

理论科学研究

## 基于中介逻辑的近似推理

程天笑, 潘正华, 王 岑

江南大学 理学院, 江苏 无锡 214000

收稿日期 2009-5-4 修回日期 2009-6-9 网络版发布日期 接受日期

**摘要** 知识处理的发展对“否定知识”的认识提出了新的要求。中介逻辑是一个完全形式化的系统, 其完整地反映了矛盾和对立等否定关系以及推理关系。文章针对模糊知识, 在中介逻辑无穷值语义模型的基础上, 研究了基于中介逻辑的近似推理问题。文章分析了模糊知识中的否定关系, 并以中介逻辑及其无穷值语义模型给予其语形与语义描述。然后, 扩展了近似推理的CRI算法。同时, 给出了语义匹配度的度量, 包括语义距离和相似度, 进而提出了基于语义匹配度度量的近似推理方法。

**关键词** [中介逻辑](#) [近似推理](#) [推理合成规则近似推理方法 \(CRI\)](#) [语义匹配](#)

分类号

## Approximate reasoning based on medium logic

CHENG Tian-xiao, PAN Zheng-hua, WANG Cen

School of Science, Jiangnan University, Wuxi, Jiangsu 214000, China

### Abstract

The development of knowledge processing requires a new cognition on negative knowledge. Based on an interpretation of infinite valued for medium logic, the paper studies the approximate reasoning of medium logic. It analyses the negative relation between fuzzy knowledge, which is described by medium logic and its interpretation of infinite valued for medium logic. The paper provides a new arithmetic which expands the CRI arithmetic. The semantic match degree and its formula which include semantic similarity and semantic distance are put forward. Further, the paper proposes an approximate reasoning approach based on the measures of the semantic match degree.

**Key words** [medium logic](#) [approximate reasoning](#) [Compositional Rule of Inference \(CRI\)](#) [the semantic match degree](#)

DOI: 10.3778/j.issn.1002-8331.2009.21.048

通讯作者 程天笑 [plastrike@sina.com](mailto:plastrike@sina.com)

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(412KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中 包含“中介逻辑”的 相关文章](#)
- ▶ [本文作者相关文章](#)

- [程天笑](#)
- [潘正华](#)
- [王 岑](#)