

**Aquitaine –Karnataka collaboration
Scientific Project for Pre-PhD student exchange**

Scientific Proposal

Project Title	Investigation of Fatigue Life of Chemical Milled Aerospace Grade Aluminium Alloy	
Scientific domain	Material Removal Process; Materials Process	
Summary (ca. 10 lines)	<p>Chemical matching or milling is one of the machining processes used widely in the aerospace and automotive sector. The main advantage of chemical milling is the weight reduction with no thermal effects, unlike the conventional machining.</p> <p>There is scarcity of literature on evaluation of the fatigue life of a chemically milled component, though a few studies have suggested decrease in fatigue life after chemical milling.</p> <p>This project proposes to take up studies on fatigue-life reduction of the chemically milled specimens useful for aerospace sector, especially for the aluminium alloys. Design of Experiments will be used to plan the experimentation layout and also study the significance of process parameters.</p>	
Student profile wished	Mechanical Engineering; Production Engineering; Materials Process	
Supervisor Name	Mr. Raja Hussain	
Supervisor @ & phone	rajahussain.me.et@msruas.ac.in	Tel: 080-49065555
Institute/laboratory/industry (full address)	Faculty of Engineering & Technology M.S Ramaiah University of Applied Sciences # 470-P, Peenya Industrial Area, 4th Phase, Peenya, Bangalore – 560058	
Director Name Institute/laboratory/industry	Dr. H.K. Narahari	
Director Institute/laboratory/industry @ & phone	narahari.aae.et@msruas.ac.in	Tel: 080-49065555 Ext: 2128
Timing & duration for project (give approximate ranges)	6 Months	
Representative References	Advanced Machining Process, Hassan El Hofi, McGraw-Hill	

Contact Aquitaine: Erick Dufourc @: e.dufourc@cbmn.u-bordeaux.fr tél: +33 5 4000 6818	Contact Karnataka: Dipankardas Sarma @: sarma@sscu.iisc.ernet.in tél: +91 80 2293 2945
http://www.cbmn.u-bordeaux.fr/aquitaine-karnataka-exchange?lang=2	