

Scalable Mixed-Integer Path Planning for UAVs

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1 Introduction

As a consequence of ever-increasing automation in our daily lives, more and more machines have to interact with an unpredictable environment and other actors within that environment. One of the sectors that seems like it will change dramatically in the near future is the transportation industry. Autonomous cars are actually starting to appear on public roads, autonomous truck convoys are being tested and large retail distributors like Amazon are investing heavily into delivering order by drones instead of courier. While these developments look promising, there are still many challenges that prevent these systems from being widely deployed.

One such challenge, which is especially challenging for aerial vehicles, is path planning. Even though most modern quadcopters are capable of flying by themselves, they are unable to generate a flight path that will get them to their destination reliably.

References

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