

ICAMS Special Seminar

Friday, 17 June 2016
10:00 am – 11:30 am
Room IC FW 02/718

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Ultra-precision manufacturing of functional surfaces in advanced on-line/in-process surface inspection

Fabrication of functional surfaces having micro/nanostructures has drawn great interest in recent years due to their applications in diverse research fields including optics and electronics, solar energy, cell biology, bioengineering and medical science. Numerous nanofabrication techniques including diamond machining, optical and electron beam lithography, focused ion beam (FIB) milling, nanoimprinting, femtosecond laser machining have been developed up to date to produce nanostructured devices/materials. On-line/in-process surface inspection is the key of the above manufacturing process. Here we briefly introduce the merits and limitations of these techniques and highlight the new progress made in the Centre for Precision Technologies at the University of Huddersfield both on the ultra-precision manufacturing of micro/nano-structured surfaces and on the development of one-line surface inspection methods for single point, profile and areal surface measurement.