

# Foreword

## Foreword to Special Issue on "Estimation and Control of Vehicle Dynamics for Active Safety"

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On February 12th of 2003, a severe accident involving 41 vehicles occurred near the Takigawa area of the Douou expressway in Hokkaido, leaving three persons dead and more than seventy injured.

At that moment, I was driving the same expressway from Sapporo to Asahikawa. The weather was cloudy in Sapporo, but in the mountains, the weather turned to driving snow with only 5 meters visibility.

If I had chosen to stop then, the car behind would have failed to see me and crashed into the rear of my car. Therefore, I concentrated on following the dim glow of the tail lights of the car ahead of me, hoping that there wouldn't be a collision ahead of me. (**Fig. 1**)

As I clung to the steering wheel, I really felt a need for advanced cruise control systems that could maintain a safe distance to the vehicle in front based on the road friction coefficient. And, in the event of an accident, such systems would be able to control the vehicle trajectory so as to avoid a collision.



**Fig. 1** Dim glow of tail lights of car ahead.  
(Photograph from car room)

Fortunately, we were able to find out a sign of parking with difficulty just before the point at which the accident occurred. Immediately after we parked, the expressway was closed because of the accident.

I very much hope that we will see the early commercialization of the technologies described in this Special Issue on "Estimation and Control of Vehicle Dynamics for Active Safety".