

DAY 1

Keynote Forum



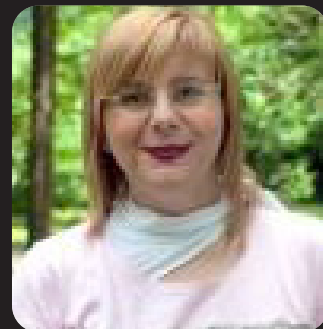
Euroscicon Conference on

3D PRINTING

August 05-06, 2019 | Paris, France

Biljana S Jović

University of Belgrade, Serbia



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3D IMAGING AND VISUALISATION

Aspects and research results in this keynote speak deals with the application of geometry of bionic forms in landscape architecture through process of modeling. Research results tend to establish the correlation between the geometry of the landscape and the geometry of natural forms like leaves or flowers. The scientific methods used in the work are Voronoi diagram and Delaunay triangulation. The process of manual creation of these dual methods will be shown in detail because of the wide application of these methods in the area of spatial structures. Delaunay triangulation and Voronoi diagram are applied in the analysis of the geometry of bionic forms. The research suggests that geometrical solutions of specific spatial problems that should be sought in the same physical assembly in the landscape architecture domain, therefore points to the congruence and the mutuality of the elements from which an area is composed. Within the research, the study was based on the geometry of the flower species, by using parametric modeling methods and experimental designs. Also in the keynote speak, an introduction about situation in 3D printing will be given at the University of Belgrade as well as the city of Belgrade private section.

Biography

Biljana Jović is Docent at University of Belgrade, Faculty of Forestry, Department of landscape architecture and horticulture. She is a Landscape Architect and has completed her Postgraduate studies (Master of Sciences thesis) from University of Belgrade Faculty of Architecture and PhD (doctoral dissertation) from University of Belgrade, Faculty of Architecture. Her PhD thesis was entitled as Geometrical education in domain of visualization and experimental designs by using virtual technologies. Her work combines the approach of landscape architects as well as Engineers and artistic approach to geometric principles finds beauty and expression. Currently, she is the Deputy Chair for Landscape Planning and Design and Head of Master Studies. She is also a Finalist on Asia Design Modelling Contest Tokyo, Japan 2017. She is a Member of the Serbian Association for Geometry and Graphics (SUGIG) and the International Association for Geometry and Graphics (International Society for Geometry and Graphics - ISGG).

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Dimitrios A. Lamprou

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3D PRINTING IN PHARMACEUTICAL AND MEDICAL DEVICE MANUFACTURING

The 3D printing (3DP) process was patented in 1986; however, only in the last decade has it been used for medical applications, as well as being utilized in the fields of prosthetics, bio-fabrication, and pharmaceutical printing. 3DP or Additive Manufacturing (AM) is a family of technologies that implement layer-by-layer processes to fabricate physical prototypes, based on a Computer Aided Design (CAD) model of the design. 3D printing permits the fabrication of high degrees of complexity with great reproducibility, in a fast and cost-effective fashion. 3DP technology offers a new paradigm for the direct manufacture of individual dosage forms, and has the potential to allow variations in their size and geometry varied to control dose and release behaviour. 3DP thus offers the perfect innovative manufacturing route to address critical capability gaps hindering the widespread exploitation of personalised drug delivery systems and medical devices. Ideally, the design and fabrication of such systems should be customised to each individual patient. This talk will focus in the manufacturing of drug delivery systems & medical devices (e.g. catheters, meshes, microneedles, tablets) using innovative 3D printing technologies. Including in-house prepared filaments by hot-melt extrusion (HME) and granules/pellets by Twin Screw Granulation (TSG).

Biography

Dimitrios Lamprou (Ph.D., MBA) is Reader in Pharmaceutical Engineering and MSc Programme Director at the School of Pharmacy in Queen's University Belfast (UK) and Visiting Researcher at University of Strathclyde (Glasgow, UK). Dimitrios has experience of teaching in Higher Education, conducting research (70+ publications, 200+ conference abstracts, 80+ Oral/Invited Presentations) and securing national and international funding (£2M+). He is Secretary at the United Kingdom and Ireland Controlled Release Society (UKICRS), Ph.D. examiner for UK and International Institutions, and referees for journals, publishers and research funding bodies. His group is applying Nano and Microfabrication Techniques in Pharmaceutical and Medical Device Manufacturing. More specifically, his areas of interest includes: Additive Manufacturing (3D Printing & Bioprinting), Electrospinning (Melt & Solution), and Microfluidics (Particle Formulations & Chip Manufacturing).

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