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24th CIRP Design Conference Mass Customization and Personalization

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The Scientific Technical Committee Design (STC Dn) of the International Academy for Production Engineering (CIRP) has been supporting contributions in the areas of design theories, methodologies, IT tools and their practical applications over the past decades. The STC Dn Conferences provide a technical forum for researchers, industrial practitioners, and policy makers to exchange ideas, share research findings, and discuss the various issues they encounter.

Thanks to the patronage of Lombardy Region (DG Industry, Innovation and Research) and the support of AFIL (Intelligent Manufacturing Association of Lombardy), the 24th CIRP Design Conference was held on April 14th-16th at Pirelli Lombardy Region Palace (1961, by Giò Ponti), in the centre of Milano, Italy.

Milano is the Lombardy Region capital. With its population of about 10 million people, and producing about 20% of the Italian GDP, Lombardy Region is well recognized to be one of the most relevant EU Regions. With respect to manufacturing, Lombardy Region is one of the leading EU Regions counting more than 100.000 manufacturing companies (mostly SMEs) well known for their capability to address individual customer requirements.

This is the fundamental motivation behind the conference scope: "Mass Customization and Personalization". Mass customization means producing goods and services to meet individual customer's needs with near mass production efficiency. Personalization means that products are made-to-measure or to customers personal specifications.

Considering the conference scope, with the support of A.I.Te.M. (Italian Manufacturing Association), two plenary sessions with keynote presentations and industrial speeches were organized.

On Monday 14th morning, after the opening addresses by Armando De Crinito (Lombardy Region, Deputy Director DG Industry, Innovation and Research) and Elisabetta Ceretti (A.I.Te.M. President), the following keynotes were presented:

85
4
6
130
25

Table 1: Conference Facts and Figures

- "Design: a key stage of product lifecycle" by Alain Bernard (Ecole Centrale Nantes, CIRP STC Dn Chairman);
- "A Conceptual Framework for Value-Driven Design and Systems Engineering" by Chris Paredis (Georgia Tech, NSF Engineering and Systems Design Program Director);
- "A New Engineering Design Paradigm The Quadruple Bottom Line" by Waguih ElMaraghy (Head Dept. of Industrial and Manufacturing Systems Engineering University of Windsor, CIRP Fellow);
- "Design for process is a key for Additive Manufacturing Innovative Application" by Gideon N. Levy (TTA - Technology Turn Around, CIRP Fellow).

On Tuesday 15th morning, after the opening addresses by Stefano Scaglia (AFIL President), the Industrial Perspective Workshop took place, with the following speakers:

- · A. Cantarutti (AITeM/Advantech),
- F. Rusin (COMAU S.p.A.),
- N. Marcucci (GE Oil & Gas, Italy)
- L. Vendrame (GE Aviation, Italy),
- · H. Szigeti (Dassault Systemes),
- · A. Condrino (Advantech-EKA).

Moreover, the following special sessions were organized:

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- "Complex Systems Architecting", co-chaired by G. M. Bonnema (University of Twente), T. Tomiyama (Cranfield University), and R. Dumitrescu (Fraunhofer Paderborn);
- "ConsumActors: New design and production chains for personalized goods", co-chaired by R. Fornasiero and A. Ballarino (ITIA-CNR);
- "Additive Manufacturing: The enabling technology for advanced design", co-chaired by M. Cavallaro (Synesis) and A. Armillotta (Politecnico di Milano);
- "Zero Defect Manufacturing", co-chaired by M. Colledani (Politecnico di Milano) and J. Zulaika (Tecnalia).

The Chairmen thank deeply Lombardy Region for its patronage, AFIL and A.I.Te.M. for their support, COMAU and Dassault Systemes for their sponsorships, AdvanTech and EMIRAcle for their organizational efforts.

Finally, the Chairmen wish to express their gratitude to the International Scientific Committee, the Session Chairpersons, and the local Organizing Committee, without their efforts the success of the conference could not be possible.









