

LIST OF PUBLICATIONS

Books

1. Lu, L, J.Y.H. Fuh and Y.S. Wong,"Laser-induced Materials and Processes for Rapid Prototyping", Kluwer Academic Publishers, U.S.A., 2001.

Chapters in Books

2. Wong, Y.S., A.N. Poo and O.H. Chai,"Mechatronic Systems Techniques in Computer Numerical Control of Machine Tools," Edited by Cornelius T. Leondes, Chapter 2, Mechatronic Systems Techniques and Applications, Volume 1, Industrial Manufacturing, Gordon and Breach International Series in Engineering, Technology and Applied Science, Gordon and Breach Science Publishers, pp.45-102.
3. Wong, Y.S., H.T. Loh and K.S. Neo,"Techniques for Computer Aided Design (CAD) for the Translation of Geometric Data to Numerical Control Programs for Manufacturing Systems", Edited by Cornelius T. Leondes, Chapter 2, Operational Methods in Computer-Aided Design, Computer Aided Design, Engineering, and Manufacturing Systems Techniques and Applications, Gordon and Breach Science Publishers, pp.2.1-2.37.
4. G.S. Hong, M. Rahman and Y.S. Wong"Tool Condition Monitoring in Manufacturing System Machine Tools using Neural Networks", Chapter of Book on Computer Aided and Integrated Manufacturing Systems Techniques and Applications.

Refereed Journals - International

1. Wong, Y.S., C.F. Noble and M. Edkins,"An Investigation of the Power Output and Gap Voltage During Electrical Discharge Machining Using a Microcomputer-based Integrated Measurement System," International Journal of Machine Tools and Manufacturing, Vol.27, No.2, U.K., (1987) pp.191-214.
2. Yeo, S.H., M. Rahman and Y.S. Wong,"Towards Enhancement of Machinability Data by Multiple Regression", Journal of Mechanical Working Technology, Vol. 19, No.1, U.K., (April 1989) pp.85-99.
3. Lee, L.C., L.C. Lim, Y.S. Wong and H.H. Lu,"Towards a Better Understanding of the Surface Features of Electro-discharge Journal of Materials Processing Technology, Vol. 24, U.K., (1990) pp.513-523.
4. Lim, L.C., Y.S. Wong and L.C. Lee,"Effects of Reagents on EDM Surfaces and Globule Appendages", Surface Engineering, Vol. 6, No. 3, 1990, pp.206-208.
5. Yeo, S.H., M. Rahman and Y.S. Wong,"Frame-based Approach for Hole-making of Turned Parts and its Further Development", Journal of Materials Processing Technology, Vol. 23, No.2, U.K., October 1990) pp.149-162.
6. Chua, M.S., H.T. Loh, Y.S. Wong and M. Rahman,"Optimization of Cutting Conditions for Multi-pass Turning Operations using Sequential Quadratic Programming", Journal of Materials Processing Technology, Vol. 28, (1991), pp.253-262.
7. Lim, L.C., L.C. Lee, Y.S. Wong and H.H. Lu,"Solidification Microstructures of Electro-discharge Machined (EDM) Surfaces of Tool Steels", Materials Science and Technology, Vol. 7, U.K., (March 1991) pp.239-248.
8. Yeo, S.H., Y.S. Wong and M. Rahman,"Integrated Knowledge-based Machining System for Rotational Parts", International Journal of Production Research, Vol. 29, No. 7, (1991), pp.1325-1337.
9. Yeo, S.H., Y.S. Wong and M. Rahman,"Knowledge-based System in Machining Domain", International Journal of Advanced Manufacturing Technology, Vol. 6, (1991), pp.35-44.

10. Wong, Y.S., F.E.H. Tay, H.T. Loh and A.Y.C. Nee, "A Review and an Implementation of Contingency Management in FMS", *International Journal of Computer Integrated Manufacturing*, Vol. 5, No. 4 & 5 (1992), pp.266-276.
11. Lee, L.C., L.C. Lim and Y.S. Wong, "Towards Crack Minimisation of EDMed Surfaces", *Journal of Materials Processing Technology*, Vol. 32 (1992), pp.45-54.
12. Lee, L.C., L.C. Lim, Y.S. Wong and H.S. Fong, "Crack Susceptibility of Electro-discharge Machined Surfaces", *Journal of Materials Processing Technology*, Vol. 29 (1992), pp.213-221.
13. Lim, F.S., Y.S. Wong and M. Rahman, "Circular Interpolators for Numerical Control: A Comparison of the Modified DDA Techniques and an LSI Interpolator", *Computers in Industry*, Vol. 18, (1992), pp.41-52.
14. Chua, M.S., M. Rahman, Y.S. Wong and H.T. Loh, "Determination of Optimal Cutting Conditions using Design of Experiments and Optimisation Techniques", *International Journal of Machine Tools and Manufacture: Design, Research and Application*, Vol. 33, No. 2 (1993), pp.297-305.
15. Seah, K.H.W., Y.S. Wong and L.C. Lee, "Design of Tool Holders for Ultrasonic Machining using FEM", *Journal of Materials Processing Technology*, Vol. 37, No. 1-4 (1993), pp.801-816. .
16. Teoh, S.H., K.W. Guan, N.H. Lee, Y.S. Wong, A.Y.C. Nee and R.W.H. Pho, "Computer Controlled Rotational Moulding of Liquid Silicone Polymer for a Hand Prosthesis", *International Polymer Processing: The Journal of the Polymer Processing Society*, VIII, No. 2 (1993), pp.178-181.
17. Ji, P., Y.S. Wong, H.T. Loh and L.C. Lee, "SMT Production Scheduling: A Generalised Transportation Approach", *International Journal of Production Research*, Vol. 32, No. 10 (1994), pp. 2323-2333.
18. Chai, O.H., Y.S. Wong and A.N. Poo, "A DDA Parabolic Interpolator for Computer Numerical Control of Machine Tools", *Mechatronics*, Vol. 4, No. 7 (1994), pp. 673-692.
19. Yeo, S.H., M. Rahman and Y.S. Wong, "A tandem approach to selection of machinability data", *International Journal of Advanced Manufacturing Technology*, Vol. 10 (1995), pp.79-86.
20. Hu, G.H., Y.S. Wong and H.T. Loh, "An FMS Scheduling and Control Decision Support System based on Generalized Stochastic Petri Nets", *International Journal of Advanced Manufacturing Technology*, Vol. 10 (1995), pp.52-58.
21. Wong, Y.S., L.C. Lim and L.C. Lee, "Effects of Flushing on Electro-discharge Machined Surfaces", *Journal of Materials Processing Technology*, Vol. 48, No.1-4 (1995), pp.299-305.
22. Wong, Y.S., W.K.H. Seah, H.T. Loh, C.S. Teng and L.C. Lee, "Approximation of Exponential Curves for CNC Machining of Toolholders used in Ultrasonic Machining", *Journal of Materials Processing Technology*, Vol. 48, No.1-4 (1995), pp.713-719.
23. Wong, Y.S. and Z.P. Wang, "Automated Process Planning for CNC Machining of Spherical Space-Frame Nodes", *Journal of Manufacturing Systems*, Vol. 14, No. 5 (1995), pp. 369-377.
24. Wong, Y.S., H.T. Loh and C.S. Teng, "An Optimal Piecewise Curve-Fitting Approach for CNC Machining", *Transactions of NAMRI/SME*, Vol. 23 (1995), pp.157-162.
25. Cheng, W., J.Y.H. Fuh, A.Y.C. Nee, Y.S. Wong and H.T. Loh, "Multi-Objective Optimisations of Part-Building Orientation in Stereolithography", *Rapid Prototyping Journal*, Vol. 1, No. 4 (1995), pp.12-23.
26. Fuh, J.Y.H., Y.S. Wong, C.Y. Yee, L.Zhuang, Y.F. Zhang and K.S. Neo, "On the Modeling, Analysis and Optimisation of an Assembly System" *CIRP Proceedings - Manufacturing Systems*, Vol. 25, No. 2 (1996), pp.197-203.
27. Ong, C.J., Y.S. Wong, H.T. Loh and X.G. Hong, "An Optimisation Approach for Biarc Curve-fitting of B-Spline", *Computer-Aided Design*, Vol. 28, No. 12 (1996).

28. Chai, O.H., Y.S. Wong and A.N. Poo,"An Interpolation Scheme for Tool-Radius Compensation Parabolic Paths for CNC", IIE Transactions on Manufacturing Process and Devices, Vol. 28 (1996), pp.11-17.
29. Fuh, J.Y.H., Y.S. Wong, C.Y. Yee, L. Zhuang and K.S. Neo," Modelling, Analysis and Simulation for the Design of a Robotic Assembly System", Computer Integrated Manufacturing Systems", Vol. 9, No. 1 (1995), pp.19-31.
30. Li, X.Q., Y.S. Wong and A.Y.C. Nee,"Tool Wear and Chatter Detection using the Coherence Function of Two Crossed Accelerations", International Journal of Machine Tools and Manufacture: Design, Research and Application, Vol. 4 (1997), pp.425-435.
31. Wong, Y.S., A.Y.C. Nee, X.Q. Li and C. Reisdorf,"Tool Condition Monitoring using Laser Scatter Pattern", Journal of Materials Processing Technology, Vol. 63 (1996), pp.205-210.
32. Fuh, J.Y.H., Y.S. Choo, L. Lu, A.Y.C. Nee, Y.S. Wong and W.L. Wang,"Post-Cure Shrinkage of Photo-Sensitive Material Used in Laser Lithography Process", Journal of Materials Processing Technology, Vol. 63 (1996), pp.887-891.
33. Lee, S.M., G.S. Hong, Y.S. Wong and C.M. Chew,"A Directed Graph Model for Distributed Sequential Control", International Journal of Computer Applications in Technology, Vol. 10, No. 5/6 (1997), pp.337-347.
34. Xu, F., Y.S. Wong, H.T. Loh, J.Y.H. Fuh and T. Miyazawa,"Optimal Orientation with Variable Slicing in Stereolithography", Rapid Prototyping Journal, Vol. 3, No. 3 (1997), pp.76-88.
35. Li, X.Q., Y.S. Wong and A.Y.C. Nee,"A Comprehensive Identification of Tool Failure and Chatter using a Parallel Multi-ART2 Neural Network", ASME Journal of Manufacturing Science and Engineering, Vol. 120 (May 1998), pp.433-442.
36. Niu, Y.M., Y.S. Wong, G.S. Hong and T.I. Liu,"Neural-based Multi-Category Classification of Tool Conditions using Wavelet Packet and ART2 Network", ASME Journal of Manufacturing Science and Engineering, Vol. 120, No. 4 (Nov. 1998), pp.807-816.
37. Niu, Y.M., Y.S. Wong and G.S. Hong,"An Intelligent Sensor System Approach to Reliable Tool Flank Wear Recognition", International Journal of Advanced Manufacturing Technology, Vol. 14 (1998), pp.77-84.
38. Wong, Y.S., L.C. Lim, I. Rahuman and W.M. Tee,"Near-mirror Finish Phenomenon in EDM using Powder-mixed Dielectric", Journal of Materials Processing Technology, Vol. 79, No. 1-3 (1998), pp.30-40.
39. Zhuang, L., Y S Wong, J Y H Fuh, and C.Y. Yee,"On The Role of A Queueing Network Model In The Design of A Complex Assembly System", Robotics and Computer-integrated Manufacturing, Vol. 14 (1998), pp.153-161.
40. Wang, Y.F., Y.S. Wong and J.Y.H. Fuh,"Off-line Modelling and Planning of Optimal Clamping Forces for an Intelligent Fixturing System", International Journal of Machine Tools and Manufacture, Vol. 39 (1999), pp.253-271.
41. Lee, K.S., W.K.H. Seah, Y.S. Wong and L.K.S. Lim,"In-process Tool-failure Detection of a Coated Grooved Tool in Turning", Journal of Materials Processing Technology, Vol. 89-90 (1999), pp.287-291.
42. Yan, W., Y.S. Wong, K.S. Lee and T. Ning,"An Investigation of Indices Based on Milling Force for Tool Wear in Milling", Journal of Materials Processing Technology, Vol. 89-90 (1999), pp.245-253.
43. Li, X.P., A.Y.C. Nee, Y.S. Wong and Hanqing Zheng,"Theoretical Modelling and Simulation of Milling Forces", Journal of Materials Processing Technology, Vol. 89-90 (1999), pp.266-272.

44. Li, X.Q., Y.S. Wong and A.Y.C. Nee, "Intelligent Tool Wear Identification Based on Optical Scattering Image and Hybrid Artificial Intelligence Techniques", *Short Communications in Manufacture & Design, Proceedings of Institution of Mechanical Engineers*, Vol. 213, Part B (1999), pp.191-196.
45. Xu, F., H.T. Loh and Y.S. Wong, "Considerations and Selection of Optimal Orientation for Different Rapid Prototyping Systems", *Rapid Prototyping Journal*, Vol. 5, No. 2 (1999), pp.54-60.
46. Zheng, H.Q., X.P. Li, Y.S. Wong and A.Y.C. Nee, "Theoretical Modelling and Simulation of Cutting Forces in Face Milling with Cutter Runout", *International Journal of Machine Tools and Manufacture: Design, Research and Application*, Vol. 39 (1999), pp.2003-2018.
47. Subramaniam, V., G.K. Lee, G.S. Hong, Y.S. Wong and T. Ramesh, "Dynamic Selection of Dispatching Rules for Job Shop Scheduling", *Production Planning and Control*, Vol. 11, No. 1 (2000), pp.73-81.
48. Zuo, J., Y.P. Chen, Z.D. Zhou, A.Y.C. Nee, Y.S. Wong and Y.F. Zhang, "Building Open CNC Systems with Software IC Chips based on Software Reuse", *The International Journal of Advanced Manufacturing Technology*, Vol. 16 (2000), pp.643-648.
49. Subramaniam, V., T. Ramesh, G.K. Lee, Y.S. Wong and G.S. Hong, "Job Shop Scheduling with Dynamic Fuzzy Selection of Dispatching Rules", *The International Journal of Advanced Manufacturing Technology*, Vol. 16 (2000), pp.759-764.
50. Lu, L., J.Y. H. Fuh, Y.S. Wong and C.C. Leong, "In Situ Formation of TiC Composite using Selective Laser Melting", *Materials Research Bulletin*, Vol. 35 (2000), pp.1555-1561.
51. Subramaniam, V, G.K. Lee, T. Ramesh, G.S. Hong and Y.S. Wong, "Machine Selection Rules in a Dynamic Job Shop", *The International Journal of Advanced Manufacturing Technology*, Vol. 16 (2000), pp.902-908.
52. Li, X.P., H.Q. Zheng, Y.S. Wong and A.Y.C. Nee, "An Approach to Theoretical Modeling and Simulation of Cutting Forces in Face Milling", *Journal of Manufacturing Processes*, Vol. 2, No. 4 (2000), pp.225-240.
53. Xu, F., Y.S. Wong, and H.T. Loh, "Towards Generic Models for Comparative Evaluation and Process Selection in Rapid Prototyping and Manufacturing," *Journal of Manufacturing Systems*, Vol. 19, No. 5 (2000), pp.283-296.
54. Lim, M.W., C.J. Ong and Y.S. Wong, "Fitting of Unstructured Objects using Simulated Re-annealing", *International Journal of Knowledge-based Intelligent Engineering Systems*, Vol. 5 (July 2001), No. 3, pp.195-202.
55. Bradley, C. and Y.S. Wong, "Surface Texture Indicators of Tool Wear – A Machine Vision Approach", *International Journal of Advanced Manufacturing Technology*, Vol. 17 (2001), pp.435-443.
56. Yuan, N., M. Rahman and Y.S. Wong, "Investigation of Chip Formation in High Speed End Milling", *Journal of Materials Processing Technology*, Vol. 113 (2001), pp.360-367.
57. Li, L., Y.S. Wong, J.Y.H. Fuh and L. Lu, "Effect of TiC in Copper-Tungsten Electrodes on EDM Performance", *Journal of Materials Processing Technology*, Vol. 113 (2001), pp.563-567.

Accepted for Publication

58. Li, L, Y.S. Wong, J.Y. H. Fuh and Lu L, "EDM Performance of TiC/Copper-based Sintered Electrodes", *Materials and Design*.
59. Liu, G.H., Y.S. Wong, Y.F. Zhang and H.T. Loh, "Modelling Cloud Data for Prototype Manufacturing", *Journal of Materials Processing Technology*.
60. Liu, G.H., Y.S. Wong, Y.F. Zhang, H.T. Loh, "Adaptive Fairing of Digitized Point Data with Discrete Curvature", *Computer Aided Design*.

Refereed Journals - Local/Regional

1. Lee, K.S., Y.S. Wong, V.C. Venkatesh, A.Y.C. Nee, M. Rahman and A.N. Poo, "Singapore's Manufacturing Sector: Performance and Potential", Journal of the Institution of Engineers, Singapore, Vol. 27, No. 3, Singapore, (Sept 1987) pp.72-80.
2. Wong Y.S. and K.B. Lim,"The Expanding Role of the Programmable Controller in Factory Automation", Journal of the Institution of Engineers, Singapore, Vol. 28, No. 4, Singapore, (Oct 1988) pp.72-79.
3. Lim, F.S., Y.S. Wong and M. Rahman,"Design and Development of a PC-based CNC System using LSI Chips", Journal of the Institution of Engineers, Singapore, Vol. 30, No. 1, (Jan/Feb 1990) pp.63-69.
4. Zhang, Y.F., Y.S. Wong and G.Y. Tey,"A Heuristic-based System for Job Shop Scheduling", Journal of the Institution of Engineers, Singapore, Vol. 36, No. 1 (1996), pp.23-31.
5. Zhang, Y.F., Y.S. Wong, Y.S. Choo, K.K. Kwong and L.B. Tan,"Comparative Study of CNC Machining, SLA, LOM and FDM Processes for the Prototyping of a Compressor Rotor", Journal of the Institution of Engineers, Singapore, Vol. 37, No. 4 (1997), pp.7-13.

Non-Refereed Journals

1. Wong, Y.S., "Electrical Discharge Machining - Monitoring and Control", Singapore Manufacturing Engineering Yearbook, Vol. 7, Singapore, (1987) pp.83-93. (Also re-printed in the Singapore Polytechnic Yearbook 1987 with permission by SME and the author.)
2. Wong, Y.S., "Desktop Design and Prototyping Systems", Singapore Manufacturing Engineering Yearbook, Vol. 9, Singapore (1989) pp.31-33.
3. Wong, Y.S., and K.S. Lee,"PC-based 2 1/2D Interactive Computer-graphics NC Programming System", Singapore Production Engineers Yearbook, Vol. 6, Singapore, (1989) pp.78-80.
4. Tay, E.H., Y.S. Wong, A.Y.C. Nee and H.T. Loh,"Error Recovery in Flexible Manufacturing Systems", Singapore Production Engineers Yearbook 1990, Vol. 7, Singapore, (1990) pp.41-47.
5. Lim, K.B., Y.S. Wong and C.C. Loo,"An Expert System for Sequential Control using PLCs", Automation News, Vol. 6, No. 1/91, Singapore, (March 1991), pp.17-20.
6. Poo, A.N. and Y.S. Wong,"Singapore Develops Its CNC Potential", Asiamac Journal, Vol. 3, No. 3, Hong Kong, (August 1991), pp.62-63.
7. Neo, K.S., Y.S. Wong, H.T. Loh and G.H. Hu,"Modelling and Performance Study of A Flexible Manufacturing System using GSPN and Simfactory", ASME Yearbook, Singapore Chapter, Vol. 2 (1994), pp.35-42.
8. Zhang, S.J., Y.S. Wong and A.N. Poo,"Intelligent Control Strategies for Manufacturing Processes", ASME Yearbook, Singapore Chapter, Vol. 2 (1994), pp.25-33.

Conferences

1. Chen, Y.F., V.C. Venkatesh and Y.S. Wong,"A Microcomputer-based CAD/CAM System for Low-cost Automation", Proc. Factory Automation, Houston, Instrument Society of America, U.S.A., (10th-13th Oct. 1983) pp.775-794.
2. Chen, Y.F., V.C. Venkatesh and Y.S. Wong,"Development of a Robot-operated Manufacturing Cell", Proc. Engineering Convention '83: Engineering Development and its Impact, Singapore, (August 1983) pp.105-110.

- 3 Chen, Y.F., V.C. Venkatesh and Y.S. Wong,"Optimisation of a Robot Operated Manufacturing Cell for Printed Circuit Boards", Proc. 11th All India Machine Tool Design and Research Conference, Madras, India, (Dec. 1984) pp.512-516.
- 4 Wong, Y.S., and C.F. Noble,"EDM with Transverse Tool Movement", Proc. 26th International Machine Tools Design and Research Conference, Manchester, U.K., (Sept 1986) pp.399-413.
- 5 Noble, C.F. and Y.S. Wong,"Use of Microcomputer-based Instrument for the Investigation of EDM with Orbital Tool Movement", Advances in Non-traditional Machining, ASME 1986 WAN (Winter Annual Meeting), Anaheim, California, U.S.A. (7th-12th Dec. 1986) pp.39-50.
- 6 Wong, Y.S., L.C. Lee and V. Narayanan,"Off-line Optimization and On-line Monitoring/Control of the EDM Process", Proc. Automation In Manufacturing 88 Conference, Singapore, (23rd-25th Nov 1988) pp.1.50-1.62.
- 7 Wong, Y.S., L.C. Lee and L.C. Lim,"EDM-induced Surface Defects on Tool Steels", Proc. 9th International Symposium on Electromachining (Triennial Event of CIRP), Nagoya, Japan, (10th-14th April 1989) pp.263-266.
- 8 Wong, Y.S., M. Rahman and W.L. Mark,"A PC-based Interpolator for CNC Control Using the DDA Interpolation Algorithm", Proc. 3rd International Conference on Advances in Manufacturing Technology, Singapore, (14th-16th August 1989), 7 pages.
- 9 Chua, M.S., M. Rahman and Y.S. Wong,"Integrated Machinability Database System", Proc. 3rd International Conference on Advances in Manufacturing Technology, Singapore, (14th-16th August 1989), 8 pages.
- 10 Lim, K.B., Y.S. Wong and C.C. Loo,"An Expert System for Sequential Control using Programmable Controller", Proc. Asia-Pacific Industrial Automation Conference '90 (IA'90), Singapore, (23-25th May 1990), pp.650-666. (Received Outstanding Paper Award.)
- 11 Tay, E.H., Y.S. Wong, A.Y.C. Nee and H.T.Loh,"Economic Justification of Flexible Manufacturing System", Proc. Asia-Pacific Industrial Automation Conference '90 (IA'90), Singapore, (23-25th May 1990) pp.185-196.
- 12 Chai, O.H., Y.S. Wong, A.N. Poo, F.S. Lim and M. Rahman,"Development and Evaluation of Parabolic Interpolators for CNC", Proc. International Conference on Automation, Robotics and Computer Vision (ICARCV '90), Singapore, (18-21 September 1990), pp.791-795.
- 13 Guan, K.W., Y.S. Wong and S.H. Teoh,"Development of Computer-aided Rotational Moulding Techniques for Moulding of Below-elbow Cosmetic Hand Prosthesis", Proc. 2nd Inter-Faculty Symposium on Materials Science and Technology, NUS, Singapore, (25th October 1990), pp.101-114.
- 14 Lim, K.B., Y.S. Wong and H.C. Liew,"Expert System for Sequential Control using Programmable Controller", Proc. GINTIC Institute of CIM Seminar Series, York Hotel, Singapore, (22nd February 1991), pp.30-44. (Invited Paper)
- 15 Teoh, S.H., K.K.W. Ong, Y.S. Wong, K.W. Chai, K.W. Guan, A.Y.C. Nee and R.W.H. Pho,"Cosmetic Hand Prostheses: Computer Aided Color Matching and Rotation Molding", Digest of the World Congress on Medical Physics and Biomedical Engineering, Kyoto, Japan (7th-12th July 1991), pp.140.
- 16 Loh, H.T., Y.S. Wong and G.H. Hu,"Improving the Productivity of FMS through Error Recovery and Contingency Management", Proc. International Conference on Productivity '91, NPB Convention Centre, Singapore, (14th-16th August 1991), pp.517-527.
- 17 Teoh, S.H., K.W. Guan, Y.S. Wong, A.Y.C. Nee and R.W.H.Pho,"Multi-layering Technique in Computer Aided Rotation Moulding using Solvent-silicone Rubber for Cosmetic Hand Prostheses",Proc. 8th Annual Meeting of the Polymer Processing Society, New Delhi, India (24th-27th March 1992), pp.452-453.

- 18 Neo, K.S. and Y.S. Wong,"Link between a CAD System and a Computer-controlled CMM via the Dimensional Measuring Interface Specification (DMIS)", Proc. Industrial Automation (IA) '92 Conference, 20-23 May 1992, Singapore, pp.179-188.]
- 19 Wong, Y.S., L.C. Lim and L.C. Lee,:"Solidification Microstructure Studies of ED Med Tool Steels", Proc. 5th Asia-Pacific Electron Microscopy Conference, Beijing, China, 2nd-6th August 1992, pp.366-367.
- 20 Wong, Y.S. K.B. Lim, and C. Lee,"A PC-based Expert System for Generation of Sequential Control Programs for Programmable Controllers", Proc. International Conference on Manufacturing Automation, Hong Kong, 10th-12th August 1992, pp.631-636.
- 21 Yeo, S.H., Y.S. Wong and M. Rahman,"Optimisation of Multi-pass Turning with Constraints", Proc. of IMACS/SICE International Symposium on Robotics, Mechatronics and Manufacturing Systems, 16-20th September 1992, Kobe, Japan, pp.113-119.
- 22 Wong, Y.S., H.T. Loh and C.S. Teng,"Best-fitting Cubic Bezier Curves for CNC Machining", Proc. National Symposium on Manufacturing Technology, (ManuTech 92), 24 September 1992, Singapore, pp.C1/27-31.
- 23 Loh, H.T., C.S. Teng and Y.S. Wong,"An Algorithm for Linear Interpolation of Cubic Bezier Curves", Proc. International Conference on Optimisation: Techniques and Applications,.(1992), Singapore, Vol. 2, pp.815-822.
- 24 Choong, E.C.S., Y.S. Wong, H.T. Loh and C.M. Lau,"Improvements of AGV Route Management in an FMS", Manutech '93, National Symposium on Manufacturing Technology, 8th September 1993, National University of Singapore, Singapore, pp.264-271.
- 25 Yang, J.D., Y.S. Wong and A.N. Poo,"An In-process Error Compensation Strategy to Improve the Positioning Accuracy of NC Machine Tools", Manutech '93, National Symposium on Manufacturing Technology, 8th September 1993, National University of Singapore, Singapore, pp.272-279.
- 26 Zhang, S.J., Y.S. Wong and A.N. Poo,"Analysis and Design of Inference Mechanisms for Fuzzy Feedback Control", 2nd IEEE International Workshop on Emerging Technologies for Factory Automation Design and Operation of Intelligent Factories, 27-29 September 1993, Cairns, Australia, pp.9-17.
- 27 Zhang, S.J., Y.S. Wong and A.N. Poo,"Intuitive Principles of Building Fuzzy Inference Mechanism for Fuzzy Controls", Proc. First Asian Fuzzy System Symposium, 23-26 November 1993, Singapore, pp.7-11.
- 28 Chai, O.H., Y.S. Wong and A.N. Poo,"Design and Development of a Multiprocessor-based CNC System", Proc. 3rd Asia-Pacific Industrial Automation Conference IA '94, 23-25 March 1994, Singapore, pp.TS-07.
- 29 Fuh, J.Y. H., Y.S. Wong and C.Y. Yee, L. Zhuang and K.S. Neo,"The Analysis, Evaluation and Optimization of An Automated Assembly Line using the Simulation Approach", Proc. 3rd Asia-Pacific Industrial Automation Conference IA '94, 23-25 March 1994, Singapore, pp. TS-06.
- 30 Fuh, J.Y.S., Y.F. Zhang and Y.S. Wong,"A Flexible Robotic Assembly System for Automated Disk Drive Manufacturing", Proc. North American Manufacturing Research Conference (NAMRC XXII), 25-27 May 1994, Illinois, U.S.A., pp. 88-94. Technical Paper of NAMRI/SME, 1994.
- 31 Y.S. Wong, A.Y.C. Nee, S.B. Tan, A.K.H. Chao, S.C. Tok and K.S. Neo,"A Neural Network Approach to Extrapolate 3D Femoral Geometry from 2D X-Ray Pictures", Proceedings of Eighth International Conference on Biomedical Engineering, 7-10 December 1994, Singapore, pp.499-501.
- 32 G. Subramanian, M. Rahman and Y.S. Wong,"Tool Clustering Technique using Tool Life", Proceedings of the Pacific Conference on Manufacturing 1994, Jakarta, Indonesia, 19-22 Dec., 1994, pp.150-157.

- 33 J.Y.H. Fuh, Y.S. Wong, C.Y. Yee, L. Zhuang, Y.F. Zhang, and K.S. Neo, "On the Modelling, Analysis and Optimization of an Assembly System", Proceedings of the 27th CIRP International Seminar on Manufacturing Systems, Ann Arbor, Michigan, August 1995, pp.234-243.
- 34 Li, X.Q., Y.S. Wong and A.Y.C., "Tool Condition Monitoring using Acoustic Emission Sensing and an Integrated Multi-ART2 Neural Network", Proc. International Symposium on Advanced Manufacturing Processes, Systems and Technologies, University of Bradford, U.K., 26-27 March 1996, pp.193-200.
- 35 Wong, Y.S., K.S. Neo, J.D. Yang and A.N. Poo, "An Error Compensation Approach to Improve the Form Tolerance of Moulds Allowing for Variations in Tool Nose Radius", Proc. Fourth International Conference on Automation Technology, Hsinchu, 8-11 July 1996, pp.735-742.
- 36 Wang, W.L., Y.N. Yan, J.Y.H. Fuh and Y.S. Wong, "The Life Cycle Analysis of Manufacturing Systems", University of Connecticut, Storrs, U.S.A., 7-9 August 1996, pp.362-364 and 419-421.
- 37 Wang, W.L., Y.N. Yan, J.Y.H. Fuh and Y.S. Wong, "The Global View of Manufacturing and Manufacturing System Research", University of Connecticut, Storrs, U.S.A., 7-9 August 1996, pp.113-115.
- 38 Wang, W.L., Y.N. Yan, J.Y.H. Fuh and Y.S. Wong, "The Evolutionary Theory of Manufacturing Systems", University of Connecticut, Storrs, U.S.A., 7-9 August 1996, pp.313-315 and 365-367.
- 39 Wang, W.L., J.Y.H. Fuh, Y.S. Wong and T. Miyazawa, "Make-up Fabrication of the Big or Complex Parts using the SLA Process", University of Texas, Austin, U.S.A., 12-14 August 1996, pp.299-306.
- 40 Chew, Y.K., Y.S. Wong, J.Y.H. Fuh, W.L. Wang and A.Y.C. Nee, "Computer-aided Fabrication of Below-knee Prosthesis using Stereolithography Process", Proceedings of the 7th International Conference on Rapid Prototyping, 31 March-3 April 1997, San Francisco Hyatt Hotel, San Francisco, United States, pp.229-239.
- 41 Xu, F., Y.S. Wong, H.T. Loh and J.Y.H. Fuh, "Optimal Orientation with Adaptive Slicing for Part Building with SLA," Proceedings of the 7th International Conference on Rapid Prototyping, 31 March-3 April 1997, San Francisco Hyatt Hotel, San Francisco, United States, pp.148-156.
- 42 Wang, Y.F., J.Y.H. Fuh and Y.S. Wong, "A Model-based On-line Control of Optimal Fixturing Process", Proceedings of the 1997 IEEE International Conference on Robotics and Automation, 20-25 April 1997, Albuquerque Conventional Centre, Albuquerque/New Mexico, United States, pp.2019-2024.
- 43 Viswanadham, N, Y.S. Wong and K.C. Chan, "Flexibility in Supply Chain Processes", Proceedings of the 4th ICCIM Conference, Vol. 1, October 1997, Singapore, pp.83-90.
- 44 Wong, Y.S., G.S. Hong and Y.M. Niu, "Sensor Fusion using ART2 Neural Networks for Reliable Tool Condition Identification", Proceedings of the International Symposium on Manufacturing Systems, ISMS'97, 18-21 November 1997, Auckland, New Zealand, pp.132-138.
- 45 Rahman, M., K.S. Lee, Y.S. Wong and W.J.R. Koh, "A Study on the Parameters of High Speed Machining", Proceedings of the 8th International Manufacturing Conference, Edited by N. He, J.H. Xu, Y.S. Wong and S.K. Ong, 12-14 May 1998, Singapore, pp. 353-359.
- 46 Wong, Y.S., F. Xu and H.T. Loh, "A Proposed Framework for Rapid Prototyping and Manufacturing System Selector", Proceedings of the 8th International Manufacturing Conference, Edited by N. He, J.H. Xu, Y.S. Wong and S.K. Ong, 12-14 May 1998, Singapore, pp. 82-88.
- 47 Loh, H.T., F. Xu and Y.S. Wong, "Optimal Orientation Selection in Different Rapid Prototyping Processes", Proceedings of the 8th International Manufacturing Conference, Edited by N. He, J.H. Xu, Y.S. Wong and S.K. Ong, 12-14 May 1998, Singapore, pp. 140-148.
- 48 Wang, J.G., Y.S. Wong, J.Y.H. Fuh, H.T. Loh, Z.H. Du, G.D. Hong and Y.N. Yan, "Rapid Prototyping based on 2D Photographic Images", Proceedings of the 9th SFF Symposium, 10-12 August 1998, University of Texas, Austin, U.S.A.

- 49 Wang, Y.F., J.Y.H. Fuh and Y.S. Wong,"Prediction of Optimal Clamping Force for Controlling An Intelligent Fixturing System", Proceedings of the Symposium on Advanced Tooling and Fixturing for Manufacturing, 15-20 November 1998, Anaheim Convention Center, Hilton, Anaheim, California, U.S.A.
- 50 Leu, K.P., M.H. Jr Ang and Y.S. Wong,"A Telemanufacturing Workcell over the Internet", Proceedings of the International Society for Optical Engineering: Telemicroscopy and Telepresence Technologies V, November 1998, SPIE, pp230-237.
- 51 Wong, Y.S., W.K. Yuen, K.S. Lee and C. Bradley,"Machine Vision Monitoring of Tool Wear", Proceedings of SPIE Conference on Sensors and Controls for Intelligent Machining and Agile Manufacturing, Boston, Massachusetts, November 1998, SPIE Vol. 3518, pp.17-23.
- 52 Lim, M.W., C.J. Ong, Y.S. Wong and S.B. Tan,"On Matching of Unstructured Objects Using Simulated Annealing," Proceedings of the 3rd International ICSC Symposium on Soft Computing, 1 –4 June 1999, Geneva, Italy, pp. 543-548.
- 53 Leong, C.C., L. Lu, J.Y.H. Fuh, Z.D. Chen and Y.S. Wong,"Formation of Copper-based Alloys for Rapid Cooling," Proceedings of the 8th European Conference on Rapid Prototyping and Manufacturing, Edited by R. I. Campbell, Nottingham/U.K., 5 July 1999, pp. 225-234.
- 54 Lim, Y.S., Y.S. Wong, J.Y.H. Fuh and T. Miyazawa,"Characteristics of Powder-mixed Photopolymer for Improved Stereolithography Models", Proceedings of the 8th European Conference on Rapid Prototyping and Manufacturing, Edited by R. I. Campbell, Nottingham/U.K., 5 July 1999, pp. 313-324.
- 55 Tam, W.M., K.P. Leu, M.H. Jr Ang and Y.S. Wong,"Machine Accessed via Internet: Issues and Architecture", Proceedings of the International Society for Optical Engineering: Telemicroscopy and Telepresence Technologies VI, November 1999, SPIE, pp192-199.
- 56 Feng, Q., H.T. Loh and Y.S. Wong,"Optimal Curve Fitting with Biarcs and Linear Segments", Proceedings of Fourth Asia-Pacific Conference on Computational Mechanics for the Next Millennium, 15-17 December 1999, Apollo Hotel, Singapore.
- 57 Y.S. Wong,"E-Manufacturing: Internet-enabled to be Agile", Proceedings of International Conference on Manufacturing (ICM-2000), 24-26 February 2000, Keynote Lecture, Bangladesh University of Engineering & Technology, Dhaka, pp.36-42
- 58 Wang, X.H., J.Y.H. Fuh and Y.S. Wong,"Development of Injection Mold with Conformal Colling Channel Produced by Direct Metal Laser Sintering (EOS) Process", Proceedings of the International Conference on Precision Engineering (ICOPE) 2000, 21-23 March 2000, Singapore, pp.455-460.
- 59 Li, L., Y.S. Wong, J.Y.H. Fuh and L. Lu,"Investigation of Sintered TiC/Cu-W for EDM Electrodes", Proceedings of the 8th International Conference on Rapid Prototyping, 12-13 June 2000, Japan, pp.329-334.
- 60 Fuh, J.Y.H., Y.S. Wong, Y.S. Lim, T. Miyazawa, A.Y.C. Nee and H.T. Loh,"Development of Aerosil-mixed Stereolithography Process for Support-less Modelling", Proceedings of the 8th International Conference on Rapid Prototyping, 12-13 June 2000, Japan, pp.123-130.
- 61 Yuan, N., M. Rahman and Y.S. Wong,"Monitoring of Chatter in High-speed End Milling using Audio-signal Method", Proceedings of the 33rd International MATADOR Conferenc, 13 July 2000, Manchester, U.K., pp.421-426.
- 62 Shi, M, Y.F. Zhang, H.T. Loh and Y.S. Wong,"Generating Triangular Mesh from Cloud Data," Proceedings of the 9th International Manufacturing Conference in China, 16-17 August 2000, Vol. 2, pp. 65-66.
- 63 Liu, G.H., Y.S. Wong, Y.F. Zhang and H.T. Loh,"Modelling Cloud Data for Prototype Manufacturing", Proceedings of the 9th International Manufacturing Conference in China, 16-17 August 2000, Vol. 2, pp. 79-80.

- 64 Y.S. Wong and Jianguo Wang,"Internet-enabled Collaborative Design, Manufacturing and Logistics", Proceedings of the 1st International Conference on Mechanical Engineering, Logistics Engineering Forum (Invited Paper), Shanghai, 20-22 November 2000, China, (in CDROM – Abstract on) pp.11.
- 65 Jia Xiao, Y.S. Wong and M.A. Mannan,"Internet/Web-based Monitoring and Control of FMS", Proceedings of Seminar on Integrated Engineering, Engineering Advances at the Dawn of the 21st Century, Faculty of Engineering, National University of Singapore, 8-9 December 2000, Singapore, pp.435-441.
- 66 Y.S. Wong, G.S. Hong and Yimin Niu,"A Generalized Framework for Feature Extraction in Tool Condition Monitoring", Proceedings of the International Conference on Artificial Intelligence in Science and Technology, Hobart, Tasmania, Australia, 17-20 December, 2000, pp.197-202.
- 67 Y.S. Wong, G.S. Hong and Irene Woo."A RBF Based Network for Tool Condition Monitoring in Milling", Proceedings of the International Conference on Artificial Intelligence in Science and Technology, Hobart, Tasmania, Australia, 17-20 December, 2000, pp.279-284.
- 68 Liu, W.D., M. Rahman and Y.S. Wong,"Micro-machining of Silicon by Electrical Discharge Machining", Proceedings of the 4th International Machining & Grinding Conference, 7 May 2001, Detroit, Michigan, U.S.A., pp. 1-8.
- 69 Tang, Y.X., L. Lu, J.Y.H. Fuh, Y.S. Wong, M. Gupta, and H.H. Zhu,"Laser Cladding of Copper-based Materials for Building Electrical Discharge Machining Electrodes", Proceedings of 2nd International Symposium on Laser Precision Micro-Fabrication", 16-18 May 2001, Data Storage Institute, Singapore.
- 70 Lee, K.S., Y.S. Wong, J.Q. Wang and T.S. Lee,"E-Training Portal Architecture for Die and Mould Industry," Proceedings of the Total Enterprise Solutions Conference, Singapore, 5-8 June 2001.
- 71 Wang, J.Q., K.S. Lee, Y.S. Wong, Y.F. Zhang and F. Neo,"Online Quick Quotation for Build-to-Order Manufacturing", Proceedings of the Total Enterprise Solutions Conference, Singapore, 5-8 June 2001.
- 72 Wong, Y.S., J.Q. Wang, K.S. Lee and W.H. Tham,"Internet-based Strategic Component Sourcing", Proceedings of the Total Enterprise Solutions Conference, Singapore, 5-8 June 2001.
- 73 Ang, T.H., Y.S. Wong, J.Y.H. Fuh, H.T. Loh, X. Mo and D.W. Hutmacher,"Development of a Rapid Prototyping Desktop Robotic Dispensing System for Fabrication of 3D Chitosan Scaffolds," ICMAT 2001 International Conference on Materials for Advanced Technologies, Singapore, 1-6 July 2001, pp.82-83.
- 74 Tan, C.H.L., Y.S. Wong, Y.F. Zhang and H.T. Loh,"Application of Rapid Prototyping on a Tooth Cavity Insert", ICMAT 2001 International Conference on Materials for Advanced Technologies, Singapore, 1-6 July 2001, pp.93-94.
- 75 Jia X., M. Abdul Mannan and Y.S. Wong,"Distributed Dynamic Integration of Open Architecture Systems", FAIM2000, 26-28 June 2000, U.S.A.
- 76 Zareena, A.R., M. Rahman and Y.S. Wong,"Evaluation of CBN Tools for High-speed Machining of Ti-6Al-4V Alloys," 17 Annual Conference of International Titanium Association, 30 Sept.-2 Oct. 2001, Las Vegas, U.S.A.
- 77 Zareena, A.R., M. Rahman and Y.S. Wong,"High-speed Machining of Aerospace Alloy (Ti-6Al-4V)", 33rd International SAMPE Technical Conference, 5-8 November 2001, Seattle, U.S.A.
- 78 Liao, Q., C.K. Tham, Y.S. Wong, J.Q. Wang and C. Choy, "A Web-Based Material Requirement Planning Integrated Application", to appear in Proceedings of 5th IEEE International Conference on Enterprise Distributed Object Computing (EDOC 2001), Seattle, Washington, USA, Sept 2001, pp. 14-21.

Seminar, Public Talk and Lecture

- 1 Fuh, J.Y.H., Y.S. Wong, L. Zhuang and Y.F. Zhang,"A Simulation Approach for the Evaluation and Optimization of An Automated Assembly Line", Proc. Seminar on Manufacturing Simulation, 25 March 1995, Ngee Ann Polytechnic, Singapore, pp. 1-18
- 2 Chai, O.H., Y.S. Wong and A.N. Poo,"Interpolation for Toolpath Control in CNC Systems", Proc. Seminar on Mechatronics -Essential Technology for 2000 and Beyond, 27 May 1995, Ngee Ann Polytechnic, Singapore, pp.28-33.
- 3 Chew, C.M., G.S. Hong and Y.S. Wong,"Sequential Control Implementation using Distributed Intelligent Network System", Proc. Seminar on Mechatronics -Essential Technology for 2000 and Beyond, 27 May 1995, Ngee Ann Polytechnic, Singapore, pp.18-27
- 4 Y.S. Wong,"Realising Agile Manufacturing via the Internet," Joint IES/METC- SME Seminar on eManufacturing, 12 May 2000, Gintic Institute of Manufacturing Technology.
- 5 Y.S. Wong,"Micro-Machining Techniques and Developments based on Micro-Electrodischarge Machining (uEDM) Processes", Micro-Fabrication Session, MTech 2001 - Manufacturing Technology Forum 2001, 23-25 May 2001, Singapore Expo

Theses/Dissertations

- 1 Wong, Y.S., "Development of a Robot-operated Manufacturing Cell", MEng Thesis , NUS, (1983).
- 2 Wong, Y.S., "Development and Use of Microcomputer-based Instrumentation and Transverse Tool-motion Control in EDM", PhD Thesis, UMIST (1986).

Published Reports

- 1 Nee, A.Y.C., Y.S. Wong and K.Y. Chan,"Surface Finish in Milling", Society of Manufacturing Engineers, Technical Paper, No. MRR78-08, U.S.A. (1978).
- 2 Nee, A.Y.C., Y.S. Wong and K.Y. Chan,"Force Pulsations in Milling", Society of Manufacturing Engineers, Technical Paper, No. MRR78-09, U.S.A. (1978).
- 3 Wong, Y.S. and C.F. Noble,"A PC-based EDM Pulse-type Recording System for Process Monitoring and Analysis", Society of Manufacturing Engineers, Technical Paper, No. MS88-905, U.S.A. (1988).
- 4 Seah, K.H.W., Y.S. Wong and L.C. Lee,"Parametric Studies of Ultrasonic Machining", Society of Manufacturing Engineers, Technical Paper, No. MR90-294, U.S.A. (1990).
- 5 Fuh, J.Y.H., Y.F. Zhang and Y.S. Wong,"A Flexible Robotic Assembly System for Automated Disk Drive Manufacturing", SME Technical Paper, MS94-145 (1994).
- 6 Niu, Y.M., G.S. Hong and Y.S. Wong,"A Comprehensive Review on Tool Condition Monitoring Techniques," Technical Report, TR-ME-002-CON-96, Singapore, February 1996, 14pp.
- 7 Nee, A.Y.C., J.Y.H. Fuh, Y.S. Wong and H.T. Loh and Y.S. Choo, GR6370 Final Report for NSTB-Ontario Joint Research Programme,"Development of a Flexible Rapid Manufacturing System (FORMS) for Fibre-reinforced Plastics", Singapore: Department of Mechanical & Production Engineering, 21 March 1997. 23pp.

Patents

1. Chew, Y.K., Y.S. Wong, J.Y.H. Fuh, H.T. Loh, A.Y.C. Nee, Y.S. Choo, L. Lu, K.B. Lim, C.L. Teo and E.T. Kang," Method for Determining Curing Areas in an Optical Stereolithography Process", PCT Application No. (1999) PCT/SG99/00036. Compiled by Patent Application No. 9801021-8. Singapore: Registry of Trade Marks and Patents, 8 May 1998.

2. Lu, L, J.Y.H. Fuh, C.C. Leong, Y.S. Wong and Z.D. Chen,"Method of Laser Casting Copper-based Composites", PCT Application No. (1999) PCT/SG99/00116. Compiled by Patent Application No. 9804031-4. Singapore: Registry of Trade Marks and Patents, 12 November 1998.
3. Wang, X.H., J.Y.H. Fuh, Y.S. Wong, L. Lu, Y. Tang, H.B. Cheng and X.L. Zhang,"Method and Apparatus for Creating a Free-form Three-Dimensional Metal Part using High-Temperature Direct Laser Melting", Provisional U.S. Patent Filing. Compiled by U.S. Patent Office, November 2000.
4. M. Rahman, Wong Y.S., A.S. Kumar and A.N. Poo,"Miniature Machine Tool for Micro Machining", Patent filed, May 2001.