Shock Waves
Propagation of a shock wave ($M_S = 2.25$ in $N_2$) over a cylindrical obstacle ($\varnothing$ 20 mm) in a channel of 54 mm height, visualized by infinite fringe polychrome shearing interferometry. Image taken by H. Kleine and H. Grönig at the Shock Wave Laboratory, RWTH Aachen, Germany.
Preface

The 24th International Symposium on Shock Waves (ISSW24) was held at the Beijing Friendship Hotel during July 11-16, 2004, in Beijing. It was a great pleasure for the Local Organizing Committee to organize the ISSW in China for the first time, because forty-seven years have passed since the First Shock Tube Symposium was held in 1957 at Albuquerque. The ISSW24 had to be postponed for one year because of the SARS outbreak in Beijing shortly before the Symposium was scheduled to be held in 2003, but it has achieved success due to the continuous support and kind understanding from all the delegates. It is very heart-warming to have had such an experience and I am very happy to have served as chairman for the Symposium. I would like to thank all for the contributions and help that they have given us over the past three years, without which we would not have had the Symposium.

A total of 460 abstracts were submitted to the ISSW24. Each of the abstracts was evaluated by three members of the Scientific Review Committee and the decision on acceptance was made based on the reviewers’ reports. 195 oral papers, including 9 plenary lectures, were accepted to be presented in three parallel sessions, and 135 poster papers in three dedicated poster sessions. Topics discussed in these papers cover all aspects of shock wave research. Among the topics, supersonic and hypersonic aerodynamics; shock waves reflection, diffraction and focusing; and detonation phenomena and pulse detonation engines were the most popular. Such topics not only include interesting fundamental flow physics, but also have important applications. The plenary lectures were selected based on recommendations from all the IAC members, and reviewed the state of the art of recent shock wave research. It is also found that a good number of papers are the result of international research collaboration. These facts have demonstrated that the ISSW24 is really international and scientific, and that shock wave research is an important research field of continuously increasing interest.

The final programme consisted of 8 plenary lectures, 123 oral papers and 75 poster papers. The total number is much smaller than that originally accepted due to the change of date, and even though this was chosen carefully, it still overlapped with other conferences, for example, the 24th International Symposium on Rarefied Gas Dynamics from July 10-14, 2004. There were 232 participants registered at ISSW24 from 20 countries and regions: Australia 9, Canada 11, China 57, Chinese Taiwan 2, France 8, Germany 14, India 21, Iran 1, Israel 7, Japan 57, Korea 2, Morocco 1, Netherlands 2, Norway 2, Russia 8, Singapore 3, South Africa 4, Thailand 1, UK 7, USA 15.

Two hundred and three papers are published in the final proceedings and are organized in such a way that all the papers relating to similar topics are grouped together. Both oral and poster papers are considered to be equal without making any distinction between them. The Proceedings are more comprehensive than the CD-ROM that all the participants received during the Symposium, which only contains the full papers that were received before June 15, 2004, and which was intended as a tool for the prompt exchange of research information. The proceedings is a valuable resource because it brings the recent information of shock wave research together in one place, acts as an introduction to many researchers and students, and serves as a tool for promotion of the ISSW.

We have been greatly assisted in planning the ISSW24 by continuous support from various sponsors: Chinese Academy of Sciences, Nature Sciences Foundation of China, Chinese Society of Shock Waves, Chinese Society of Theoretical and Applied Mechanics,
and Chinese Society of Aerodynamics. On behalf of the Local Organizing Committee, I would like thank all the members of the International Advisory Committee for their guidance and suggestions, and the Scientific Review Committee for their careful and efficient evaluation of the abstracts. My greatest thanks have to be to the delegates for providing high quality papers, and actively participating in the Symposium. In particular, I would like to thank Prof. JM Yang from the University of Sciences and Technology of China for helping me to arrange and adjust the Symposium program, and make the presentations move smoothly. For editorial assistance, I wish to thank Dr. C. Wang for re-editing all the papers according to the required style of the ISSW24, and for compiling these proceedings. I must also thank Miss Q. Pu and X. Wang, my secretaries, for taking care of so many details in organizing the Symposium. Many thanks also go to the staff and students of the Key Laboratory of High Temperature Gas Dynamics, Institute of Mechanics of CAS, for helping and supporting me over the past three years. Finally, I want to express my appreciation to Dr. Chris Caron from Springer-Verlag for his kind cooperation in publishing these proceedings.

Zonglin Jiang
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July 11-16, 2004
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