Editorial

Jack D. Gaskill, Editor

When Is a Special Issue Not a Special Issue?

Nearly a year ago, Dr. Henry Lum agreed to serve as guest editor for the November 1986 special issue of *Optical Engineering*, the subject of which was to be "Automation and Robotics for the Space Station." Dr. Lum, who is Chief of the Information Sciences Office, Aerophysics Directorate, at NASA Ames Research Center, felt that he would have no difficulty obtaining a dozen or more excellent papers related to this very interesting subject. However, due to circumstances beyond his control, only three suitable papers were forthcoming, the consequence of which was a severe dilution of the "special issue." I would like to offer my apologies to the authors of those three papers, who fully expected that their papers would be part of a significant collection of papers on the chosen subject, and I'm certain that Dr. Lum joins me in doing so.

In the first paper, Dolce and Faymon address the automation of the U.S. Space Station's electrical power system. The emphasis is directed toward the automation of activities that are normally performed by humans to decrease both spaceborne and ground-based support costs. The second paper, by Krueger et al., is concerned with the need for special artificial intelligence hardware architectures for the Space Station era. This need exists because the support requirements imposed by artificial intelligence languages are, in general, poorly served by current computer architectures. In the third and final paper devoted to the special topic of this issue, Erickson and Cheeseman describe autonomous systems and executive controllers, outline how these intelligent systems can be utilized within the Space Station, and discuss a number of related design considerations.

Although I was disappointed that there was not a better response to the call for papers for this special issue, I would like to express my appreciation to the authors of these three papers for their contributions.

This issue also contains 10 contributed papers on topics ranging from computer vision to layered synthetic microstructures and from phase-locked laser diode arrays to intermediate spherical aberration. Although the contents are substantially different than originally anticipated, it is nevertheless a significant issue with a number of excellent papers.

OPTICAL ENGINEERING EDITORIAL SCHEDULE

December 1986

Contributed papers on optical engineering

January 1987

**Optical Computing and Nonlinear
Optical Signal Processing**

Nasser Peyghambarian
Optical Sciences Center
University of Arizona
Tucson, AZ 85721 602/621-4649

February 1987

Optical Materials

Solomon Musikant
General Electric Company
Space Systems Div., Rm. U3027
Valley Forge Space Center
P.O. Box 8555
Philadelphia, PA 19101 215/354-3020

March 1987

Charge Transfer Devices

Eustace Dereniak
Optical Sciences Center
University of Arizona
Tucson, AZ 85721 602/621-1019

April 1987

Optical Microlithography

Joseph P. Kirk
IBM East Fishkill-Z40A
Route 52
Hopewell Junction, NY 12533 914/894-4911

May 1987

**Optical Information Processing: Systems,
Materials, and Devices**

Uzi Efron
Hughes Research Laboratories
MS RL69
3011 Malibu Canyon Road
Malibu, CA 90265 213/317-5214

June 1987

Contributed papers on optical engineering

July 1987

Visual Communications and Image Processing

T. Russell Hsing
Bell Communications Research
Room 2L-181
435 South Street
Morristown, NJ 07960-1961 201/829-4950

August 1987

Charge-Coupled Devices: Theory

James R. Janesick
Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive
Pasadena, CA 91109 818/354-7734

September 1987

Charge-Coupled Devices: Applications

James R. Janesick
(See August 1987 for address)