*International Journal of Thermophysics, Vol. 20, No. 4, 1999*

# Preface

This special issue contains the proceedings of the Fifth International Workshop on Subsecond Thermophysics held in Aix-en-Provence, France.[1] It was the fifth in a series of recently established workshops (Gaithersburg, 1988; Torino, 1990; Graz, 1992; Köln, 1995) on both experimental and theoretical aspects of the thermophysical behavior of matter in the millisecond to femtosecond time regimes. It includes both rapid resistive and inductive heating (volume) and pulse laser heating (surface) techniques. Such tools provide a unique approach to studying thermophysical properties of materials at very high temperatures (up to the plasma range) and to understanding the fundamental mechanisms governing the behavior of matter under conditions near and far removed from thermodynamic equilibrium.

This 1998 workshop corresponded to the tenth anniversary of this series of meetings initiated in 1988 at the National Institute of Standards and Technology, Gaithersburg, Maryland, U.S.A., by Ared Cezairliyan, who died suddenly on 28 October 1997, and to whom this conference was dedicated. Let me recall that Ared founded the *International Journal of Thermophysics* and served this journal as its Editor-in-Chief until his death (see Volume 19, Number 2, 1998, of this journal in honor of Ared Cezairliyan).

The conference was organized by the French Atomic Energy Commission (CEA) represented by the Centre de Valduc (Department of Research on Nuclear Materials), and took place under the Honorary Presidency of Mr. Robert Dautray, Member of the French Academy of Sciences.

This Fifth Workshop hosted 57 participants, coming mostly from the ECC (Austria, France, Germany, Great Britain, Italy), but also including Russia and Eastern countries (8), the United States (6), and Japan (2).

[1] The sponsors of the Fifth International Workshop on Subsecond Thermophysics are gratefully acknowledged: Commissariat à l'Energie Atomique; Ministère de l'Education Nationale, de la Recherche et de la Technologie; Thomson-CSF Laser; and Nicolet Instruments France.



0195-928X/99/0700-1003$16.00/0 

Forty-eight contributions, divided into seven oral sessions (27 presentations) and one poster session (21 presentations), were presented on the following topics: thermophysical properties of materials in both solid and liquid states (two sessions), studies of melting (one session) and undercooling (two sessions), determination of critical points (one session), and study of plasmas (one session). The latter was an innovation for such a series, which used to deal mainly with the solid and liquid states (up to a few tens of $10^3$ K). This opening to the plasma domain, and therefore to the higher temperature range (up to a few tens of $10^4$ K), is natural since similar experimental techniques (exploding wires and laser) and diagnostics are used, which then lead to related investigations. This special issue of the *International Journal of Thermophysics* consists of 29 papers presented at the workshop.

As usual, this workshop has provided a very friendly atmosphere and fruitful discussions among the participants. According to the congratulations we received during and after the conference, I believe that attendees had a pleasant stay in Aix-en-Provence, the historical Capital of Provence, in both the scientific and the tourist arenas.

On this occasion, I would like to thank the members of the International Scientific Committee, Ared Cezairliyan, Ivan Egry, Gernot Pottlacher, and Francesco Righini, for their help in organizing the conference, as well as all the reviewers for editing the proceedings. A special thanks is due to W. M. Haynes, Editor-in-Chief of the *International Journal of Thermophysics*, for his large contribution to publishing this issue.

The Sixth International Workshop on Subsecond Thermophysics will be held in 2001 in Leoben, Austria. It will be organized by E. Kaschnitz from the Österreichisches Giesserei-Institut. I look forward to attending this conference and meeting again my colleagues in the subsecond thermophysics community.

Michel Boivineau
*Chairman*
*Fifth International Workshop on Subsecond Thermophysics*