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授与した学位	博 士
専攻分野の名称	工 学
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学位授与の要件	環境生命科学研究科 環境科学専攻 (学位規則第 4 条第 1 項該当)
学位論文の題目	Risk Awareness, Driving Performance and Eye Movement Characteristics of Distracted Drivers (漫然運転ドライバーのリスク意識, 運転パフォーマンス, 眼球運動特性に関する研究)
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学位論文内容の要旨	
<p>According to the World Health Organization (WHO) report, the traffic accident is a severe threat to global health; and among all factors lead to accidents, the driver distraction is consistently a leading cause. With the development of technology, the cellphone related distraction is becoming more and more popular. Japan and China both have enacted laws and regulations to control distracted driving, but the result is not satisfactory. Unlike drunk driving and over speed, distracted driving is difficult to detect and monitor, relying on rigid rules to stop distracted driving has shown its limitations. It is necessary to focus on the drivers, to study their awareness toward distracted driving, then take measures to stop distracted driving fundamentally. The objectives of this thesis are:</p> <p>1) Study on the driving awareness, try to figure out the drivers' attitude towards distracted driving, and what factors influence their attitude; 2) Study on the physiological reaction of distracted drivers, focus on the eye movement features and driving performance; 3) Compare the similarities and differences in the awareness of distracted driving behaviors and their driving behaviors between the drivers of the two countries, try to provide a new perspective for comprehensively improving traffic safety.</p> <p>Based on a simulation experiment, the eye movement measures, speed data were gathered and analyzed in Chapter 3. Results shown lack of experience make the novice drivers experience a centralized visual area, longer fixation time and more blink cases. Chapter 4 focus on attitude to distracted driving of Chinese drivers, the relations between attitude towards distracted driving and factors including driving awareness, quality of life (QOL), personal attributes, and clarified the characteristics of each attitude group. Chapter 5 is the attitude to distracted driving due to cellphone use of Japanese drivers, demonstrate to build a health attitude towards distracted driving due to cellphone use, it is necessary for governments and related organizations to boost the social capital ownership and educate on common safety driving habits. Chapter 6 is the comparison between Japanese and Chinese drivers on attitudes toward distracted driving behaviors and discussed the possibilities of the difference. Chapter 7 summarized the findings and possible applications of this thesis.</p> <p>The results of eye movement characteristics are hoped to apply to the technology of distraction detection device. The comparison between novice drivers and experienced drivers throw a light on education the new drivers. The research about risk awareness toward distracted driving and comparison between Japan and China are beneficial to understand distracted driving and safety attitude in a comprehensive perceptible.</p>	

論文審査結果の要旨

本論文は、漫然運転に起因する交通事故を削減することを目的に、漫然運転時のドライバーの眼球運動、運転パフォーマンスについて調査するとともに、日本と中国における意識調査から両国のリスク意識の差異についても明らかにしたものである。

本論文の特徴は以下の点である。

- ドライバーが注意散漫な状況で運転する状況下での眼球運動や運転パフォーマンスにおいて、初心者とベテランドライバーでどのような差異があるのかについてドライビングシミュレータを用いて明らかにしている。
- 運転時のリスク意識において、日本と中国でアンケート調査を行い、リスク意識の構想に関しては大きな差異はないものの、リスクの許容性に大きな違いがあることが明らかにした。また、ここには、文化的な背景が影響している可能性があることを示唆した。

上記について、極めて精力的に調査・分析をすすめ、今後の交通安全の促進に寄与する有用性の高い成果を導き出している。

よって、学位を授与するに値する研究論文であると判断した。