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Y F Zhang received his B.Eng. from Shanghai Jiao Tong University, China in 1985 and Ph.D. from the University of Bath in 1991. He joined NUS in 1992 and is currently an Associate Professor at the Department of Mechanical Engineering. He is a senior member of SME.

Qualification

Ph.D. (University of Bath, UK), B.Eng. (Shanghai J T U, China)

Modules Taught

ME3261: Principles of CAD/CAM
ME4262: Automation in Manufacturing

Research Interests

A. Computational Intelligence in Design & Manufacture

- (1) Reverse Engineering
- (2) CAPP & Production Scheduling
- (3) Multi-axis tool-path and trajectory planning

B. UAV and its Applications

Selected Publications

- (1) Liu, N, Y F Zhang and W Lu, "A Hybrid Approach to Energy Consumption Modelling based on Cutting Power: A Milling Case". *Journal of Cleaner Production*, 104 (2015): 264-272.
- (2) Wang, J J, Y F Zhang, L Geng, J Y H Fuh and S H Teo, "A Heuristic Mission Planning Algorithm for Heterogeneous Tasks with Heterogeneous UAVs". *Unmanned Systems*, 3, no. 3 (2015): 205-219.
- (3) Geng, L and Y F Zhang, "Generation of Kinematic Smooth Tool paths in Five axis Milling of Sculptured Surfaces". *International Journal of Manufacturing Research*, 10, no. 3 (2015): 237-266.
- (4) Geng, L, Y F Zhang*, J WANG, J Y H Fuh and S H Teo, "Cooperative Mission Planning with Multiple UAVs in Realistic Environments". *Unmanned Systems*, 2, no. 1 (2014): 73-86.
- (5) Li, L L, Y F Zhang, H LI and L GENG, "Generating tool path with smooth posture change for 5 axis sculptured surface machining based on cutter's accessibility map". *International Journal of Advanced Manufacturing Technology*, 53, no. 5 8 (2012): 699-709.
- (6) Wang, Y, Y F Zhang, and J Y H Fuh, "Job rescheduling by exploring the solution space of process planning for machine breakdown/arrival problems". *Proceedings of the Institution of Mechanical Engineers Part B Journal of Engineering Manufacture*, 225, no. 2 (2011): 282-296.
- (7) Wang, J, Y F Zhang*, A Y C Nee, Y WANG and J Y H Fuh, "Reducing tardy jobs by integrating process planning and scheduling functions". *International Journal of Production Research*, 47, no. 21 (2009): 6069-6084.
- (8) Zhang F, Zhang YF, and Nee AYC, Using genetic algorithms in process planning for job shop machining. *IEEE Trans on Evolutionary Computation*, 1(4): 278-289.
- (9) Sun W, Bradley C, Zhang YF, and Loh HT, Cloud Data Modelling employing a unified, non-redundant triangular mesh, *CAD*, 33(2):183-193.
- (10) Xu XJ, Bradley C., Zhang YF, Loh HT, and Wong YS, Tool-path generation for 5-axis machining of free-form surfaces based on accessibility analysis, *Int J. Production Research*, 40 (14): 3253-3274.