The Innovative Production Machines and Systems Network of Excellence

D.T. Pham  
Cardiff University, UK

R. Setchi  
Cardiff University, UK

E.E. Eldukhuri  
Cardiff University, UK

P.T.N. Pham  
Cardiff University, UK

A. Soroka  
Cardiff University, UK

A. Thomas  
Cardiff University, UK

V. Zlatanov  
Cardiff University, UK

Y. Dadam  
Cardiff University, UK

M.S. Packiananther  
Cardiff University, UK

INTRODUCTION

This article presents the essence of the Innovative Production Machines and Systems (I*PROMS) Network of Excellence. It gives the rationale for networks of excellence, outlines the scope and structure of I*PROMS, and summarizes its program of activities.

RATIONALE FOR NETWORKS OF EXCELLENCE

Manufacturing is a significant wealth generation sector, accounting for over 20% of the European Union’s (EU’s) gross domestic product. To compete successfully in the global market, the European manufacturing industry needs to be underpinned by well focused advanced production research. Because of the breadth of the field, commercial considerations, and the multinationalism of the EU, production research activities within it have been naturally fragmented.

There is the potential to coordinate precompetitive research for common benefit. Under its Sixth Framework Programme (FP6), the EU has introduced networks of excellence as a new “instrument” to overcome fragmentation of European research and help shape the conduct of research in Europe. The operation of these networks is based on a joint program of activities aimed principally at integrating the research activities of the network partners while also advancing knowledge on the topic.

THE I*PROMS NETWORK OF EXCELLENCE

The EU FP6 network of excellence for Innovative Production Machines and Systems (I*PROMS) was inaugurated in October 2004. I*PROMS integrates the production research activities of 30 research centers from 14 countries in Europe: MEC, Cardiff University (UK) (coordinator), Profactor (Austria), Czech Technical University in Prague (Czech Republic), VTT (Finland), CETIM (France), ENIT (France), INRIA (France), Robosoft (France), IAO Fraunhofer Institute (Germany), IPK Fraunhofer Institute (Germany), Schneider Electric (Germany), TUC (Germany), University of Hannover (Germany), University of Patras (Greece), Dublin City University (Ireland), CRF (Italy), FIDIA (Italy), University of Naples Federico II (Italy), PIAP (Poland), University of Minho (Portugal), Fatronik (Spain), Tekniker (Spain), TNO (The Netherlands), Sakarya University (Turkey), University of Warwick (UK), University of Cambridge (UK), University of Manchester (UK), University of Newcastle (UK), and University of Oxford (UK).

I*PROMS addresses production research in an integrated manner to help shape this research area and overcome fragmentation. By creating an EU-wide research community concentrating on future manufacturing concepts, processes, and systems, I*PROMS acts as the main research hub within the EU for the whole area of production machines and systems.