

## 國家通訊傳播委員會 委員

姓名	張時中 (CHANG, SHI-CHUNG)
學歷	美國康乃狄克大學電機及系統工程博士 美國康乃狄克大學電機及系統工程碩士 國立臺灣大學電機工程學系學士
經歷	◎國立暨南國際大學電機工程系教授 ◎國立暨南國際大學學生事務處學務長 ◎國立臺灣大學電信工程研究所教授 ◎國立臺灣大學工業工程學研究所教授 ◎國立臺灣大學工業工程學研究所兼任所長 ◎國立臺灣大學電機工程學系暨研究所教授 ◎國立臺灣大學電機工程學系/所副教授 ◎Alphatech Inc. Decision Systems 研究員
著作	<p>一、期刊論文：</p> <ol style="list-style-type: none"> <li>1. F. Zhao; P. B. Luh, . ; J. H. Yan; G. A. Stern; S. -C. Chang, “Payment Cost Minimization Auction for Deregulated Electricity Markets With Transmission Capacity Constraints” IEEE Transactions on Power Systems, Volume23, Issue 2, May 2008. pp.532 - 544.</li> <li>2. P. B. Luh, . , Bo Xiong, S. -C. Chang , “Group Elevator Scheduling With Advance Information for Normal and Emergency Modes” IEEE Transactions on Automation Science and Engineering, vol. 5, no.2, April 2008. pp. 245-258.</li> <li>3. B. -W. Hsieh, C. -H. Chen, S. -C. Chang , “Efficient Simulation-Based Combination of scheduling policies by Integrating Ordinal Optimization with Design of Experiment,” IEEE Transactions on Automation Sciences and Engineering, vol. 4, no. 4 Oct. 2007. pp. 553-568.</li> <li>4. S. -I. Chu, S. -C. Chang, “Time-of-day Internet Access Management by Combining Empirical Data-based Pricing with Quota-based Priority Control,” IET Communications, vol. 1, issue 4, August 2007, pp. 587-596.</li> <li>5. F. Zhao, P. B. Luh, J. H. Yan, G. A. Stern, S. -C. Chang, “Payment Minimization Auction for Deregulated Electricity Markets with Transmission Capacity Constraints,” to appear on IEEE Transactions on Power Systems. Vol. 45. No.3, February 2007. pp. 653-673.</li> <li>6. S. -C. Chang, M. -M. Hsieh, C. -W. Chen, “Reverse Auction-Based Job</li> </ol>

- Assignment among Foundry Fabs,” MASM Special Issue of International Journal of Production Research, Jan., 2007. pp. 653-657.
7. P. B. Luh, W. E. Blankson, Y. Chen, J. H. Yan, G. A. Stern, S.-C. Chang, F. Zhao, “Payment Minimization Auction for Deregulated Electricity Markets,” IEEE Transactions on Power Systems, vol. 21, issue 2, May 2006, pp. 568-578.
  8. S.-C. Chang, M.-C. Hsu, L.Y.-H. Ge, W.-C. Lin, “A Supervisory Control Approach for Automatic Protocol Conversion between Manufacturing Cell and Machine Controllers,” Bulletin of the College of Engineering, National Taiwan University, Jan. 2006.
  9. K.-H. Chen, T.D Chiueh, S.-C Chang, P.B. Luh, “A 1600-MIPS Parallel Processor IC for job-shop scheduling,” IEEE transaction on Industrial Electronics, vol. 51, issue 1, Feb. 2005. pp. 291-299.
  10. K.-H. Chen, T.-D. Chiueh, S.-C. Chang, P. B. Luh, “Design and Implementation of a Parallel Processor IC for Job Shop Scheduling,” to appear on IEEE Transaction on Industrial Electronics, 2004.
  11. Y.-H. Su, R.-S. Guo, S.-C. Chang, “Virtual Fab: Enabling Framework and Dynamic Manufacturing Service Provisioning Mechanism,” Information & Management, vol.42, issue 2, pp. 329-348 2004.
  12. T.-K. Hwang, S.-C. Chang, “Design of a Lagrangian Relaxation-Based Hierarchical Production Scheduling Environment for Semiconductor Wafer Fabrication,” IEEE Transaction on Robotics and Automation, vol. 19 , no. 4, Aug. 2003, pp. 566-578.
  13. T.C. Lin, Y. S. Sun, S.-C. Chang, S.-I Chu, Y.-T. Chou, M.-W. Li, “Management of Abusive and Unfair Internet Access by Quota-based Priority Control,” Computer Networks, Vol. 44, Issue 4, March 2004, pp. 441-462.
  14. M.-D. Hu, S.-C. Chang, “Translating Overall Production Goals into Distributed Flow Control Parameters for Semiconductor Manufacturing,” Journal of Manufacturing Systems, Vol. 22, No. 1, 2003, pp. 46-63.
  15. B.-W. Hsieh, C.-H. Chen, S.-C. Chang, “Scheduling Semiconductor Wafer Fabrication by Using Ordinal Optimization-based Simulation,” IEEE Trans. on Robotics and

- Automation, vol. 17, no. 5, Oct. 2001, pp.599-608. 016 C.-Y. Liu, S.-C. Chang, "Scheduling Flexible Flow Shops with Sequence-Dependent Setup Effect," IEEE Transactions on Robotics and Automation, Vol.16, No.4, pp. 408-419, August, 2000.
- 17 C.-M. Fang, R.-S. Guo, S.-C. Chang, J. C.-S. Wei, "SHEWMA: an End-of-line SPC Scheme for Multiple-stream and Sequence-disorder Data," accepted by IEEE Transactions on Semiconductor Manufacturing, August, 2000.
- 18.P. B. Luh, X.Zhao, L. S. Thakur, K.-H. Chen, T.-D. Chiueh, S.-C. Chang, "Architectural Design of Neural Network Hardware for Job Shop scheduling," Annals of the CIRP, Vol. 48, Jan., 1999, pp. 373-376
- 19.D.-Y.Liao, S.-C.Chang, K.-W.Pei, C.-M.Chang, "Daily Scheduling for R&D Semiconductor Fabrication," IEEE Transactions on Semiconductor Manufacturing, Nov. 1996, pp. 550-561.
- 20.C.-Y. Huang, S.-C. Chang, C.-L. Chen, "Modeling, Analysis and Performance Evaluation of a Cache Coherent Parallel Computer Architecture," Performance Evaluation, Vol 23, July-Aug, 1995, pp. 31-52.
- 21.F.-S. Hsieh, S.-C. Chang, "Dispatching-Driven Deadlock Avoidance Controller Synthesis for Flexible Manufacturing Systems," IEEE Trans. on Robotics and Automation, Vol. 10, No. 2, April, 1994, pp. 196-209.
22. S.-C. Chang, D.-Y. Liao, "Scheduling Flexible Flow Shops with No Set-up Effects," IEEE Trans. on Robotics and Automation, Vol. 10, No. 2, April, 1994, pp. 112-122.
23. S.-C. Chang, W. L. Yang, I-Kong Fong, C.-H. Chen, "Two Effective Approaches for Hydroelectric Generation Scheduling," Journal of the Chinese Institute of Engineers, Vol. 16, No. 6, 1993, pp. 835-842.
24. R.-H. Liang, I.-K. Fong, S.-C. Chang, "An Optimal Control Approach to Power Generation Scheduling without Thermal Unit Dynamics," Bulletin of the College of Engineering, National Taiwan University, No. 55, June 1991, pp.21-40.
25. S.-C. Chang, C. H. Chen, I. K. Fong, P. B. Luh, "Hydroelectric Generation Scheduling with an Effective Differential Dynamic Programming Algorithm," IEEE Trans. on Power System

Engineering, August, 1990.

26. P. B. Luh, X. Y. Miao, S.-C. Chang, "A Parallel Conjugate Direction Method for Unconstrained Optimization," *International Journal of Modeling and Simulation*, 1990, vol. 10, no. 1, pp. 6-13.
27. P. B. Luh, X. Y. Miao, S.-C. Chang, D. A. Castanon, "Stochastic Task Selection and Renewable Resource Allocation," *IEEE Trans. on Auto. Contr.*, Vol. 34, No. 3, Mar 1989. pp. 335-339.
28. S.-C. Chang, T. S. Chang, P. B. Luh, "A Hierarchical Decomposition for Large-scale Optimal Control Problems with Parallel Processing Structure," *Automatica*, January 1989, pp. 84-89.
29. Z. J. Wu, P. B. Luh, S.-C. Chang, D. A. Castanon, "Optimal Control of a Queueing System with Two Interacting Service Stations and Three Classes of Impatient Tasks," *IEEE Trans. on Auto. Contr.*, Vol. 33, No. 1, Jan 1988, pp. 42-49.
30. R. Norgaard, P. B. Luh, S.-C. Chang, "Electric Generation Capacity in New England in 1995," *The Northeast Journal of Business and Economics*, Vol. 13, No. 2, Spring/Summer, 1987. pp. 31-46.
31. P. B. Luh, S.-C. Chang, T. S. Chang, "Solutions and Properties of Multi-Stage Stackelberg Games," *Automatica*, Vol. 20, No. 2, March 1984, pp. 251-256.

## 二、研討會論文：

1. Y.-N. Yang, S.-C. Chang, "A Contract of Purchase Commitments on Shared Yields as a Risk-Sharing Mechanism among Fabless-Foundry Partnership," *Proceedings of 2008 International Conference on Modeling and Analysis of Semiconductor Manufacturing (MASM)*, Miami, Florida, USA, Dec. 7-10, 2008. pp. 2244-2250.
2. S.-C. Chang, S. S. Su, K.-J. Chen, "Priority Mix Planning for Cycle Time-Differentiated Semiconductor Manufacturing Services," *Proceedings of 2008 International Conference on Modeling and Analysis of Semiconductor Manufacturing (MASM)*, Miami, Florida, USA, Dec. 7-10, 2008. pp. 2251-2259.
3. F. H. Su, S.-C. Chang, Y.-J. Tsai, C.-M. Fan, C.-Y. Lu, "Knowledge Engineering of Analysis Tool Application Processes for Yield Symptom Identification," *Proceedings of 2008 International Symposium on Semiconductor Manufacturing*, Tokyo,

- Japan, Oct. 27-29, 2008. pp. 261-264.
4. S.-C. Chang, Y.-T. Kao, S. S. Su, B.-J. Liao, "Cycle Time Constrained Priority Mix Optimization Based on Decomposition Approximation Model," INFORMS 2008, Washington D.C., Oct. 12-15, 2008.
  5. P. Wang, P.B. Luh; S.-C. Chang; Jin Sun , "Modeling and Optimization of Crowd Guidance for Building Emergency Evacuation," Proceedings of IEEE International Conference on Automation Science and Engineering, Arlington, VA, Aug. 23-26, 2008, pp. 328 - 334; Also CASE 2008 Best Conference Paper Award winning paper.
  6. Jun-Rong Lee ; S.-C. Chang, F.-H. Su; Chih-Min Fan, "Service oriented platform design for collaborative engineering data analysis" Semiconductor Manufacturing, 2007. ISSM 2007. International Symposium on 15-17 Oct. 2007. pp:1 - 4.
  7. B.Xiong, P.B. Luh, S.-C. Chang, L.Michel, A.See, "Coherent Modeling and Effective Coordination for Building Emergency Evacuation," IEEE International Conference on Automation Science and Engineering 2007. Case 2007, September 2007. pp. 670-677.
  8. J.-R. Lee, S.-C. Chang, F.-H. Su, C.-M. Fan, "Service Oriented Platform Design for Collaborative Engineering Data Analysis," Proceedings of 2006 International Symposium on Semiconductor Manufacturing, Tokyo, Japan, Sept. 25-27, 2007, pp. 245-248.
  9. F. Zhao, P. B. Luh, Y. Zhao, J.H. Yan, G.A. Stern, S.-C. Chang, "Bid Cost Minimization vs. Payment Cost Minimization: A Game Theoretic Study of Electricity Markets," IEEE Transactions on Power Engineering Society General Meeting, June 2007. pp.1-8.
  10. A. See, L. Michel, Bo Xiong, P.B. Luh, S.-C Chang, "Transportation and HVAC System for Building Emergency Evacuation," IEEE International Conference on Automation Science and Engineering, 2006 October 2006, pp. 363-368.
  11. S.-C. Chang, S.-I Chu, "Time-of-Day Internet Access Management: Virtual Pricing vs. Quota Scheduling," 10th IEEE Singapore International conference on communication systems, 2006. ICCS 2006. October, 2006 pp. 1-6.
  12. S.-C. Chang ,K. J. Chen, "Priority X-Factor Modeling for Differentiated Manufacturing Service Planning," Proceedings of 2006 International Symposium on Semiconductor Manufacturing,

- Tokyo, Japan, Sept. 25-27, 2006.
13. S.-C. Chang, B.-J. Liao, A. Chen, "Priority Behavior Modeling of Fab for Supply Chain Management" proceedings of 2006 International Symposium on Semiconductor Manufacturing, Tokyo, Japan, Sept. 2006.
  14. S.-C. Chang, M.-M. Hsieh, "Reverse Auction-Based Job Assignment among Foundry Fabs," Proceedings of International Conference on Modeling and Analysis of Semiconductor Manufacturing (MASM), October 6-7, 2005.
  15. T-Y Hsieh, H.-Y. Huang, Y.-C. Chou and S.-C. Chang, "Managing Supply Chain by Using Channel Inventory Information," Proceedings of International Conference on Modeling and Analysis of Semiconductor Manufacturing (MASM), October 6-7, 2005.
  16. P.B. Luh, L. Michel, Santos E. Jr., Yu D.; A. See, Bo X., G. Johnson, , S.-C. Chang, "Coherent Configuration and Operation of Building Transportation Systems," Proceedings of IEEE International Conference on Automation Science and Engineering, 1-2 Aug. 2005 PP.178 - 184.
  17. D. Yu, P. B. Luh, S.-C. Chang, "Achieving Six Sigma Deliveries in Supply Chains," Proceedings of the 16th IFAC World Congress, Prague, July 4-8, 2005.
  18. T.-K. Hwang, S.-C. Chang, "Properties OF Iterative Proportional Capacity Allocation for Re-entrant Line Operations," Proceedings of APIEMS 2004, Gold Coast Australia, Dec.15-17, 2004.
  19. P.B. Luh, W. E. Blankson, Ying Chen, Joseph H. Yan, Gary A. Stern, S.-C. Chang, Feng Zhao, "Optimal Auction for the Deregulated Electricity Market Using Augmented Lagrangian and Surrogate Optimization," Proceedings of PSCE04, New York City, Oct. 2004.
  20. M. Ni, P.B. Luh, B. Xiong, S.-C. Chang, "An Inventory Control Policy for Maintenance Networks," Proceedings 2004 IEEE/RSJ International Conference on Intelligent Robots and Systems, 2004. (IROS 2004), Volume 2, 28 Sept.-2 Oct. 2004 pp. 1238 - 1244.
  21. Y.-H. Su, R.-S. Guo, S.-C. Chang, "Manufacturing and Engineering Collaboration Mechanism between Foundry and Fabless," Proceedings of 2004 International Symposium on Semiconductor Manufacturing, Tokyo, Japan, Sept. 27-29, 2004.
  22. Y.-H. Su, R.-S. Guo, S.-C. Chang, "Inter-firm Collaboration Mechanism in Process Development and Product Design between

- Foundry and Fabless Design House," Proceedings of 2004 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, Sept 10-11, 2004, pp. 47 - 50.
23. S.-C. Chang, Y.-T. Lin, Y.-J. Chang S.-K. Jeng, B.-W. Hsieh, "Learning Software Agent Design for Semiconductor Tool Group Dispatching," Proceedings of 2004 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, Sept 10-11, 2004.
24. B.-W. Hsieh, S.-C. Chang, C.-H. Chen, M.-C. Chang, "Efficient Composition of Good Enough Dispatching Policies for Semiconductor Manufacturing," Proceedings of 2003 International Symposium on Semiconductor Manufacturing, Sept. San Jose, CA , NSC.
25. T.-C. Lin, Y. S. Sun, S.-C. Chang, S.-I Chu, Y.-T. Chou, M.-W. Li, "Priority-Based Internet Access Control for Fairness Improvement and Abuse Reduction," Proceedings of QoS-IP 2003, Milan, Italy, Feb. 24-26, 2003.
26. B.-W. Hsieh, S.-C. Chang, C.-H. Chen, "Efficient Selection of Scheduling Rule Combination by Combining design of Experiment and Ordinal Optimization-based Simulation," Proceedings of IEEE ICRA2003, Sept., 2003; Kayamori Best Automation Paper Award Winning paper.
27. Y.-J. Chang, S.-C. Chang, S.-K. Jeng, C. Lin, M. Chein, C.-H. Chang, K.-H. Hsu, "A Learning Agent for Supervisors of Semiconductor Tool Dispatching," Proceedings of 2002 International Symposium on Semiconductor Manufacturing, Tokyo, Japan, Oct 15-17, 2002, pp. 101-104.
28. Y.-T. Lin, S.-C. Chang, M. Chein, C.-H. Chang, K.-H. Hsu, H.-R. Chen, B.-W. Hsieh, "Design and Implementation of a Knowledge Representation Model for Tool Dispatching," Proceedings of 2002 International Symposium on Semiconductor Manufacturing, Tokyo, Japan, Oct 15-17, 2002, pp. 109-112.
29. B.-W. Hsieh, S.-C. Chang, C.-H. Chen, " Dynamic Scheduling Rule Selection for Semiconductor Wafer Fabrication," Proceedings of 2001 IEEE International Conference on Robotics and Automation, May 21-26, 2001, Seoul, Korea.
30. K.-H. Chen, S.-C. Chang, T.- D. Chiueh, P. B. Luh, X. Zhao, " SIMD Architecture for Job Shop Scheduling Problem Solving," Proceedings of 2001 IEEE International Symposium on Circuits and Systems, May 6 - 9, 2001, Sydney, Australia.

31. S.-C. Chang, R.-S. Guo, Y.-H. Su, Y.-C. Lai, "Realizing Dynamic manufacturing Service Provisioning Mechanism in Order Commitment Service," Proceedings of International Symposium on Semiconductor Manufacturing 2000, Tokyo, Sept. 26-28, 2000, PP. 25~28.
32. C.-C. Liu, S.-C. Chang, H.-H. Cheng, "Pricing and Fee Sharing for Point to Multipoint Multicast Services with Quality Guaranteed," Proceedings of the Seventh International Conference on Parallel and Distributed Systems:Workshops 2000, Iwate, Japan, July 4-7, 2000. pp. 255~260.
33. M.-D. Hu, S.-C. Chang, "Translating Fab Cycle Time and Output Targets into Production Control Requirements for Tool Groups1," Proceedings of 2000 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 14-15, 2000, pp. 73-83.
34. Y.-H. Su, S.-C. Chang, R.-S. Guo, Y.-C. Lai, "Application of Dynamic Manufacturing Service Provisioning Mechanism to Delivery Commitment," Proceedings of 2000 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 14-15, 2000, pp. 107-117.
35. B.-W. Hsieh, S.-C. Chang, C.-H. Chen, "Dynamic Scheduling Rule Selection for Fab Operations," Proceedings of 2000 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 14-15, 2000, pp. 202-210.
36. C.-C. Liu, S.-C. Chang, H.-H. Cheng, "Pricing and Fee Sharing for Point to Multipoint Multicast Services with Quality Guaranteed," Proceedings of the Seventh International Conference on Parallel and Distributed Systems:Workshops 2000, Iwate, Japan, July 4-7, 2000, pp. 255~260.
37. C.-Y. Liu, S.-C. Chang, "Scheduling for IC Sorting," Automation 2000 Proceedings Vol.2, Taipei, Taiwan May, 9-11, 2000, pp. 1301~1307.
38. T.-K. Hwang, S.-C. Chang, "An Optimization-Based Short-Term Scheduler with Target Tracking for IC FAB," Automation 2000 Proceedings Vol.2, Taipei, Taiwan May 9-11, 2000, pp. 903~910.
39. I.-C. Chen, S.-C. Chang, "Detecting Production Rate Shift by Using Wafer-in-Process Data:a M/M/1 Case," Automation 2000 Proceedings Vol.2, Taipei, Taiwan May 9-11, 2000, pp. 1287~1292.
40. H.-I. Wu, S.-C. Chang, "Design of Resource Management at IP Router," Proceedings of ICOIN-14, Hsin-Chu, Jan. 26-28., 2000,



IC-4.1~IC-4.8.

41. S.-C. Chang, "Demand-Driven, Iterative Capacity Allocation and Cycle Time Estimation for Re-entrant Lines," Proceedings of 38th IEEE Conference on Decision and Control, Phoenix, AZ, Dec., 7-10, 1999, pp. 2270~2275.
42. C.-M. Fan, S.-C. Chang, R.-S. Guo, H.-H. Kung, J.-C. You, H.-P. Chen, S. Lin, J. Wei, "SHEWMAC: an End-of-line SPC Scheme for Joint Monitoring of process Mean and Variance," Proceedings of International on Semiconductor Manufacturing 1999, Santa Clara, CA, Oct. 11-13, 1999, pp. 233~236.
43. B.-W. Hsieh, C.-H. Chen, S.-C. Chang, "Fast Fab Scheduling Rule Selection by Ordinal Comparison-based Simulation," Proceedings of International on Semiconductor Manufacturing 1999, Santa Clara, CA, Oct. 11-13, 1999, pp. 53~56.
44. Min-Der Hu, S.-C. Chang, "Translating System Cycle Time and Throughput Specifications into Flow Control Requirements," Proceedings of IFAC' 99, Beijing, 1999. pp. 440~443.
45. C.-M. Fan, R.S. Guo, S.-C. Chang, "An Integrated Fault Detection Scheme for Wafer Acceptance Data," Proceedings of International Symposium on Semiconductor Manufacturing 1998, Tokyo, Oct. 7-9, 1998, pp. 440~443.
46. Y.-H. Su, R.-S. Guo, S.-C. Chang, "A Conceptual Framework for manufacturing Service Provisioning by Virtual Fabs," Proceedings of 1998 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 16-17, 1998, pp. 75-85.
47. N.-J. Wang, R.-L. Tsai, H.-P. Liu, G.-L. Wu, K. Wei, C.-Y. Tsai, S.-C. Chang, "TSS: a Daily Production Target Setting System for Fabs," Proceedings of 1998 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 16-17, 1998, pp. 86-98.
48. S.-C. Chang, T.-L. Chou, R.-S. Guo, Y.-H. Su, L.-L. Lu, "A Dynamic Binding Model for Service Creation in Virtual fab," Proceedings of 1998 Semiconductor Manufacturing Technology Workshop, Hsin-Chu, June 16-17, 1998, pp. 131-137.
49. B.-W. Hsieh, C.-H. Chen, S.-C. Chang, "Dispatching Rule Selection for Semiconductor wafer fabrication by Ordinal Optimization and Simulation," Proceedings of Resselae'r s International conference on Agile, Intelligen, and Computer Integrated Manufacturing, Troy, New York, Oct. 7-9, 1998.
50. G.-L. Wu, K. Wei, C.-Y. Tsai, S.-C. Chang, N.-J. Wang, R.-L. Tsai,

- H.-P. Liu, "TSS: a Daily Production Target Setting System for Foundry Fabs, " Proceedings of International Symposium on Semiconductor Manufacturing 1998, Tokyo, Oct. 7-9, 1998, pp. 75~78.
51. Y.-H. Su, R.-S. Guo, S.-C. Chang, T.-L. Chou, Y.-C. Lai, "Manufacturing Service Creation and Management for Next Generation Virtual Fab," Proceedings of International Symposium on Semiconductor Manufacturing 1998, Tokyo, Oct. 7-9, 1998, pp. 27~30.
52. M.-D. Hu, S.-C. Chang, "Translating Fab Cycle Time and Throughput Specifications into Stepwise Flow Control Requirements," Proceedings of International Symposium on Semiconductor Manufacturing 1998, Tokyo, Oct. 7-9, 1998, pp. 381~384.
53. M.-D. Hu, S.-C. Chang, "Translating Output specifications to Production Flow Requirements for Re-entrant Lines," Proceedings of the 37th IEEE Conference on Decision and Control, Tampa, Florida, Dec. 16-18. 085 Wei-Bin Gao, S.-C. Chang and Chi-Tseng Chang, "Design of Self-Healing Algorithm for ATM Networks," Proceedings of ICOIN-12, Tokyo, Jan. 20-23, 1998.
54. C. H. Lin, S.-C. Chang, Z. Tsai, J.-F. Chang, "Traffic Smoothing by Using Inter-Departure Time Control in ATM Adaptation Layer," Proceedings of the 36th IEEE Conference on Decision and Control, San Diego, Dec. 10-12, 1997, pp. 3544-3549.
55. 郭瑞祥，蘇雅惠，張時中，李元維，周宗廉， "Real competitiveness via Virtual FAB" , Proceedings of Technology Management Symposium, Kaohsiung, Nov, 1997.
56. C.-M. Fan, R.-S. Guo, S.-C. Chang, "EWMA/SD: an End-of-line SPC Scheme to Monitor Sequence Disordered Data," 2nd International Workshop on Statistical Metrology, Kyoto, Japan, June, 1997.
57. S.-C. Chang, Chung-Yang Liu, Ming-Der Hu, Hsin-Yi Wu, "PHOMAG: A Photolithography Machine Allocation Game" , Proceedings of 1997 International Symposium on Semiconductor Manufacturing San Francisco, Oct. 6-8, 1997.
58. M.-C. Lee, S.-C. Chang, K.-L. Wu, "Re-entrant Line Scheduling by a Stochastic Optimal Control Approach," Proceedings of 1997 Automatic Control Conference, Shih-Ding, Taipei County, March 15, 1997, pp. 316-321.

三、論文及著述：

1. R.-S. Guo, J.-M. Fan, C.-K. Tsai, S.-C. Chang, "An Integrated Wafer Acceptance Test Scheme in Semiconductor Manufacturing," Proceedings of 1997 Automatic Control Conference, Shih-Ding, Taipei County, March 15, 1997, pp. 310-315.
2. C.-H. Lin, S.-C. Chang, Z. Tsai, J.-F. Chang, "Traffic Smoothing by Using Inter-deaprture Time Control in ATM Adaptation Layer," Proceedings of 36th IEEE Conference on Decision and Control, San Diego, Dec. 10-12, 1997.
3. S.-C. Chang, et. al., "PHOMAG: a Photolithography Machine Allocation Game," Proceedings of the 1997 International Symposium on Semiconductor Manufacturing, San Francisco, CA, Oct. 6-8, 1997.
4. W.-H. Chang, S.-C. Chang, "MPEG Video Traffic synthesis Using a Compound Self-Similar Sequence Model," Proceedings of the 11th International Conference on Information networking, Taipei, Taiwan, Jan. 27-29, 1997.
5. J. Shiu, T.-K. Huang, Y.-W. Huang, C.-M. Tsai, W.-M. Su, Y. Cheng, S.-C. Chang, C.-C. Chien, "FASE: a Scehduling Environment for Semiconductor Fabricat on," Proceedings of 1996 IEEE/CPMT Int'l Electronics Manufacturing Technology Symposium, Austin, TX.
6. J.-M. Fan, R.-S. Guo, S.-C. Chang, J.-H. Lee, "Abnormal Trend Detection of Sequence- Disordered Data Using EWMA Method," Proceedings of the 7th Annual IEEE/SEMI Advanced Semiconductor Manufacturing Conference and Workshop, Cambridge, MA, Nov. 12-14, 1996.
7. R.-S. Guo, C.-K. Tsai, J.-H. Lee, S.-C. Chang, "Fuzzy Logic-based Diagnosis Using Wafer Acceptance Test data," Proceedings of the 1996 Semiconductor Manufacturing Workshop, Hsin-Chu, Taiwan, Oct. 22-23, pp. 69-80.
8. M.-C. Hsu, S.-C. Chang, "A Supervisory Control Theoretic Approach for Missing Module Construction," Proceedings of IEE Workshop on Discrete Event Systems, Edingburgh, England, Aug., 1996.
9. S.-C. Chang, W.-L. Jan, T.-H. Wang, C.-S. Chang, "Analysis of Proportional Machine Allocation Scheme in a Deterministic Reentrant Line," Proceedings of 1995 International Conference on Emerging Technology of Factory Automation, Paris France, Oct. 10-12, 1995.
10. S.-C. Chang, L.-H. Lee, L.-S. Pang, T. W.-Y. hen, Y.-Weng,

- “Iterative Capacity Allocation and Production Flow Estimation for Scheduling Semiconductor Fabrication,” Austin, TX, Oct. 2-4, 1995, pp. 508-512.
11. J.F. Chang, S.C. Chang, Z.H. Tsai, H.C. Yen, J.S. Wu, T.D. Chiueh, 1995, “Design and Implementation of a BISDN Simulation Testbed,” Proceedings of the 1994 Workshop on Communication Networks, Hsin-Chu, Taiwan, Feb. 1, pp. 243-264.
  12. M.-C. Hsu, S.-C. Chang, “A Method for Logic Design of ATM Adaptation layer Protocol,” Proceedings of the 1994 Symposium on Communication Networks, Hsin-Chu, Taiwan, R.O.C., Feb. 1, 1994; a revised version also appeared in.
  13. J.-M. Chen, S.-S. Lu, W.-L. Chan, S.-C. Chang, W.-H. Dai, J.-C. Chen, 1994, “Development of a SLAM II-Based Simulation Testbed for Evaluating Photolithography Area Scheduling/Dispatching Schemes in IC Fabrication”, Proceedings of the 3rd International Conference on Automation Technology, Taipei, Taiwan, July 7-9, Vol. 4. pp. 193-200.
  14. D.-Y. Liao, S.-C. Chang, C.-F. Hung, K.-W. Pei, C.-M. Tsai, “ERSOFS: A Computer-Aided Daily Scheduling Tool for Semiconductor Fabrication”, to appear on the Proceedings of the 3rd International Conference on Automation Technology, Taipei, Taiwan, July 7-9, Vol. 4. pp. 73-80.
  15. S.-C. Chang, C.T. Lin, L.-A. Peng, “Operator Assignment for Semiconductor Fabrication”, Proceedings of the 3rd International Conference on Automation Technology, Taipei, Taiwan, July 7-9, 1994, Vol. 4, pp. 1-6.
  16. C.-Y. Liu, S.-C. Chang, H.-M. Hsu, C.-C. Cheng, “Scheduling for IC Testing and Assembly”, Proceedings of the 3rd International Conference on Automation Technology, Taipei, Taiwan, Jul 7-9 Vol. 4, pp. 59-67.
  17. F.-S. Hsieh, S.-C. Chang, “Performance Analysis of a Dispatching-Driven Deadlock Avoidance Controller for Flexible Manufacturing Systems”, Proceedings of the 12th World Congress International Federation of Automatic Control, Sydney, Australia. 19-23, July.
  18. F.-S. Hsieh, S.-C. Chang, “Dispatching-Driven Deadlock Avoidance Controller Synthesis for Flexible Manufacturing Systems”, Proceedings of the 12th World Congress International Federation of Automatic Control, Sydney,

- Australia. 19-23, July, 1993.
19. S.-C. Chang, H.-M. Yeh, S.-S. Lu, "Production Scheduling with Industrial Applications", Proceedings of the NTU CIM Research Workshop. May 26, 1993.
  20. D.Y. Liao, S.-C. Chang, S.-R. Yen, C.-C. Chien, "Daily Scheduling for R&D Semiconductor Fabrication", Proceedings of the IEEE 1992 International Conference on Robotics and Automation, Atlanta, GA. May 3-5, 1993.
  21. S.-C. Chang, "Needs and Desired Features of Broadband Network Simulation System", Proceedings of the 1993 Workshop on Computer Communication Networks, Taipei, Feb. 19, 1993, pp. 168-180.
  22. R.-T. Liu, H.-M. Yeh, S.-C. Chang, "Assembly Line Scheduling in a Two-Stage Machining-Assembly Environment", Proceedings of the 2nd International Conference on Automation Technology, Taipei. July, 1992.
  23. S.-C. Chang, S.-H. Chen, P.-H. Tung, T.W-Y. Chen, Y. Chang, Y.-F. Liao, "Development of a Simulation Testbed for Integrated Circuit Fabrication", submitted to the 2nd International Conference on Automation Technology, Taipei, July, 1992, Vol.4, pp. 47-52.
  24. P.-W. Chung, S.-C. Chang, "Scheduling a Heterogeneous Flexible Manufacturing Cell with Setup Effects Using Lagrangian Relaxation Approach", Proceedings of the 2nd International Conference on Automation Technology, Taipei, July, 1992, Vol.4, pp. 39-46.
  25. S.-C. Chang, L.-H. Lee, L.-S. Pang, P.-C. Lin, T.W-Y. Chen, "Daily Target Generation and Machine Allocation for Integrated Circuit Fabrication", Proceedings of the 2nd International Conference on Automation Technology, Taipei, July, 1992, Vol.4, pp. 131-13.
  26. S.-C. Chang, C.-S. Chen, W.-P. Wang, P.B. Luh, D.-L. Kleinman, "Coordination of a Parallel Team in a Task Sequencing Paradigm—a Static Model", Proceedings of the 6th Joint Director of Laboratories Command and Control Research Symposium, Monterey, CA. Jun.
  27. S.-C. Chang, F.-S. Hsieh, "Order and Production Scheduling/Rescheduling for Flow Shops", Proceedings of the IEEE 1992 International Conference on Robotics and Automation, Nice, France. May 10-15, 1992.

28. F.-S. Hsieh, S.-C. Chang, "Deadlock Avoidance Controller Synthesis for Flexible Manufacturing Systems" , Proceedings of Rensselaer's 3rd International Conference on Computer Integrated Manufacturing, Troy, May 20-22, 1992 pp. 252-261.
29. S.-C. Chang, D.-Y. Liao, "Scheduling Flexible Flow Shops of No Set-up Effects" , Proceedings of IEEE 1992 International Conference on Robotics and Automation, Nice France. May 10-15, 1992.
30. C.-H. Lin, S.-C. Chang, Z.-H. Tsai, J.-F. Chang, "Traffic Smoothing by Interdeparture Time Control at the ATM Adaptation Layer" , Proceedings of the 1992 Workshop on High Speed Networks, Chung-Li, Taiwan. Feb. 14 1992.
31. P. B. Luh, W.-P. Wang, D. L. Kleinman, S.-C. Chang, "A Normative Model of Hierarchical Team Decisionmaking," Proceedings of the 30th IEEE Conference on Decision and Control, Brighton, England, 11-13. Dec. 1991.
32. S.-C. Chang, C.-S. Chen, T.-W. Wei, H.-C. Chang, "Modeling the Implicit Coordination with in a Parallel Team," Proceedings of the Workshop on Game Theory and Applications, Institute of Economics, Academia Sinica, Taipei, Nov. 29-30. 1991.
33. S.-C. Chang, F.-S Hsieh, "Integrated Order and Production Scheduling for Flow Shops" Proceedings of the 4th IFIP Conference on Computer Applications in Production and Engineering, Bordeaux, France. Sep. 1991.
34. D.-Y Liao, S.-C. Chang, "Fast Rescheduling of Flexible Flow Shops with no Setup Effects" , Proceedings to the 4th National Symposium on Automation Technology, Taipei, Taiwan. July, 1991.
35. S.-C. Chang, W.-P. Wang, P. B. Luh, D. L. Kleinman, "A Normative Model of Team Coordination in a Task Sequencing Paradigm" , Presented at the 1991 American Control Conference, Boston, MA. June, 1991.
36. S.-C. Chang, D.-Y. Liao, F. S. Hsieh, "Scheduling Flexible Flow Shops of No Set-up Cost by a Lagrangian Relaxation and Network Flow Approach Scheduling" , Proceedings of the 1991 IEEE Conference on robotics and Automation, Sacramento, CA. April, 1991.
37. W.-L. Yang, S.-C. Chang, I-Kong Fong, "Sensitivity Analysis for Optimal Control Problems and Its Application" , Proceedings of the 13th National Symposium on Automatic control, Hsin-Chu,

- Taiwan, Dec. 1990 pp.123-131.
38. S.-C. Chang, D.-Y. Liao, F.-S. Hsieh, C.-T. Yang, "Flow shop Scheduling by a Lagrangian Relaxation and Network Flow Approach," to appear on the Proceedings of 29th IEEE Conference on Decision and Control, Honolulu, Hawaii, 1990, 122-124.
  39. S.-C. Chang, F.-S. Hsieh, H.-M. Yeh, "Integrated Order and Production Scheduling," Proceedings of the 1st International Conference on Automation Technology, Taipei, Taiwan, July 4-6, 1990, pp. 557-564.
  40. T.-H. Huang, Y.-C. Chen, S.-C. Chang, C.-T. Yang, "Application of a Rapid Modelling Tool to Manufacturing system Analysis" Presented at the 1st International conference on Automation Technology, Taipei, Taiwan, July 4-6, 1990.
  41. S.-C. Chang, W. L. Yang, I-Kong Fong, C.-H. Chen, "Two Effective Approaches for Hydroelectric generation Scheduling," Proceedings of the ninth International Conference Analysis and Optimization of Systems, Antibes, France, June 12-15, 1990, pp. 133-142.
  42. J. Shi P. B. Luh, S. C. Chang, T. S. Chang, "A Method for Constrained Dynamic Optimization Problems," Proceedings of the 1990 American Control Conference, San Diego, CA, May 23-25, 1990.
  43. S.C. Chang, M.Y. Kuo, I.K. Fong, "A Parallel Optimal Control Algorithm Based on Spatial Decomposition and Coordination," Proceedings of the 13th National Symposium on Automatic Control, Taipei, Taiwan, Dec. 22-23.1989.
  44. S.C. Chang, C.H. Chen, I.K. Fong, "A Parallel Algorithm for the Time Decomposition Approach to Constrained Optimal Control Problems," Proceedings of 1989 American Control Conference, Pittsburg PA, June, 1989, pp. 2678-2683
  45. C.H. Chen, S.C. Chang, I.K. Fong, "An Effective Differential Dynamic Programming Algorithm for Constrained Optimal Control Problems," Proceedings of 1989 American Control Conference, Pittsburg, PA, June, 1989, pp.1763-1764.
  46. C.H. Chen, S.C. Chang, I.K. Fong, "A Multiplier Method-Based Differential Dynamic Programming Algorithm," Proceedings of the 12th National Symposium of Automatic Control, Hsing-Chu, R.O.C. Dec 1988.
  47. I.C. Lee, S.C. Chang, J. Shi, P.B. Luh, "A Differential Dynamic

- Programming Algorithm for Discrete-Time, Linearly Constrained Problems,” Proceedings of the 12th National Symposium of Automatic Control, Hsing-Chu, R. O. C. Dec 1988, pp. 507-516.
48. J. Shi, P. B. Luh, S. C. Chang, T. S. Chang, “A Parallel Two-Level Algorithm for Constrained Optimal Control Problems,” Proceedings of the 27th IEEE Conference on Decision and Control, Austin, Texas, December 1988, pp. 1478-1479.
49. J. J. Shaw, R. M. James, S. C. Chang, “The Anti-Satellite Missile Defense Problem,” Proceedings of the 2nd Joint Director of Laboratories Command and Control Research Symposium, Monterey, CA, June, 1988.
50. C. H. Chen, P. B. Luh, J. Shi, S. C. Chang, I. K. Fong, “Wave-Form Decomposition for Large-Scale Optimal Control Problems,” Proceedings of the 2nd National Workshop on Automation Technology, Ken Ding, April, 1988. pp. 483-492.
51. S. C. Chang, R. M. James, J. J. Shaw, “Assignment Algorithms for Kinetic Energy Weapons in Boost Phase Defense,” Proceedings of the 26th IEEE Conference on Decision and Control, Los Angeles, CA, Dec 1987. pp. 1678-1683.
52. S. C. Chang, D. Serfaty, D. A. Castanon, “On a Team Optimal Stopping Problem with Periodic Communications,” working paper, presented at the 1st Joint Director of Laboratories Command and Control Research Symposium, Washington, D. C., June, 1987.
53. P. B. Luh, J. X. Tang, S. C. Chang, “Two Conjugate Algorithms with Much Relaxed Line Searches,” Proceedings of 1987 IFAC, Munich, Germany, July, 1987.
54. P. B. Luh, X. Y. Miao, S. C. Chang, D. A. Castanon, “Stochastic Task Selection and Renewable Resource Allocation,” Proceedings of the 9th MIT/ONR Workshop on C3 Systems, Monterey, CA, June 1986, also a modified version on Proceedings of the 1987 AmericanCont.
55. R. M. James, S. C. Chang, J. J. Shaw, “Weapon Target Assignment for Boost Phase Defense,” Proceedings of the 1st Joint Director of Laboratories Command and Control Research Symposium, Washington, D. C., June, 1987, pp. 131-136.
56. T. S. Chang, X. X. Jin, P. B. Luh, S. C. Chang, “On the Computation of Optimal Strategies for Large Scale Control Problems,” Proceedings of the 25th Conference on Decision and Control, Athens, Greece, Dec 1986.



	<p>57. S. C. Chang, P. B. Luh T. S. Chang, “A Two-level Optimization Algorithm for Discrete-Time, Linear Quadratic Optimal Control Problem with State and Control Constraints,” Proceedings of the 25th IEEE Conference on Decision and Control, Athens, Greece, December.</p> <p>58. T. S. Chang, S. C. Chang, P. B. Luh, “A Hierarchical Decomposition for Large-scale Optemal Control Problems with Parallel Processing Capability,” Proceedings of 1986 American Control Conference, Seattle, Washington, June, 1986,1995-2000.</p> <p>59. Z. J. Wu, P. B. Luh, S. C. Chang, D. Serfaty, D. L. Kleinman, D. A. Castanon, “Optimal Task Allocation of Two Service Stations with Three Classes of Tasks,” Proceedings of the 24th IEEEConference on Decision and Control, Fort Lauderdale, Florida, December, 1988.</p> <p>60. S. C. Chang, P. B. Luh, T. S. Chagn, “Stackelberg Game Approach to Power System Scheduling Problems,” proceedings of the 1984 American Control Conference, San Diego, CA, June 1984. pp. 1434-1439.</p> <p>61. P. B. Luh, T. S. Chang, S. C. Chang, “On Dynamic, Deterministic, Stackelberg Games,” Proceedings of the 1982 American Conference, Washington D. C. June 1982. pp. 409-411.</p>
專長/領域	高速網路、網際網路、系統最佳控制、分散式決策