

In contrast with most science or engineering courses, the objective is to impart relatively little factual or cognitive knowledge to the student, but rather to let him acquire the skills to solve problems on the basis of whatever he has already learned, both in his previous courses and in his general experience. Apart from providing practice in solving problems and thinking in concrete terms, the course is aimed at giving the student confidence in his own ability. It surprises me each year how many students believe they are not yet equipped for problem solving or anything else—after fourteen years of education!

The course will consist of a number of units in which the class is given a few problems to work on while the instructor is available. Longer problems will be assigned as homework. Now, I rarely discuss a unit in advance, preferring at first to let the student work alone and offering help where necessary. Later I discuss and expand upon the problems. Some of the topics I anticipate studying at Verrazzano are order-of-magnitude estimations, approximate calculations, graphing, units, dimensional analysis, mathematical approximations, energy storage and conversion, steady-state and transients (applied to many areas), optimization—all at a level commensurate with sophomores' abilities. I may well require a design project at the course's end. I hope to work the course in such a way that it will be useful to all science students, not physics students alone.

I will be more than happy to share my ideas and experiences with any of my colleagues who request the information.

MATT YOUNG

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Shared employment

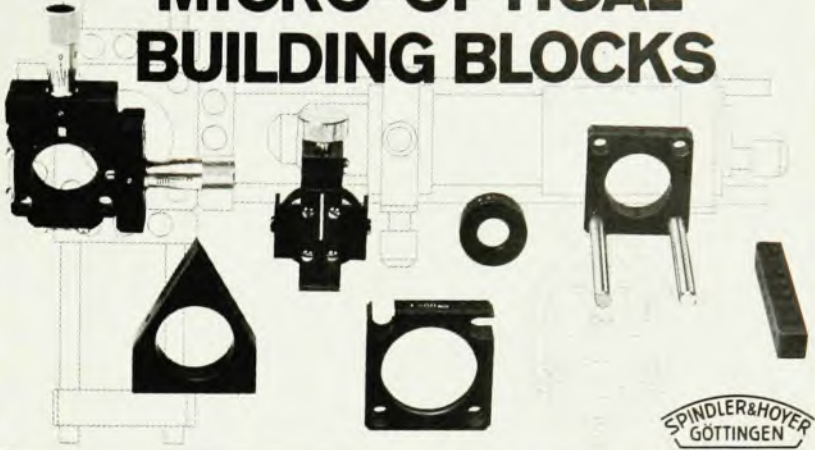
Having read the on-going comments of Ernest G. Fontheim and Jane Jackson (March, pages 11 and 13) with interest, it occurred to me that readers might be interested in SHARE, Inc., a new employment service in Colorado specializing in bringing the idea of part-time professionalism to fruition.

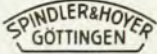
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Professor D. Amati, Leader of the Theoretical Study Division, CERN, 1211 Geneva 23, Switzerland,

and received before 30 August, 1974.

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SUBJECT INDEX

25.60. ^3He and ^4He -induced reactions and scattering ($A \geq 5$)

- Abstract No. 00343. Elastic scattering of 60-MeV alpha particles by the even nickel isotopes. D. G. Madland, P. Schwandt, W. T. Sloan, Physics Department, Indiana University, Bloomington, Indiana 47401; P. Shapiro, Naval Research Laboratory, Washington, D.C. 20375; and P. P. Singh, Physics Department, Indiana University, Bloomington, Indiana 47401, and Naval Research Laboratory, Washington, D.C. 20375. (Received 17 September 1973)
- Article Title
- Abstract
- Journal Title, Vol., No., Pages, Date
- Additional PACS Listings
- Additional Title Listing
- Authors' Names
- Authors' Affiliations
- Date Article Received
- Current Physics Microform No.
- Abstract No.

AUTHOR INDEX

von Falkenburg, P.-03615
Vyaslav, John F.-00039

W

Wagner, R.F.-00015
Wagner, William P.-00010
Walch, R. Milton-00174
Wald, Gregory J.-01123
Walker, H. Alexander, Jr.-00036
00231, 00659,
Walker, Mary R.-00029
Wallace, A.W.-00247, 00542

● Author's Name

● Abstract No.

Sample entries from the Annual (Cumulative) Index*

● Physics-Astronomy
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Heading (PACS)

SUBJECT INDEX

71.60. Lasers

- Article Title
- Abstract No.
- Authors' Names
- Journal Title, Vol., No., Pages, Date
- Current Physics Microform No.

AUTHOR INDEX

- Article Title
- Author's Affiliation
- Author's Name
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Gloria Golbert
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More on matter waves

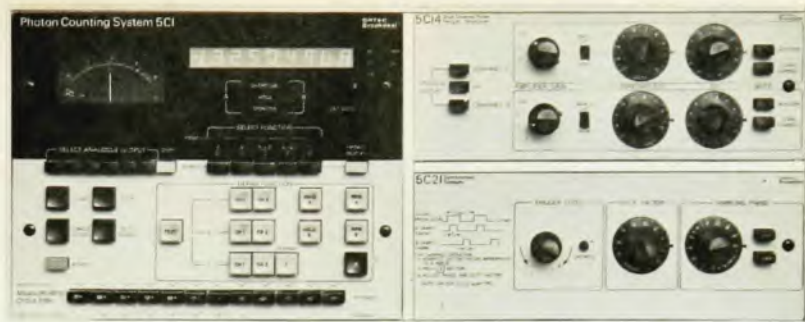
In his very interesting article "Fifty years of matter waves," (February, page 38) H. A. Medicus mentions the fact that "... only two years after the invention of holography by Dennis Gabor—the first experiments on micro-holography with electrons were carried out ..."

It is of great interest to note that in his first papers on holography,^{1,2} Gabor presented his method as a solution to the aberration of electron lenses in electron microscopy. He proposed holography as a method to reconstruct an electron "wavefront" by an equivalent optical wavefront, so that the imaging process be done with visible light for which good lenses are available.

References

1. D. Gabor, Nature, 15 May 1948.
2. D. Gabor, Proc. Roy. Soc. A197 (1948).
DORIAN KERMISCH
Xerox Corp.
Rochester, New York

In his article Heinrich Medicus gives, from several sources, Max Born's accounts of his own influence on the work of Elsasser. The references in which Born states that he instigated Elsasser's work are from the 1960's. It may be of interest to note that essentially this account is also given by Born in the little book *Experiment and Theory in Physics*, first published by the Cam-



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