



Foreword

Shape memory alloys have unique properties such as recoverability of deformation upon heating and pseudoelastic stress-strain behavior for large strains. These are promising alloys finding applications ranging from bioengineering to mechanical and civil engineering. The materials science background has been documented for these alloys over the last twenty years in a variety of materials journals, and is continually under investigation. On the other hand, the study of engineering aspects of shape memory alloys is relatively new and is currently undergoing intense research. Our experiences with these alloys and the design methodologies have not yet fully developed as for conventional metals. Before design criteria, standards and new texts are prepared in this field a collection of recent articles on the topic will be of considerable value. The papers presented in this special issue are aimed at fulfilling this need. The papers

span from metallurgy of shape memory alloys to experimental and continuum mechanics issues in these alloys. All of the papers attempt to develop understanding at both micro- and macro- levels in the quest for bridging length scales in characterization of these alloys. The papers represent contributions from Europe, Asia, and Americas outlining the direction of some of the leading research groups. We hope that taken all together this issue will be of considerable value to the readers of this journal.

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