



Kursplan

Kursens namn på svenska Störningsanalys av tillverkningsystem		
Kursens namn på engelska Disturbance Analysis in Manufacturing Systems		
Högskolepoäng 6h,0	Kurskod MG3910	Nivå Forskarnivå
Huvudområde Productions system		
Organisatorisk enhet (kod) MG	Kursplanen gäller från (termin) HT	
Kursens mål <p>This course is intended to give indepth knowlegde in disturbances anaysis in manufacturing systems. The course takes a broader definition of manufacturing disturbance to include deviations in the system that result variations in product features. After introducing the fundamentals of variations and variation propagation modelling in multistage manufacturing, the state of the art methods for source identification will be taught in depth.</p> <p>The application of the knowledge acquired in this course covers a variety of manufacturing activities namely, process control, maintenance, process planning, quality inspection, etc. Furthermore, examples and illustrative tutorials include both from machining and assembly processes. The course is intended for graduate students as well as practitioners in industry who are qualified to take post graduate courses. The course is tailored to give hands on experience on the selection and application of the different methods applicable to real industrial cases.</p>		
Huvudsakligt innehåll <p>Concept and background in manufacturing disturbances and variations. Fundamental concepts and introduction to disturbances and variations. Sources of variations in machining and assembly systems. Industrial relevance with examples.</p> <p>Principal Component Analysis, Factor Analysis. hands on tutorial.</p> <p>Variation and propagation modelling in multi stage manufacturing using state space modeling.</p> <p>Direct estimation and pattern matching methods in variation analysis and source identification. Hands on tutorials with industrial examples.</p>		
Kurslitteratur Kurs kompondium finns.		
Undervisningsspråk: Engelska		
Förkunskapskrav Basic stastics and basic matrix algebra will be an advantage.		
Betygsskala: P/F		
Examination attendance in the lectures and tutorials as well as approved home-take assignment.		
Övrigt		

Kursen ges på engelska.

Fastställd den

Underskrift av GA

Underskrift av skolchef

Namnförtydligande

Namnförtydligande