# 异构社交网络中用户轨迹隐匿方法优化研究

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摘　要：在对异构社交网络中用户轨迹进行隐匿时，当前方法大多针对用户单个位置进行轨迹隐匿，不适于复杂的异构社交网络.为此，提出一种新的基于假轨迹的异构社交网络中用户轨迹隐匿方法，通过一个例子对所提方法的基本思想进行分析.对假轨迹方法进行概述，在中心服务器系统结构上实现.给出单个位置的暴露风险、轨迹暴露风险、距离偏移度的概念和计算公式.为了避免攻击者判断出用户真实轨迹的概率，提出记忆规则进行优化.将查询消息、真实位置等参数传输至隐私保护服务器，隐私保护服务器依据用户参数要求和记忆规则产生满足条件的假位置，将含有假位置的匿名框传输至服务提供商，隐私保护服务器对返回的查询结果进行求精后传输至用户.实验结果表明，采用所提方法得到的轨迹数据有很高的可用性.

关键词：异构社交网络；用户轨迹；隐匿；优化

# User Track Hidden Method in Heterogeneous Network Optimization Research

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Abstract：In the heterogeneous network users in the path of the hidden, most of the current methods for users to a single location to track hidden, not suitable for complex heterogeneous social networks.For this, put forward a new heterogeneous social networks based on false trajectory track hidden by the user, through an example analysis of the basic concept of the proposed method.Are summarized, the methods of false track in a central server system structure on the implementation.Given a single location exposure risk, trajectory exposure risk, the concept and calculation formula of distance deviation degree.In order to avoid the attacker tell users real trajectories of probability, proposed rules to optimize memory.Sending query parameters such as news, true location server to privacy protection, privacy protection server on the parameters of user requirements and the rule satisfy the condition of the false memory location, anonymous boxes containing a false position to service providers, privacy protection server to return after the refinement of the query results of transmission to the user.The experimental results show that the proposed method the trajectory data has a high availability.

Key words：heterogeneous social networks;user trajectory.the hidden;Optimization

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