

Courses, seminars or panel session presentations

- “Smart grid research: A sustainable development for the future world”, 3 March 2011, EEE Department in HKU
- “A half-day course on power system stability and control in interconnected systems” on 25 November 2011 in CLP Power
- A four-day short course on “Power system stability and control” with Prof. P. Kundur (FIEEE) on 18-21 December 2007 (sponsored by CLP Power and Hongkong Electric Co Ltd; and supported by HKIE, IEEE(HK) and IET(Hong Kong)) held in Hong Kong.
- Invited tutorial session on “Determining power market Nash equilibrium using evolutionary computation” with Prof. K.P. Wong (FIEEE) at 14th International Conference on Intelligent System Applications to Power Systems” (ISAP 2007), Taiwan, 4-8 November 2007.
- “Advanced Small-signal Security Assessment Tools for Power Systems”, Presented at Panel Session on *Advanced Technologies in Modern Power Systems*, IEE International Conference on APSCOM2006, Nov. 2006, Hong Kong.
- “Evolutionary Computation Techniques for Power Market Equilibrium Determination”, Presented at IEEE PES General Meeting Panel Session on *Energy Issues under Deregulated Electricity Energy Markets*, Montreal, Quebec, Canada, 18-22 June, 2006.
- “Development of ‘Small-Signal Analysis Tool (SSAT)’ for Stability Assessment of Large-Scale Power Systems”, organized by the *Joint Chapter of PES/IAS/PELS/IES, IEEE(HK)*, 1 April 2004.
- “Small-Signal Analysis in Power Systems”, presented in South China University of Technology, China, 4 April 2004.
- “Increasing power transfer limits at interfaces constrained by small-signal stability”, Presented at IEEE PES Winter Meeting Panel Session on *Recent Applications of Small Signal Analysis Techniques*, New York, January 2002.
- “Versatile Modeling of System Components in Large Scale Power System” organized by the *Joint Chapter of PES/IAS/PELS/IES, IEEE(HK)*, 4 March 1996.

IEEE Transactions on Power Systems (the best Journals in power systems and around 250 papers per year only)

- [1] D.P. Ke and C.Y. Chung, “An inter-area mode oriented pole-shifting method with coordination of control effects for robust tuning of power oscillation damping controllers”, *IEEE Trans. on Power Systems*, accepted.
- [2] H.M. Yang, C.Y. Chung and K.P. Wong, “Optimal fuel power and load-based emissions trades for electric power supply chain equilibrium”, *IEEE Trans. on Power Systems*, accepted.
- [3] X. D. Liang, W. Xu, C.Y. Chung and K. Xiong, “Dynamic load models for industrial facilities”, *IEEE Trans. on Power Systems*, accepted.
- [4] D.P. Ke, C.Y. Chung and Y. Xue, “An eigenstructure-based performance index and its application to control design for damping inter-area oscillations in power systems, " *IEEE Trans. on Power Systems*, Vol. 26, No. 4, November 2011, pp. 2371-2380.
- [5] C.Y. Chung, Wei Yan and F. Liu, “Decomposed predictor-corrector interior point method for dynamic optimal power flow”, *IEEE Trans. on Power Systems*, Vol. 26, No. 3, August 2011, pp. 1030-1039.
- [6] H. Yan, C.Y. Chung and K.P. Wong, “Robust Transmission Network Expansion Planning Method with Taguchi’s Orthogonal Array Testing”, *IEEE Trans. on Power Systems*, Vol. 26, No. 3, August 2011, pp. 1573-1580.
- [7] C.Y. Chung, H. Yu and K. P. Wong, “An advanced quantum-inspired evolutionary algorithm for unit commitment," *IEEE Trans. on Power Systems*, Vol. 26, No. 2, May 2011, pp. 847-854.
- [8] M.H. Yin, C.Y. Chung, K.P. Wong, Y.S. Xue and Y. Zou, “An improved iterative method for assessment of multi-swing transient stability limit," *IEEE Trans. on Power Systems*, Vol. 26, No. 4, November 2011, pp. 2023-2030.

- [9] S.X. Zhang, C.Y. Chung, K.P. Wong and H. Chen, "Analyzing Two-settlement Electricity Market Equilibrium by Coevolutionary Computation Approach", *IEEE Trans. on Power Systems*, Vol. 24, No. 3, August 2009, pp. 1155-1164.
- [10] T.W. Lau, C.Y. Chung, K.P. Wong, T.S. Chung and S.L. Ho, "Quantum-Inspired Evolutionary Algorithm Approach for Unit Commitment", *IEEE Trans. on Power Systems*, Vol. 24, No. 3, August 2009, pp. 1503-1512.
- [11] H. Yu, C.Y. Chung, K.P. Wong and J.H. Zhang, "A Chance Constrained Transmission Network Expansion Planning Method with Consideration of Load and Wind Farm Uncertainties," *IEEE Trans. on Power Systems*, Vol. 24, No. 3, August 2009, pp. 1568-1576.
- [12] H. Yu, C.Y. Chung, K.P. Wong, H.W. Lee and J.H. Zhang, "Probabilistic Load Flow Evaluation with Hybrid Latin Hypercube Sampling and Cholesky Decomposition", *IEEE Trans. on Power Systems*, Vol. 24, Issue 2, May 2009, pp. 661-667.
- [13] H.R. Cai, C.Y. Chung and K.P. Wong, "Application of Differential evolution algorithm for transient stability constrained optimal power flow", *IEEE Trans. on Power Systems*, Vol. 23, Issue 2, May 2008, pp. 719-728.
- [14] J. Yu, W. Yan, W. Li, C.Y. Chung and K.P. Wong, "An unfixed piecewise-optimal reactive power-flow model and its algorithm for AC-DC systems", *IEEE Trans. on Power Systems*, Vol. 23, Issue 1, Feb 2008, pp. 170-176.
- [15] C.H. Liang, C.Y. Chung and K.P. Wong and X.Z. Duan, "Parallel optimal reactive power flow based on cooperative co-evolutionary differential evolution and power system decomposition", *IEEE Trans. on Power Systems*, Vol. 22, Issue 1, Feb 2007, pp. 249-257.
- [16] H. Chen, K.P. Wong, C.Y. Chung and D.H.M. Nguyen, "A coevolutionary approach to analyzing supply function equilibrium model", *IEEE Trans. on Power Systems*, Vol. 21, Issue 3, Aug. 2006 pp. 1019-1028.
- [17] Yan Wei, Liu Fang, C.Y. Chung and K.P. Wong, "A hybrid strategy based on GA and IPM for optimal reactive power flow", *IEEE Trans. on Power Systems*, Vol. 21, Issue 3, Aug. 2006, pp. 1163-1169.
- [18] H. Chen, K.P. Wong, D. H. M. Nguyen and C. Y. Chung, "Analyzing oligopoly electricity market using coevolutionary computation", *IEEE Trans. on Power Systems*, Vol. 21, Issue 1, Feb. 2006, pp. 143-152.
- [19] C.Y. Chung, L. Wang, F. Howell and P. Kundur, "Generation rescheduling methods to improve power transfer capability constrained by small-signal stability", *IEEE Trans. on Power Systems*, Vol. 19, No.1, February 2004, pp. 524-530.
- [20] C.Y. Chung, K.W. Wang, C.T. Tse, X.Y. Bian and A.K. David, "Probabilistic eigenvalue sensitivity analysis and PSS design in multimachine systems", *IEEE Trans. on Power Systems*, Vol. 18, No. 4, November 2003, pp. 1439-1445.
- [21] C.Y. Chung, K.W. Wang, C.T. Tse and N. Riu, "PSS design by probabilistic sensitivity indices", *IEEE Trans. on Power Systems*, Vol. 17, No. 3, August 2002, pp. 688-693.
- [22] K.W. Wang, C.Y. Chung, C.T. Tse and K.M. Tsang, "Multimachine eigenvalue sensitivities of power system parameters", *IEEE Trans. on Power Systems*, Vol. 15, No. 1, May 2000, pp. 741-747.

Selected recent SCI journals

- [23] I. R. Pordanjani, C. Y. Chung, H.E. Mazin and W. Xu, "A method to construct equivalent circuit model from frequency responses with guaranteed passivity", *IEEE Trans. on Power Delivery*, Vol. 26, No. 1, 2011, pp. 400-409.
- [24] Z.Z. Lin, F.S. Wen, C.Y. Chung, K.P. Wong and H. Zhou, "Division algorithm and interconnection strategy of restoration subsystems based on complex network theory", *IET Generation, Transmission and Distribution*, Vol. 5. Issue 6, 2011, pp. 674-683.
- [25] Z. Wang, C.Y. Chung, K.P. Wong, D. Gan and Y. Xue "Probabilistic Power System Stabilizer Design with Consideration of Optimal Siting Using Recursive Genetic Algorithm", *European Transactions on Electrical Power*, 2011, pp. 1409-1424.

- [26] X. Luo, C.Y. Chung, H.M. Yang and X.J. Tong, "Robust Optimization-Based Generation Self-Scheduling under Uncertain Price", *Mathematical Problems in Engineering*, vol. 2011, ID 497014, 17 pages, 2011.
- [27] W. Yan, Lili Wen, W. Li, C.Y. Chung and K.P. Wong, "Decomposition-coordination interior point method and its application to multi-area optimal reactive power flow", *International Journals of Electrical Power and Energy Systems*, 33(2011), 55-60.
- [28] J.F. Zhang, C.T. Tse, K.W. Wang and C.Y. Chung, "Voltage stability analysis based on probabilistic power flow and maximum entropy", *IET Generation, Transmission and Distribution*, Vol. 4. Issue 4, 2010, pp. 941-948.
- [29] C.Y. Chung, C.H. Liang, K.P. Wong and X.Z. Duan, "Hybrid Algorithm of Differential Evolution and Evolutionary Programming for Optimal Reactive Power Flow", *IET Generation, Transmission and Distribution*, Vol. 4. Issue 4, 2010, pp. 84-93.
- [30] Z.Wang, C.Y. Chung and K.P. Wong, "Systematic Approach to Consider System Contingencies in PSS Design", December 2009, *International Journals of Electric Power Systems Research*.
- [31] J.F. Zhang, C.T. Tse, K.W. Wang and C.Y. Chung, "Voltage Stability Analysis Considering the Uncertainties of Dynamic Load Parameters", *IET Generation, Transmission and Distribution*, Vol. 3. Issue 10, October 2009, pp. 941-948.
- [32] T.O. Ting, K.P. Wong and C.Y. Chung, "Hybrid Constrained Genetic Algorithm / Particle Swarm Optimisation Load Flow Algorithm", *IET Generation, Transmission and Distribution*, Vol. 2, Issue 6, November 2008, pp. 800-812.
- [33] Lu Gang, C.Y. Chung, K.P. Wong and F.S.Wen, "Unit maintenance scheduling coordination mechanism in electricity market environment", *IET Generation, Transmission and Distribution*, Vol. 2, Issue 5, September 2008, pp. 646-654.
- [34] Z. Wang, C.Y. Chung, K.P. Wong, C.T. Tse and K.W. Wang, "Robust power system stabilizer design under multioperating conditions using differential evolution", *IET Generation, Transmission and Distribution*, Vol. 2, Issue 5, September 2008, pp. 690-700.
- [35] H.M. Yang, C.Y. Chung, X.J. Tong and P.P. Bing, "Research on dynamic equilibrium of power market with complex network constraints based on nonlinear complementarity function", *International Journal of Industrial and Management Optimization*, Vol. 4, No. 3, August 2008, pp. 617-630.
- [36] G.Y. Wu, C.Y. Chung, K.P. Wong and C.W. Yu, "Voltage stability constrained optimal dispatch in deregulated power systems", *IET, Generation, Transmission and Distribution*, September 2007, 1, (5), pp. 761-768.
- [37] N. Yang, C.W. Yu, F.S. Wen and C.Y. Chung, "An investigation of reactive power planning based on chance constrained programming", *International Journals of Electrical Power and Energy Systems*, 29(2007), 650-656.
- [38] C.H. Liang, C.Y. Chung, K.P. Wong, X.Z. Duan and C.T. Tse, "Study of differential evolution for optimal reactive power flow", *IET, Generation, Transmission and Distribution*, Vol. 1, Issue 2, March 2007, pp. 253 – 260.
- [39] Wang Yong, K. P. Wong, C.Y. Chung and F.S. Wen, "Determination of appropriate price level in installed-capacity market", *IET, Generation, Transmission and Distribution*, Vol. 1, Issue 2, January 2007, pp. 127 – 132.
- [40] X.J. Lin, C.W. Yu, N. Xu, C.Y. Chung and H.Wu, "Reactive power service cost allocation using the Aumann-Shapley method", *IEE Proceedings, Generation, Transmission and Distribution*, Vol. 153, No. 3, 2006, pp. 540-546.
- [41] X.J. Lin, C.W. Yu, A.K. David and C.Y. Chung, "A novel market-based reactive power management scheme", *International Journals of Electrical Power & Energy Systems*, Vol. 28, No. 2, 2006, pp. 127-132.
- [42] Y. Cheng, T.S. Chung, C.Y. Chung, C.W. Yu, "Dynamic voltage stability constrained ATC calculation by a QSS approach", *International Journals of Electrical Power & Energy Systems*, Vol. 28, No. 2, 2006, pp. 408-412.
- [43] C.H. Liang, C.Y. Chung, K.P. Wong and X.Z. Duan, "Comparison and Improvement of Evolutionary Programming Techniques for Optimal Reactive Power Flow", *IEE Proceedings, Generation, Transmission and Distribution*. Vol. 153, Issue 2, 16 March 2006, pp. 228 – 236.