

## 基于动态依赖的类间测试顺序研究

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摘要：

类间集成测试顺序决定着测试成本的大小，为了得到合适的测试顺序，本文提出了一种基于动态依赖的类间测试顺序，然后运用边删除规则去除环路，最后运用有向无环图的拓扑序列给出类的测试顺序。仿真结果表明，本文的方法满足最小化测试桩的需要，提高了测试效率，减少了测试成本。

关键词：对象关系图；动态依赖；测试桩；测试顺序；有向无环图

## Class-integration Testing Sequence Research Based on Dynamic Depen

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**Abstract:**

The cost of the class-integration-test depends largely on the testing sequence. Therefore, in this paper, an approach based on class-integration-test order is proposed in order to obtain a suitable test sequence. Firstly, the paper will analyse the class dependency. Secondly, the loop will be removed by applying the edge deletion rules. Lastly, the test order will be achieved based on the topological sequence of the directed acyclic graph. The simulation results show that 42% test stubs were reduced by applying the proposed method comparing to the Briand's method. This method meets the requirement of reducing the test stubs to the minimum, in addition, it improves test efficiency as well as reduces the test cost.

**Keywords:** object relational graph; dynamic dependency; test stub; test sequence; directed acyclic graph

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