JOURNAL OF PROPULSION AND POWER
Vol. 16, No. 4, July–August 2000

Editorial

WE are pleased to present this special issue of the *Journal of Propulsion and Power* that includes selected papers presented at the second International Conference on Advanced Energy Conversion Systems and Related Technologies (RAN98) held at Nagoya University, Japan, December 1–3, 1998. Following the successful RAN95 also held at Nagoya University in 1995, the RAN98 Symposium consisted of a very extensive range of topics on Advanced Energy Conversion Technologies and Related Systems. Technical sessions were offered on gas turbine technologies, advanced combustion technologies, combustion and treatment technologies—for waste materials, and measurement and visualization technologies for energy conversion systems. In addition to the 21 papers selected for publication in this special issue from the over more than 200 technical papers presented at the conference, we are pleased to include the following keynote papers: Recent Advances in Soot Formation from Spherical Droplet Flames at Atmospheric Pressure (C. T. Avedisian, Cornell University); Utilization of High-Density Strained Hydrocarbon Fuels for Propulsion (G. D. Roy, Office of Naval Research); Thermal Destruction of Cellulose and Surrogate Solid Wastes (A. K. Gupta, University of Maryland); Miniaturization Technologies for Advanced Energy Conversion and Transfer Systems (T. A. Ameel, I. Papautsky, R. O. Warrington, R. S. Wegeng, and M. K. Drost, Michigan Technological University); Gas Turbine Heat Transfer: Past and Future Challenges (R. Schiele and S. Wittig, University of Karlsruhe); and Transition in Boundary Layers on a Concave Surface (S. H. Winoto, D. H. Zhang, and Y. T. Chew, National University of Singapore).

The conference drew participants from 10 countries around the world and was sponsored by the Research Center for Advanced Energy Conversion of Nagoya University and the Society of Chemical Engineers, Japan. The AIAA, ASME, The Combustion Society of Japan, and The Heat Transfer Society of Japan cosponsored the conference. The editors of this special edition sincerely appreciate the time and effort of the authors and reviewers who made this issue a success.

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Advanced Power Generation

READERS of the *Journal of Propulsion and Power* will recall that the March–April 1999 Issue contained 16 papers on the efficient generation of Terrestrial Energy. These manuscripts were largely based on papers given at sessions organized for the 1996 Aerospace Sciences Meetings by the Terrestrial Energy Technical Committee. The Issue received many favorable comments regarding its relevance to a topic of continuing importance to Planet Earth.

While the publication cycle was in process for this Issue, discussions on advances in many of the topics covered in the Issue were being presented at two conferences held in Japan. Once again, Ashwani Gupta (Chair of the Terrestrial Energy TC and an Associate Editor of *JPP*) suggested publication of a group of manuscripts describing these advances; the results included in this section demonstrate the extent to which present-day technology from several aerospace topics is being applied to the implementation of improved methods of generating energy. On behalf of the readers of *JPP*, I want to thank Professor Gupta and the Co-Organizers from Nagoya University for their efforts in these Conferences and their willingness to share their results in this latest Special Section.

R. H. Woodward Waesche
Editor-in-Chief, *Journal of Propulsion and Power*