Impact on Traffic of Route Recommendations

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Résumé

This study examines the impact of navigation apps on road traffic. We develop a dynamic flow network model to analyze how drivers using these apps affect traffic patterns. Our findings show that real-time recommendations can lead to stable traffic dynamics but may reduce network efficiency when a significant number of drivers follow them. Additionally, we investigate the effects of delayed recommendations, highlighting their potential to make the traffic state unstable. This research provides insights beyond traditional equilibrium analyses, offering a deeper understanding of transient behaviors in traffic networks influenced by navigation apps.

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