From the numerical results, we can see that the optimum position of the beam waist of the incident wave beam is closer to the input aperture than that obtained by Kogelnik and Yariv [2]. The difference between them increases as the acceptance factor becomes smaller.

The maximum SNR in the output depends only upon the acceptance factor. The smaller the acceptance factor, the better the SNR.

This short paper gives one of the examples which show the usefulness of the beam mode expansion method. More complex systems, such as those which include lenses, can be treated in the same way.

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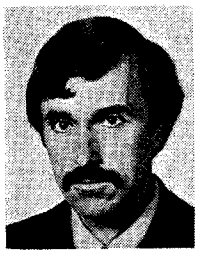
Joseph Helszajn (M'64), for a photograph and biography, please see page 324 of the March 1975 issue of this TRANSACTIONS.



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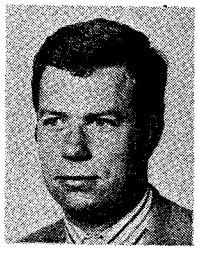

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