

Preface

Dedicated to Clarence Melvin Zener, Founder of the Physics of Anelasticity

The papers collected in this volume constitute the Proceedings of the 10th International Conference on Internal Friction and Ultrasonic Attenuation in Solids, which was held at the University of Roma "La Sapienza", 6–9 September, 1993. The issue consists of 153 refereed contributions, of which 31 are invited papers.

The Conference was the 10th of a quadrennial series which began in Providence (USA, 1956) and continued in Ithaca (USA, 1961), Manchester (England, 1965), Providence (USA, 1969), Aachen (Germany, 1973), Tokyo (Japan, 1977), Lausanne (Switzerland, 1981), Urbana (USA, 1985) and Beijing (China, 1989).

The Roma Conference started a new triennial series which also includes the European Conferences on Internal Friction and Ultrasonic Attenuation in Solids (ECIFUAS). The Conference was attended by the founders of the Physics of Anelasticity. In addition, there was the participation of scientists who use the same technique in different fields of physics and technology, but who do not usually attend our Conference series; the success of this initiative was achieved thanks to the collaboration of representative members of those communities, some of whom were included in the International Scientific Committee. For the above reasons, the new ICIFUAS series took on a wider international significance, becoming the only major Conference devoted to elastic energy dissipation in solids. We hope that the various scientific communities will continue to contribute to this Conference series in a unitary way in the future.

The programme of the Conference consisted of 301 contributions on 14 different topics, and the 180 participants were from 29 different countries; 73 contributions were presented orally in two parallel sessions; 228 were collected in two poster sessions consisting of three parallel sets of short oral presentations followed by the plenary visit to posters.

An Historical Review Session was devoted to the origin of the Physics of Anelasticity, and the respective contributions are placed at the beginning of the present volume. It is sad that Professor Clarence Melvin Zener, who was due to be the Keynote Speaker, left us on July 2, 1993, shortly before the beginning of the Conference. Professor C.A. Wert opened this session with an impressive remembrance of him.

Medals were awarded to Professors P.G. Bordoni, K. Lücke, A. Seeger and C.A. Wert for their significant contribution to the advancement of science in the Physics of Anelasticity. It was decided to name the award the Clarence Zener Medal. The number of medals awarded in this Conference was exceptionally high, and the reason is that medals were only sporadically awarded in the past. The following scientists had received awards previously: W. Köster (Manchester, 1965); W.P. Mason (Providence, 1969); C.M. Zener (Urbana, 1985); T.S. Kê and A.S. Nowick (Beijing, 1989).

Another feature of the Roma Conference was the significant participation and contribution of colleagues from the ex-Soviet Union, China and Eastern Europe. This was achieved by an assistance programme which we were able to offer thanks also to the generous contribution of Sponsors.

Gratitude is expressed to all those persons who contributed to this Conference. We acknowledge the help we received from the members of the International Scientific and the Honorary Committees, and the valuable collaboration of the referees who contributed to improving the standard of the papers. The local Committee was very busy in arranging the form of the Conference and its execution during the meeting, and the collaboration of F. Trequattrini was particularly valuable. The long and laborious editing procedure in Roma was achieved by the efforts of my co-Editors G. Cannelli and F. Cordero.

We are looking forward to a further stimulating meeting in Poitiers, France in 1996, under the Chairmanship of Professor A. Rivière.

Rosario Cantelli
Conference Chairman