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# 多自主式水下机器人的路径规划和控制技术研究综述

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**摘 要**:自主式水下机器人(AUV)是海洋资源勘探和开发的重要工具,在民用和军用领域都发挥着重要作用。随着AUV技术的逐步成熟,通过构建多自主式水下机器人(MAUV)系统,令多个AUV协作完成水下作业任务已成为当前的发展趋势。MAUV系统对提高水下机器人的智能化水平及发展海洋化装备具有重要的理论研究意义和实用价值。介绍目前MAUV系统的应用现状和科研进展,并对MAUV协同路径规划和集群协同控制技术等研究热点进行系统化梳理,着重分析人工智能优化和编队协同的关键技术。最后,对MAUV系统未来的发展方向进行展望。

**关键词**:多自主式水下机器人系统;路径规划;集群协同;编队控制