論文審査の要旨
Summary of Dissertation Review

博士の専攻分野の名称 Degree	博　士　（　工学　） Doctor of Engineering	氏名 Author	JIANG YING　（姜　影）
学位授与の要件	学位規則第４条第①・２項該当		

論 文 題 目　Title of Dissertation

Analysis of Multi-faceted Driving Risks on Expressways and Drivers' Responses to Information Provision

論文審査担当者　Dissertation Committee Member

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　The purposes of this thesis are two-fold: (1) how to mitigate drivers' internal driving risks via smart use of smartphone apps, and (2) how to mitigate the impacts of traffic accidents on drivers' travel choices via dynamic information provision. Research questions raised are: (1) whether smartphones apps with driving safety diagnosis and information provision should be promoted in traffic safety practices, (2) what kinds of traffic information is more effective to the above mitigations. Individual drivers' decisions are targeted and presented based on a series of econometric modeling approaches with correlations and inter-group interactions as well as heterogeneities, by using primary data collected from expressways users in Japan (100 drivers in a three-month driving experiment with a developed smartphone app, 30,000 stated preference (SP) data on general drivers, 525 SP data on trucks, etc.).

　This is the first empirical research in literature to explore the roles of information provision in mitigating multi-faceted driving risks and the impacts of traffic accidents on travel choices in a consistent and comprehensive way. The thesis presents various original contributions to literature with respect to methodologies, data collection, and policymaking. The most important contribution is that this thesis presents an analysis framework of driving risks associated with voluntary behavioral change via traffic information provision.

　The thesis consists of eight chapters: introduction, literature review, data, short-term effects of the app on mitigating driving risks, long-term effects of the app, driving avoidance behavior, driver's adaptation behavior, and conclusions.

　The applicant published a total of 12 refereed papers (1 SCI paper (Transp Res Record), 1 paper awarded as Best Paper Award at the 21st ITS World Congress: 1 paper at the journal Asian Transport Studies (ATS), 2 book chapters (Springer and Routledge), and 8 refereed papers in conference proceedings). Four more papers are under review by SCI/SSCI journals.

　With the above evidence, all the committee members unanimously judged that the applicant is sufficiently qualified to be awarded a degree "doctor of engineering".