Preface

Colorful multi-dimensional flow visualization

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We are pleased to present Journal of Visualization Volume 6 Number 4 to all our readers around the world. JOV has maintained its unique position among world journals as a full-color publication covering a wide variety of visualization fields such as medical care, computer science, electromagnetics and fluid engineering. JOV has presented first-hand and in full color the progression from classical flow visualization techniques, which could produce only monochromatic images conveying limited information, to recent technologies that have made it possible to present color-based information in three and even four dimensions. These new techniques have come to dominate current research, and the images produced have increased the capacity for presenting information enormously. JOV has earned respect from the international academic community for its role as a full-color journal in this rapidly advancing field, and we can expect this role to expand dramatically as research on multi-dimensional information proliferates.

In this issue No. 4, JOV returns to its historical base through ten articles on visualization in the field of fluid engineering. The visualization techniques presented herein include the latest advances such as stereoscopic imaging, particle image velocimetry, and pressure-sensitive paint techniques. The results obtained by these techniques are presented as colorful visualizations in many dimensions, making full use of current computing technologies. The first six papers represent fundamental and academically interesting research on flow visualization, including diffusion flame shapes, swirling flow, and shock waves. The remaining four papers are industry-related, focusing on automotive testing, labyrinth seals, liquid crystal technologies, and heat transfer. All of these articles can be viewed in their full-color entirety. We hope you enjoy this issue, and would like to ask you to join us in extending our appreciation to all the authors and related staff that have made this issue possible.

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