TH Lee, "A robust vision system for a UAV transporting cargoes between moving platforms", *33rd Chinese Control Conference*, Nanjing, China, pp. 544-549, July 2014.
6. L Bai, S Yen, X Zheng and BM Chen, "Market turning points forecasting using wavelet analysis", *2014 International Conference of Financial Engineering*, London, UK, pp. 940-945, July 2014.
7. F Lin, K Peng, X Dong, S Zhao and BM Chen, "Vision-based formation for UAVs", *Proceedings of the 11th IEEE International Conference on Control & Automation*, Taichung, Taiwan, pp. 1375-1380, June 2014.
8. K Peng, T Pang, F Lin and BM Chen, "Autonomous mission execution for multiple unmanned aerial vehicles with hierarchical-distributed methodology", *Proceedings of the 11th IEEE International Conference on Control & Automation*, Taichung, Taiwan, pp. 1369-1374, June 2014.
9. F Wang, K Wang, S Lai, SK Phang, BM Chen and TH Lee, "An efficient UAV navigation solution for confined but partially known indoor environments", *Proceedings of the 11th IEEE International Conference on Control & Automation*, Taichung, Taiwan, pp. 1351-1356, June 2014.
10. K Ang, J Cui, T Pang, K Li, K Wang and BM Chen, "Development of an unmanned tail-sitter with reconfigurable wings: U-Lion", *11th IEEE International Conference on Control & Automation*, Taichung, Taiwan, pp. 750-755, June 2014.
11. SK Phang, S Lai, F Wang, M Lan and BM Chen, "UAV calligraphy", *11th IEEE International Conference on Control & Automation*, Taichung, Taiwan, pp. 422-

428, June 2014.

12. SK Phang, K Li, F Wang, BM Chen and TH Lee, "Explicit model identification and control of a micro aerial vehicle", *2014 International Conference on Unmanned Aircraft Systems*, Orlando, USA, pp. 1048-1054, May 2014.
13. J Cui, S Lai, BM Chen and TH Lee, "Autonomous navigation of UAV in forest", *2014 International Conference on Unmanned Aircraft Systems*, Orlando, USA, pp. 726-733, May 2014.
14. X Qiu, JX Xu, KC Tan, "A Novel Differential Evolution (DE) Algorithm for Multi-objective Optimization", *IEEE Congress on Evolutionary Computation (CEC)*, Beijing, China, July 6-11, 2014, pp. 2391-2396, 2014.
15. Q Yu, H Tang, and KC Tan, "A New Learning Rule for Classification of Spatiotemporal Spike Patterns", *International Joint Conference on Neural Networks (IJCNN)*, Beijing, China, July 6-11, 2014, pp. 3853-3858, 2014.
16. SB Gee and KC Tan, "Diversity Preservation with Hybrid Recombination for Evolutionary Multiobjective Optimization", *IEEE Congress on Evolutionary Computation (CEC)*, Beijing, China, July 6-11, 2014, pp. 1172-1178, 2014.
17. CK Pang, A Kumar, CH Goh, and CV Le, "Design and Robust Scheduling of Nano-Satellite Swarm for Synthetic Aperture Radar Applications," in *Proceedings of the 2014 IEEE ICARCV*, Th21.2, pp. 705-710, Singapore, December 10-12, 2014.
18. R Ren, CK Pang, L Ma and P Dutta, "An Experimental Study of Correlation between Text and Image Similarity by Information Fusion Approach," in *Proceedings of the 2014 IES*, pp. 671-685, Singapore, November 10-12, 2014.
19. XJ Wang, H Zhou and CK Pang, "Feature Extraction for Classification of Welding Quality in RSW Systems," *2014 IES*, pp. 307-317, Singapore, November 10-12, 2014.
20. WY Tay and CK Pang, "A Decision Support System for Laptop Procurement Using Mixed Text and Image Analytics," *2014 IES*, pp. 279-292, Singapore, November 10-12, 2014.
21. W Yan, C Du and CK Pang, "Direct Closed-Loop Identification of Mechanical Resonances Above the Nyquist Frequency Without Any External Persistently Exciting Signals," *2014 IEEE IECON*, pp. 2750-2755, Dallas, TX, USA, October 29-November 1, 2014.
22. H Zhu, CK Pang, TJ Teo and LT Marek, "Modeling and Design of a Size and Mass Reduced Magnetically Levitated Planar Positioner," *2014 IEEE IECON*, pp. 2366-2371, Dallas, TX, USA, October 29-November 1, 2014.
23. CK Pang, W Yan and C Du, "Multirate Adaptive Compensation of Uncertain Resonances Beyond the Nyquist Frequency," *9th IFAC World Congress*, WeB14.2, pp. 6837-6842, Cape Town, South Africa, August 24-29, 2014.

24. H Zhu, TJ Teo and CK Pang, "Conceptual Design and Modeling of a Six Degrees-of-Freedom Unlimited Stroke Magnetically Levitated Positioner," *2014 IEEE/ASME International Conference on AIM*, ThCT1.3, pp. 1569-1574, Besançon, France, July 8-11, 2014.
25. CK Pang and CV Le, "Renyi Mean-Entropy Criterion for Robust Energy Optimization of Industrial Stamping Systems," *2014 IEEE ICCA*, FrB1.6, pp. 1108-1113, Taichung, Taiwan, June 18-20, 2014.
26. CK Pang and CV Le, "An Energy Data-Driven Decision Support System for High Performance in Industrial Injection Moulding and Stamping Systems," *2014 IEEE ICCA*, FrB1.5, pp. 1102-1107, Taichung, Taiwan, June 18-20, 2014.
27. YZ Tan, CK Pang, TS Ng and TH Lee, "Integrated Servo-Mechanical Design of Robust Mechatronics Based on Low-Order Moments and Support," *2014 IEEE AMC*, pp. 49-54, Yokohama, Japan, March 14-16, 2014.