

# BIOMEDICAL ENGINEERING AND ADDITIVE MANUFACTURING

Zorana Golubović<sup>1</sup>, Božica Bojović<sup>1</sup>, Ljubiša Petrov<sup>2</sup>

<sup>1</sup>*University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia,*

<sup>2</sup>*Innovation center of the Faculty of Mechanical Engineering, Belgrade, Serbia*

**Abstract:** Additive manufacturing (AM) technologies have evolved significantly in recent decades, bringing new trends to production processes. The advantages compared to conventional technologies are numerous: production is simpler and faster, geometry can be adjusted more easily, the quality of finished parts is better, less material is wasted, and costs are lower. Because of the wide range of possibilities, the different AM processes and the materials that can be used, these technologies have found their place in many industries, with significant application in biomedical field. Flexibility in geometric freedom, in particular, is important for the fabrication of biomedical devices. AM technologies proved that diagnostics is facilitated and improved through the fabrication of customized and in-demand parts, consultation between physicians and patients are supported, and thus the opportunity to develop individualized, patient-specific medicine is provided. This review briefly outlines current applications and AM processes in the biomedical field.

**Keywords:** additive manufacturing, biomedical engineering, applications, areas.