

Preface

"International Symposium and Exhibition on Shape Memory Materials (SMM'99)" was held at Ishikawa Kosei-Nenkin Hall in Kanazawa from May 19 to 21, 1999, as a satellite meeting to "International Conference on Solid-Solid Phase Transformations (PTM'99)" in Kyoto. The symposium was also in a series of successful symposia of SMM'86 in Guilin, SMM'94 in Beijing, in addition to China-Japan Bilateral SMM'97 in Hangzhou.

The symposium was quite timely and successful from the following reasons. SMM are becoming more and more important as smart materials or intelligent materials, which already exist. Superelastic wires are being used for antenna of cellular phones, and medical stents and guide wires are going to be a big business too. Some rapid progresses are being made in fundamental studies also, such as the kinetics of martensitic transformations, premartensitic behavior, aging problem, thin film SMA etc. Furthermore, new experimental techniques are becoming available, such as imaging plate, TEM with energy filter, AFM, glazing angle x-ray reflection technique etc. So, it was a good time to discuss all of them together.

The number of participants to this symposium was 163, including 8 accompanying persons. Among them the number of foreigners was 68 from 19 countries. Thus, the size of the symposium was just appropriate to make good discussions, and to learn both fundamentals and applications, which are basically important to promote the science and technology of SMM. In fact, good discussions were made in a friendly atmosphere throughout the symposium. Since the period of the symposium was limited within 3 days, about 1/3 of the papers were presented as posters. To facilitate the poster presentation, poster preview (within 3 minutes) sessions were held, which turned out to be very useful and effective for both listeners and authors.

All the works of program making and editing the present proceedings were done by Professor T. Saburi with Osaka University (presently with Kansai University) as a chairman, and the members of the Editorial Committee. All other secretarial works were done by the members of Kanazawa Institute of Technology under the supervision of Mr. N. Iwashita, Secretary General, and under the actual leadership of Professors K. Shimizu and Z. Yajima. The exhibition of SMM was organized by Mr. J. Kobayashi through cooperation of Japan Association of SMA. Professor Youyi Chu and the Nonferrous Metals Society of China contributed to the success of the symposium by sending many delegates from China. I would like to thank all these members for their tremendous works, without which the present symposium would not be operated.

On behalf of the Organizing Committee, I would like to thank all invited speakers and participants, who actually made the present symposium meaningful and successful. Especially, I would like to thank Professor Jim Krumhansl, ex-president of the American Physical Society, who gave an excellent symposium lecture and sent a message for our work in the 21 century. Thanks are also due to co-sponsors and financial supports, as listed in the separate sheet, who made this symposium possible.

With a hope for a further development of SMM in the 21 century,

Kazuhiro Otsuka
Chairman, Organizing Committee
SMM'99

Editor's Note:

This volume contains the Proceedings of the International Symposium and Exhibition on Shape Memory Materials (SMM'99) held in Kanazawa, Japan, 19-21 May, 1999. The Proceedings consists of 18 invited and 89 contributed papers presented at SMM'99. The papers included are those which have actually been presented orally or by poster. The papers were grouped in 13 sections in nearly the same way as that of the symposium itself. The papers presented by poster were distributed in an appropriate place according to their contents. All the papers were peer reviewed. The Editorial Committee selected the referees from those who attended the symposium. On behalf of the Editorial Committee, I would like to express sincere appreciation to all the authors and the reviewers. I also would like to thank Dr. T. Fukuda for his help in this editorial work.

Toshio Saburi
Chairman, Editorial Committee
SMM'99