Announcing the Final Examination of Catalina Uribe Restrepo for the degree of Master of Science

Time & Location: October 26, 2011 at 11:00 AM in Orlando Tech Center, Suite 304 MCF Room (Suite 304)
Title: PROCESS-DEPENDENT MICROSTRUCTURE AND SEVERE PLASTIC DEFORMATION IN SICP REINFORCED ALUMINUM METAL MATRIX COMPOSITES

Discontinuously reinforced MMCs with optimized microstructure are sought after for exceptional high strain rate behavior. The microstructure evolution of a stir-cast A359 aluminum composite reinforced with 30 vol.% SiCp after isothermal anneal, successive hot-rolling, and high strain rate deformation has been investigated. Quantitative microstructural analysis was carried out for the as-cast, annealed (470°C, 538°C and 570°C) and successively hot rolled specimens (64, 75, 88, and 96% rolling reductions). Selected composites were also examined after high strain rate deformation. X-ray diffraction, optical microscopy, scanning electron microscopy and transmission electron microscopy were employed for microstructural characterization.

Major: Materials Science and Engineering

Educational Career:
Bachelor’s of Mechanical Engineering, BS, 2006, National University of Colombia

Committee in Charge:
Dr. Yongho Sohn, Chair, MECHANICAL, MATERIALS AND AEROSPACE ENGINEERING
Dr. Kevin Coffey, MECHANICAL, MATERIALS AND AEROSPACE ENGINEERING
Dr. Nena Orlovskaya, MECHANICAL, MATERIALS AND AEROSPACE ENGINEERING

Approved for distribution by Dr. Yongho Sohn, Committee Chair, on October 10, 2011.

The public is welcome to attend.