Preface

Although rubber science and technology is approximately two centuries old, the greatest growth in the industry occurred in the 20th century, through a strong association with the pneumatic tire and the automotive industry. In 2000, overall rubber consumption was around 18 million tons, with natural rubber accounting for some 7250 ktons.* In Europe the rubber industry is very important, with a production of more than 3.2 million tons per year—around 61% for tire manufacturing and the rest for so-called industrial rubber goods.† About a quarter million persons are employed by manufacturers of tires and rubber goods. Such important industrial activity is supported by research and development activities, not only in companies but also in a number of university research laboratories, as reflected by the steady flow of publications dealing with rubber science and technology.

The International Seminars on Elastomers have resulted from the initiative of individuals, most of them belonging to institutions or universities, and are becoming quite a tradition. The first seminar was organized in 1977 by Prof. M. Morton, at the time Director of the Institute of Polymer Science at the University of Akron, and Prof. N. Yamakzaki. Since that time, several seminars have been organized in various places—the United States, Japan, South Korea, and Thailand—by a number of scientists engaged in rubber research (see Table I).

TABLE I
The International Seminars on Elastomers

Seminar number	Location	Year	Organizers
1	Akron, Ohio, USA	1977	M. Morton, N. Yamazaki
2	Kyoto, Japan	1985	J. Furukawa, N. Yamazaki
3	Akron, Ohio, USA	1988	J. L. White, K. Murakami
4	Kurumé, Japan	1990	K. Murakimi, J. L. White
5	Akron, Ohio, USA	1993	J. L. White, T. Inoue
6	Kyongju, South Korea	1996	C. S. Ha, J. K. Kim, P. K. Paik
7	Bangkok, Thailand	1998	K. Suchiva, J. L. White

Papers from the 3rd, 4th, and 5th seminars were published in the *Journal of Applied Polymer Science, Applied Polymer Symposia,* Vol. 44 (1989), Vol. 50 (1992), and Vol. 53 (1994), respectively. A detailed historical account of those seminars was provided by Dr. K. Suchiva, Prof. J. L. White, and Prof. Y. Tanaka in the preface to a special issue of the *Journal of Applied Polymer Science* (Vol. 78, No. 8, 2000) including contributions selected from the 7th International Seminar on Elastomers, held in Bangkok, Thailand, in December 1998.

Following the success of the 7th seminar, it was decided that the next seminar would be held, for the first time, in Europe. A team of university professors and their collaborators agreed to organize the event in France. The city of Le Mans was considered an obvious site for the seminar, as significant quantities of tire tread are worn there every year in a well-known Grand Prix.

Prof. J. C. Brosse of the Université du Maine, Le Mans, Prof. J. Schultz of the Université de Haute Alsace, Mulhouse, and Prof. J. L. Leblanc of the Université Pierre et Marie Curie, Paris, set up a scientific committee in order to select a few topics considered major ones with respect either to current research and development activities or to contemporary industrial concerns.

The topics chosen were rubber technology, rubber chemistry, surfaces and interfaces, and rubber rheology. A call for papers was issued, and submitted proposals were selected not only with respect to their scientific quality but also with the view of providing those in attendance at the seminar with the widest exposure to current problems and *ongoing progress* in the science and engineering of elastomers. All topics were introduced by a guest lecturer.

The seminar was a great success, with an attendance of over 160, including an important delegation from Thailand—recognition of the long collaboration between France and Thailand in educating young people in rubber science and in performing common research projects, most of them dealing with natural rubber.

After the seminar, the scientific committee selected a series papers either as representative of current concerns or with respect to the quality and originality of the results presented. Selected authors were asked to write elaborated versions of their contributions. The editorial board of the *Journal of Applied Polymer Science* agreed to consider the collection of papers for publication, providing the usual peer-review process was applied. The present special issue therefore offers an up-to-date view of the most advanced research activities in rubber science, in accordance with the quality standards of the journal.

On behalf of the organizing and scientific committee,

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*Source: Economist Intelligence Unit.
†Source: IRSG 1999.

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