

多项目管理中依据资源的马氏链择优

耿显民, 刘志嘉

南京航空航天大学 理学院, 南京 210016

Markov chain optimal method base on resources in multi-project management

GENG Xian-min, LIU Zhi-jia

College of Science, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China

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摘要 对众多需要实施项目进行优化选择, 找出合理的优先级标准的方法, 是多项目管理研究中需要解决的关键问题. 针对有限资源限制和众多项目需要实施的决策管理, 作者研究依据项目间资源转移矩阵找出优先级标准, 从项目设计和已实施的项目中提取项目间资源转移关系, 通过量化处理后构造资源转移概率矩阵, 则与该资源变化矩阵对应的马尔科夫链的平稳分布即为项目最终占用资源的比例序列或项目的影响程度序列; 以此作为评价项目优先级的标准, 确定项目重要程度的排序.

关键词: 多项目管理 马氏链 平稳分布 项目排序

Abstract: During the multi-project management research, finding out a reasonable priority standard to perform the optimization section of multi-project is the key issue that needs to be carried out. For the decision management of limited resources and numerous projects, the author provides the priority standard according to the transition matrix of resources among projects. And extract the transition relations of resources from the projects designed and implemented, then structure transition probability matrix of resources through quantifying the transition relations of resources among projects, the stationary distribution of the Markov chain which is corresponding to the resource matrix, is the ration sequence of final resources occupation or the influence level sequence; the authors take it as the criteria of evaluating the priority of projects and determining the ranking of significance.

Key words: multi-project management Markov chain stationary distribution ranking for projects

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