

硕 士 研 究 生 读 书 报 告



题目 3D传感打印的研究

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摘要

近年来，随着3D的传感和印刷技术的快速发展，为我们打开了一个新的世界。在这篇文章中，从3D传感到3D打印的相关的传输技术做了一个简要的概述。在本文中，我们比较最新的3D传感器和3D打印机，介绍几种在市场上出现的和在已经发布的研究中都可用的传感、处理、印刷的技术。此外，本文还将说明3D传感打印的与传统制造工艺相比的优点，以及它现在的缺点。在本文中还将对3D传感打印未来可应用之处，做了一些研究。最后对3D技术的目前进展，未来研究趋势，和潜在风险也进行了讨论。

**关键词**：3D传感技术， 3D模型重建，3D打印机

Abstract

With the rapid development of three-dimensional (3D) sensing and printing technologies，it have reshaped our world in recent years. In this article, a brief overview of techniques related to the pipeline from 3D sensing to printing is provided.We compare the latest 3D sensors and 3D printers and introduce several sensing, postprocessing, and printing techniques available from both commercial deployments and published research. In addition, this paper also describes the advantages of 3D sensing printing compared with the traditional manufacturing process, and its current shortcomings. In this paper, we will have some research on the future application of 3D sensing printing. Current progress, future research trends, and potential risks of 3D technologies are also discussed.

**Keywords：**3D sensing technologies, 3D model reconstruction, 3D printers