

RECENT ADVANCES IN ROBOTICS WELDING IN BRAZIL – THE LABORATORY OF ROBOTICS, WELDING AND SIMULATION

Bracarense, Alexandre Q.

Department of Mechanical Engineering

Federal University of Minas Gerais

Belo Horizonte, Minas Gerais, Brazil

Abstract. This seminar starts describing the brief history of the Manufacturing Automation Network (MANET) in Brazil. This net, appeared inside of the RECOPE Project (Cooperative Nets of Research in Engineering) as a sub-net, grew and today, after 5 years of existence (2 with the Brazilian government's financing) includes almost 140 researchers from several Brazilian states. The net has three mainly types of activity: group activity (internal to the research groups), inter-groups activities (involving several groups), and global activities, involving the whole net. These activities always take to global projects as was the Industrial Robotics book, edited in 2002, the distance course about Robotics and the robots' retrofitting, succinctly described in this presentation. As main topic the seminar describes the activities of the Laboratory of Robotics, Welding and Simulation - LRSS, addressing the recent studies for orbital robotic welding, robot's retrofitting and mechanization of underwater wet. The talk also will cover some case studies, and address problems in the application of robotic welding, and solutions that minimize their effects.