Preface

Dynamic Behavior of Materials represents one of six tracks of technical papers presented at the Society for Experimental Mechanics Annual Conference & Exposition on Experimental and Applied Mechanics, held at Indianapolis, Indiana, June 7-10, 2010. The full proceedings also includes volumes on Application of Imaging Techniques, the Role of Experimental Mechanics on Emerging Energy Systems and Materials, Experimental and Applied Mechanics, the 11th International Symposium on MEMS and Nanotechnology, and the Symposium on Time Dependent Constitutive Behavior and Failure/Fracture Processes.

Each collection presents early findings from experimental and computational investigations on an important area within Experimental Mechanics. The current volume on Dynamic Behavior of Materials includes studies on:

Composite Materials, Dynamic Failure and Fracture, Dynamic Materials Response, Novel Testing Techniques, Low Impedance Materials, Metallic Materials, Response of Brittle Materials, Time Dependent Materials, High Strain Rate Testing of Biological and Soft Materials, Shock and High Pressure Response, Energetic Materials, Optical Techniques for Imaging High Strain Rate Material Response, and Modeling of Dynamic Response.

Dynamic behavior of materials represents an ever expanding area of broad interest to the SEM community, as evidenced by the increased number of papers and attendance in recent years. This track was initiated in 2005 and reflects our efforts to bring together researchers interested in the dynamic response and behavior of materials, and provide a forum to facilitate technical interaction and exchange. The sessions within this track are organized to cover the wide range of experimental research being conducted in this area by scientists from around the world. A modeling session is also included in the 2010 program.

The contributed papers span numerous technical divisions within SEM. It is our hope that these topics will be of interest to the dynamic behavior of materials community as well as the traditional mechanics and materials community.

The organizers thank the authors, presenters, organizers, and session chairs for their participation in this track. We are grateful to the TD chairs who co-sponsored and organized sessions in this track (e.g., Composite Materials, Optical Techniques for Imaging High Strain Rate Events). We also acknowledge the SEM support staff for their devoted efforts in accommodating the large number of submissions this year.

The Society would also like to thank the organizers of the track, Kathryn A. Dannemann, *Southwest Research Institute*; Vijay Chalivendra, *University of Massachusetts, Dartmouth*; and Bo Song, *Sandia National Laboratories* for their efforts.

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