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**Degree:** *MSc Mobile & Ubiquitous Computing*

**Title:** *Trading-off immediacy and trustworthiness in participatory sensing*

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**Year :** *2013*

# Abstract

Traffic congestion is an important issue that many development cities suffering from. This project is based on participatory sensing that exploits the power or the crowd. Through the mobile application the citizens will be aware for the real situation in the streets and simultaneously will be able to report traffic incidents that citizens can view. It is noticed that other similar applications delay to publish the reports. They are waiting from other users to confirm it. The dissertation focuses on making the publication of traffic reports faster while allowing the users to evaluate the trustworthiness of the reports.

The mobile application uses non-monetary rewards and rank methods to motivate users to participate and to empower them to publish traffic reports immediately. Extra information (percentage, username) is provided in each report that enables users to evaluate the trustiness of the reports. In case that the given information is not valuable for a specific report, the user has to wait until the “trustiness” equation to characterize the report as “trusted”. The “trustiness” equation should take into account four parameters (number of votes from users, time, location, population density), in order to work properly for each report. The results in the evaluation demonstrate that the mobile application is easy to learn and user-friendly. In many cases the extra information for the reports are useful to the users and they trust the report. Moreover, the results show that the “trustiness” equation should take into account all the parameters else the equation does not work properly under specific circumstances.