Factories of the future: the Italian flagship initiative

Abstrak

This book presents results relevant in the manufacturing research field, that are mainly aimed at closing the gap between the academic investigation and the industrial application, in collaboration with manufacturing companies. Several hardware and software prototypes represent the key outcome of the scientific contributions that can be grouped into five main areas, representing different perspectives of the factory domain:

1) Evolutionary and reconfigurable factories to cope with dynamic production contexts characterized by evolving demand and technologies, products and processes.
2) Factories for sustainable production, asking for energy efficiency, low environmental impact products and processes, new deproduction logics, sustainable logistics.
3) Factories for the People who need new kinds of interactions between production processes, machines, and human beings to offer a more comfortable and stimulating working environment.
4) Factories for customized products that will be more and more tailored to the final users needs and sold at cost-effective prices.
5) High performance factories to yield the due production while minimizing the inefficiencies caused by failures, management problems, maintenance.

This book is primarily targeted to academic researchers and industrial practitioners in the manufacturing domain.