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## **Preface**

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Albert I. King

I am happy to see the publication of the *International Journal of Vehicle Safety (IJVS)*, a journal dedicated to the science of vehicle safety. There are, indeed, too few journals focused on the total picture of vehicular safety, including crashworthiness and safety design, new technologies for injury mitigation and the biomechanics of impact injury. Congratulations are in order to the Editor-in-Chief, Dr Jesse Ruan, the regional editors, the editorial board and the publisher, Inderscience for bringing this journal to fruition.

The international nature of this journal needs to be emphasised and hopefully, it will encourage paper submissions from all parts of the world. With the advent of the airbag and strict belt wearing regulations, there has been a steady decrease in fatality rates (deaths per 10,000 vehicles, for example) in Western Europe and the USA but this may not be the case worldwide. The 1997 rate for China was over eight times that of the USA.

The IJVS will be a vehicle for the cross-fertilisation of ideas among the various specialties in vehicular safety. It is important, for example, for the designer to be more well versed in the biomechanics of injury so that he/she is aware of the types of injury that can result from a certain design and what the trade-offs would mean in terms of injury severity and long-term disability. For example, in pedestrian protection, injuries to the knee can be difficult to fix surgically and may result in long-term impairment for the victim, but a simple fracture of the mid shaft of the tibia can be fixed relatively easily with very little sequelae. Similarly, for head protection for the pedestrian, it is not altogether clear if head impact with the hood is the only cause of head injury. It does not take much of a fall onto concrete to generate high head accelerations and eventually most, if not all, pedestrians fall to the ground after they are hit. Moreover, with the popularity of pick-up trucks and sports utility vehicles, the high hood will not allow head/hood contact and there will be a direct impact of the head with the ground at a relatively high speed. Such problems are challenging designers as well as safety engineers and it behooves them to work together and have a common forum to express their ideas, such as this *Journal*.

It is indeed timely for the first issue to have several papers dealing with the pedestrian. On a worldwide basis, this is the most pressing problem because it is not always possible to separate the pedestrian from motorised traffic, particularly in the less developed countries. Much engineering ingenuity is needed to keep the injury rate from rising, as it is doing now.

I wish the *Journal* great success in its efforts to disseminate crucial information and to help bring about a reduction in injury and death among the driving public.