



# Heat Transfer Gallery

The fourth "Heat Transfer Photogallery" was held at the 1999 International Mechanical Engineering Congress and Exhibition in Nashville last November. The Heat Transfer Visualization Committee sponsored the session and attracted 13 photo displays, which illustrate phenomena that occur in the presence of a temperature gradient. Eight entries were selected for publication in this special section of the ASME *Journal of Heat Transfer*.

The purpose of publishing these photographs is to draw attention to the innovative features of optical diagnostics and aesthetic qualities of thermal processes. To focus on the visualization, the text is kept at a minimum and further details should be found through the listed references or directly from the authors. The photographs include visualizations of: (1) phenomena of molten droplet breakup on a solid surface, (2) microscale flow velocity mapping using molecular fluorescence velocimetry (MFV), (3) picosecond laser pulse impact on a surface, (4) counter-rotating thermal cross flows, (5) natural convection using interferometry, (6) oblique impinging jet using liquid crystal technique, (7) gas loaded heat pipe using infrared imaging, and (8) solidification of water using liquid crystal thermography. It is now proposed that the journal readers enjoy viewing these collections, acquire knowledge of the state-of-the-art features potentially applicable for their own research, and promote their participation in IMECE Photogallery session presentation (refer to the Call for Photogallery for 2000-IMECE announced in this volume).

The web-based review (<http://www.mengr.tamu.edu/otherlinks/http://index.asp>) has been carried out and the review was based on the subjective measure of the merit of individual entries, i.e., their innovative features in visualization techniques, scientific importance on heat and mass transfer phenomena, and the artistic beauty of the presentation. Sincere thanks go to the following who participated in the web-based reviews in ranking the entries: C. Ammerman, J. Baughn, Y. Bayazitoglu, C. Beckermann, M. Bussmann, M. Cerza, S. Chandra, T. Y. Chu, R. Douglass, S. V. Ekkad, D. K. Ezekoye, A. Haji-Sheikh, J. Howell, M. Hung, M. K. Jensen, D. Juric, J. Kim, K. C. Kim, J. Lage, J. H. Lienhard, J. R. Lloyd, S. S. Mao, I. Nakane, J. M. Ochterbeck, C. H. Oh, T. O'Hern, and R. H. Page. Special thanks go to the Technical

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