

# **MULTISCALE MODELING OF STRUCTURES MANUFACTURED USING FUSED DEPOSITION MODELING (FDM) METHOD FOR APPLICATIONS IN MEDICINE**

Summary – The paper presents a method for multiscale modeling of structures manufactured using Fused Deposition Modeling (FDM) additive method, on the example of trabecular bone scaffold model. On the basis of manufactured bone scaffold reference model, the FEM numerical model of the structure was build, which takes into account the structure of scaffold at micro, meso and macro scales. Multiscale calculations were performed using numerical homogenization method.

Keywords: multiscale modeling, numerical homogenization, fused deposition modeling, bone scaffold