

## 面向航天器舱布局 CAD 系统的公理化设计研究

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**摘 要:** 航天器舱布局 CAD 系统是针对航天器舱中的各种设备和仪器进行布局以及优化的智能布局设计系统, 对航天器舱布局 CAD 系统采用公理化设计的方法进行设计, 提出了基于独立公理的设计过程, 得到了系统的功能结构表, 降低了设计的复杂性, 保证了在设计过程中能够以适当顺序做出合理的决策, 保证了该系统的高效性及合理性.

**关键词:** 航天器舱; CAD; 布局设计; 公理化设计

## Research on Axiomatic Design Oriented the CAD

### System for Spacecraft Cabin Layout

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**Abstract:** Spacecraft cabin layout CAD system is the intelligent layout design system that makes some layout and optimization for a variety of devices and equipment in a spacecraft cabin. In this paper, using axiomatic design method to carry on the design for the spacecraft cabin layout CAD system, and proposing the design process based on the independence axiom, getting the functional structure chart of the system, it can reduce the complexity of the design, make rational decisions with the proper sequence in the design process and ensure the efficiency and rationality of the system.

**Key words:** spacecraft cabin; CAD; layout design; axiomatic design

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