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## An analysis of driving behavior of mild Cognitive Impairment or Primary Dementia Drivers

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The population aging rate has been very high, and the rate of older adults' fatalities during driving has increased in Japan. In 2017, the Traffic Act was revised, and older adult drivers who occurred accidents have to take a simple cognitive function test. After that, they have to return their driver license if they were diagnosed dementia. I found some situations occur the dangerous driving of dementia or MCI drivers, but it doesn't reveal what is the trigger for dangerous driving of dementia or MCI drivers. So in this study, I conducted a driving experiment for dementia (n=1), MCI (n=20), and normal (n=61) drivers over 65 years old, and compared their driving skills. As the results, driving behavior of intersections or parking was not different significantly, and the almost all older adult drivers couldn't behave safely. Most of them didn't stop and confirm environment at intersections. On the other hand, contents of conversations pulse rate of MCI drivers

changed more dramatically during driving than the one of non-MCI drivers. After changing their mental load, their driving behavior on lane change or obstacle avoidance was different between MCI and normal drivers significantly.

### Biography

Mio Suzuki has been an associate professor in Tokai University since 2018. Her research topics are accident analysis and road design for mixed traffic (during driving, cycling on roadways), bicycle facilities, and development of a cycling simulator. Moreover, she has interest in traffic safety of elderly car drivers including those who have mild cognitive impairment and policies for traffic congestion moderation programs on highway network. She had worked at Institute for Transport Policy Studies (ITPS) during 2009 and 2010, Tokyo Institute of Technology during 2010 and 2017, the University of Tokyo during 2017-2018. She holds a Doctor of Engineering from Tokyo Institute of Technology.

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