

## **Preface**

Subsecond thermophysics is a rapidly expanding research area where optoelectronic technologies (computers, lasers, data acquisition systems, etc.) create opportunities for new and more accurate measurements. A forum for contacts and discussions among the researchers involved in this area was necessary, and consequently a series of Workshops on Subsecond Thermophysics was started in 1988. After a successful First Workshop held at the National Bureau of Standards (presently the National Institute of Standards and Technology), the Second Workshop on Subsecond Thermophysics was held at the Instituto di Metrologia "G. Colonnetti" (IMGC) in Torino, Italy, on September 20–21, 1990.

The Workshop covered both theoretical and experimental aspects of thermophysical behavior of matter in the millisecond to picosecond time regimes, including both rapid resistive self-heating (volume) and laser heating (surface) techniques. The emphasis was on measurements at very high temperatures, where rapid transient techniques both provide accurate property data and help to understand the fundamental mechanisms governing the behavior of matter under conditions near and far removed from equilibrium.

The Workshop consisted of seven sessions and 20 papers were presented, most of them from invited speakers. Contributions covered the areas of volume heating (nine papers), laser heating (six papers), and high-speed pyrometry (five papers). Recent research work in subsecond thermophysics performed in the United States, the USSR, Italy, Germany, Yugoslavia, and Austria was presented and discussed. The total attendance was 42 researchers, with participants from Italy (20), Germany (7), the USSR (4), the United States (3), Austria (3), Yugoslavia (2), China (2), and Czechoslovakia (1). Some time was devoted to technical visits to IMGC laboratories active in thermophysical property measurements.

This Special Proceedings Issue of the *International Journal of Thermophysics* contains most of the papers that were presented at the Second Workshop.

The Third Workshop on Subsecond Thermophysics is scheduled to take place at Institut für Experimentalphysik, Technische Universität Graz, Austria, on September 17–18, 1992 (Chairman, G. Pottlacher).

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*Chairman of the Second Workshop  
on Subsecond Thermophysics*