東京大学 THE UNIVERSITY OF TOKYO

GMSI Global Center of Excellence for Mechanical Systems Innovation

The first CIRP conference on BioManufacturing 2013 (CIRP-BioM 2013)

GMSI & CIRP-BioM2013 Joint Seminar

(The 135st GMSI Open Seminar)

Additive Manufacturing is on its way to industrialisation: A future oriented technology with high degree of innovation potentials

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Venue : Room 213 (CIRP-BioM2013 Room A), Eng. Building No.2

Abstract

Since several years the use Rapid-Prototyping is considered state of the art in the product develop cycle. The community is committed to Additive Manufacturing (AM). The first recent ASTM standard F 2792 defines it as: “Additive manufacturing is a process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies”

The AM systems open up, never been before, potentials, “Complexity for Free”. A near to unlimited geometrical freedom in parts manufacturing, applying plastics, metals and ceramics became possible. Moreover, the biomedical manufacturing with relevant Biomaterials and acellular tissue matrices is on the way. AM is application driven. In comparison to the SM (Subtractive Manufacturing) AM is a family of technologies with high degree of interaction between System and Material. It ranges from Micro to Macro sized components production.

The presentation will describe the state of the art of the Additive Manufacturing on the way to industrialisation. Challenges, bottlenecks as well as success stories and use in praxis. A particular emphasis will be on the link to innovation and product developments.

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Invited by: Prof. Mamoru Mitsuishi CIRP-BioM2013 Chair, GMSI Leader

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