Editorial

Jack D. Gaskill, Editor

Is It Suitable for Optical Engineering?

I am often asked to comment on the suitability of various topics and kinds of manuscripts for submission to *Optical Engineering*, and one of the most frequently asked questions is related to the distinction between experimental and theoretical papers; i.e., should *Optical Engineering* contain papers of a theoretical nature? Another question I have encountered more than once has to do with the appropriateness of papers on image processing. Some individuals with whom I have spoken seem to have very definite ideas about these matters, but I find it difficult to be as confident as they.

I think that some topics quite clearly belong in the jour-

nal (e.g., optical design, optical fabrication, and optical testing), whereas others just as clearly do not (e.g., the history of Far Eastern religions, eighteenth century English literature, etc.). On the other hand, it is my view that a great many topics can be neither automatically included nor excluded simply because they are present or absent from some preordained list. Neither can a manuscript be automatically declared suitable simply because it is experimental nor judged unsuitable because it is theoretical. Why can't a theoretical paper be appropriate; is there no theory in engineering? And why should a paper on image processing be any less suitable than a paper on computer-generated holograms?

In many cases, a decision regarding the suitability of a paper on a particular topic or of a particular nature simply boils down to a judgment call, and the author may be the best judge. It seems to me that the most important ingredient in arriving at such a decision is the determination of whether or not a substantial number of those who read the journal will find the paper of interest. If an author believes that a manuscript generally fits the guidelines established for the journal and that it will be of interest to a significant number of readers, then he or she should submit it for consideration.

Future Special Issues (see p. 824 for complete editorial schedule)

April 1987

Optical Microlithography

Guest Editor: **Joseph P. Kirk**

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It is apparent that optical exposure tools will be able to produce minimum critical dimensions approaching $0.5\ \mu\text{m}$ over fields sufficiently large to economically manufacture integrated circuit chips. The technology that has enabled this advance of optical microlithography into the realm previously assumed to be the domain reserved for electrons, ions, and x rays will be reported in this special issue.

Papers will be considered for inclusion that describe leading-edge technologies that are enabling these advances. Subjects will range from the generation and inspection of reticles to the photoresist that ultimately records the optical image. Papers are solicited particularly on the following subjects: design of reflecting, refracting, and catadioptric projection lenses; design and analysis of alignment technology; UV light sources and condenser systems, including excimer lasers; design of precision mechanical stages for step and repeat, image scanning, or flash on the fly; and methods of measurement and correction of the errors in the exposure process.

Manuscripts must be received by the Guest Editor by September 1, 1986, and will be reviewed by two referees and selected for publication, with the revised manuscripts due November 1, 1986.

July 1987

Visual Communications and Image Processing

Guest Editor: **T. Russell Hsing**

Room 2L-181

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The increase in communication of visual information over the past several decades has resulted in many new image processing and visual communications systems being put into service. The growth of this field has been rapid in both commercial and military applications. With the growing availability of optical fiber links, advances of large scale integration, new telecommunications services, and emerging new processing algorithms, computer technologies, fiber optics technologies, and VLSI devices, this growth undoubtedly will continue and will create many more video services of value to huge numbers of customers. Therefore, a special issue on Visual Communications and Image Processing is being planned for publication in July 1987. Papers in the issue will include, but not be limited to, the following topics:

- PC-based image processing systems
- Image processing for telecommunications
- Image understanding and knowledge-based systems
- Human visual system models for image processing
- Optical fiber based network distribution for image data
- Pattern recognition and image processing for medical applications
- High definition television
- Electronic publishing and facsimiles.

Prospective authors wishing to have their manuscripts considered for publication in this issue should submit four copies of their complete manuscripts to the Guest Editor for review by October 1, 1986.