

## 3D scanning systems for monitoring the size of mesh implants

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### Abstract

© Published under licence by IOP Publishing Ltd. The work is devoted to 3D scanning capabilities investigation for controlling the geometric dimensions of cervical spinal implants. Models of cervical implants were modeled in the CAD program "SolidWorks" and were made on rapid prototyping installations RS 6000 and ProJet 1200. Polymer models of implants were used for casting on consumable patterns at the casting unit Inducast. Scanning of polymer models and metal castings was performed using the 3D scanning system Activity 850. The resulting parametric 3D model had a lot of defects and inaccuracies. However, the use of non-contact optical scanning methods greatly simplifies the measurement of the control dimensions of complex profile mesh implants.

<http://dx.doi.org/10.1088/1757-899X/412/1/012090>

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