

Dr Sein Leung Soo BEng, PhD, MIET, AMIMechE, PGCLTHE, FHEA

Senior Lecturer

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About

Leung is a Senior Lecturer in the School of Mechanical Engineering with expertise in the machining of advanced alloys and composites together with modelling of cutting processes.

Leung has published over 40 papers in academic journals and international refereed conference proceedings in the areas of modelling of machining processes, EDM, point grinding, hybrid processes and the cutting of aerospace alloys and carbon fibre reinforced plastics.

Qualifications

- PhD in Manufacturing & Mechanical Engineering 2003
- BEng in Mechanical Engineering 1999

Teaching

Teaching Programmes

- MEng/BEng in Mechanical Engineering
- MEng/BEng in Mechanical Engineering (Automotive)
- MSc Engineering Management

Postgraduate supervision

Leung currently supervises 9 doctoral researchers in the area of machinability of advanced alloys and composites, micro machining, process development together with workpiece integrity modelling / prediction.

Research

Research Themes

Machining of advanced materials, Hybrid processes, Non-conventional cutting techniques, Surface integrity evaluation, Manufacturing process modelling.

Publications

- Soo, S.L., Aspinwall, D.K. (2007), Developments in modelling of metal cutting processes, Proceedings of the Institution of Mechanical Engineers Part L: Journal of Materials: Design and Applications, 221(4): 197-211
- Aspinwall, D.K., Soo, S.L., Berrisford, A., Walder, G. (2008), Workpiece surface roughness and integrity after WEDM of Ti-6Al-4V and Inconel 718 using minimum damage generator technology, CIRP Annals – Manufacturing Technology, 57/1: 187-190
- Curtis, D.T., Soo, S.L., Aspinwall, D.K., Sage, C. (2009), Electrochemical superabrasive machining of a nickel-based aeroengine alloy using mounted grinding points, CIRP Annals – Manufacturing Technology, 58/1: 173-176
- Shyha, I.S., Soo, S.L., Aspinwall, D.K., Bradley, S. (2010), Effect of laminate configuration and feed rate on cutting performance when drilling holes in carbon fibre reinforced plastic composites, Journal of Materials Processing Technology, 210: 1023-1034
- Shyha, I.S., Soo, S.L., Aspinwall, D.K., Bradley, S., Dawson, S., Pretorius, C.J. (2010), Drilling of titanium / CFRP / aluminium stacks, Key Engineering Materials, 447-448: 624-633
- Soo, S.L., Dewes, R.C., Aspinwall, D.K. (2010), 3D FE modelling of high speed ball nose end milling, International Journal of Advanced Manufacturing Technology, 50(9-12): 871-882
- S.L. Soo, R. Hood, M. Lannette, D.K. Aspinwall, W.E. Voice (2011), Creep feed grinding of burn resistant titanium (BuRTi) using superabrasive wheels. International Journal of Advanced Manufacturing Technology, 53(9-12), 1019-1026.
- S.L. Soo, R. Hood, D.K. Aspinwall, W.E. Voice, C. Sage (2011). Machinability and surface integrity of RR1000 nickel based superalloy, CIRP Annals – Manufacturing Technology, 60/1, 89-92.
- I.S. Shyha, S.L. Soo, D.K. Aspinwall, S. Bradley, R. Perry, P. Harden, S. Dawson (2011). Hole quality assessment following drilling of metallic-composite stacks, International Journal of Machine Tools and Manufacture, 51(7-8), 569-578.

