physics and engineering, but rather to develop the material from a few basic concepts; namely, Hamilton's principle together with the theory of the first variation, and Bernoulli's separation method for the solution of linear homogeneous partial differential equations. The author's persuasive style appears certain to gain adherents for his viewpoints on many college campuses this coming fall.

Hamilton's principle and the theory of the first variation occupy Chapter 1. The representation of some physical phenomena by partial differential equations (vibrating string and membrane, heat conduction and potential equation) forms the subject matter of Chapter II. Chapter III contains general remarks on the existence and uniqueness of solutions and the presentation of Bernoulli's method of separation of variables, while Chapter IV is devoted to Fourier series. Chapter V deals with self-adjoint boundary-value problems, the concept of their eigenvalues being developed according to the elementary method of H. Pruefer in *Mathematische Annalen*, v. 95 (1926). Chapters VI and VIII, on special functions, deal with Legendre polynomials and Bessel functions, and spherical harmonics, respectively. Chapter VII develops the characterization of eigenvalues by a variational principle; while the final Chapter IX is devoted to the nonhomogeneous boundary-value problem (Green's function and generalized Green's function).

The text is well designed for class room use. The author intends it to be used in a two-semester three-credit course. Each chapter is generously provided with interesting exercises (answers and hints are provided at the end of the book for the even-numbered problems). A recommended supplementary reading list concludes each chapter. A welcome innovation is the detailed appendix, containing a condensation of topics with which "the student who wishes to take this course with a reasonable chance to succeed should be familiar."

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10[S]. Charles DeWitt Coleman, William R. Bozman & William F. Meggers, *Table of Wavenumbers*, Volumes I and II, U. S. Department of Commerce. Volume I—2000 A to 7000 A, and Volume II—7000 A to 1000 μ, 1960, vii + 500 p., and vii + 534 p., 35 cm. Price $6.00.

A two-volume table for converting wave lengths in standard air to wave numbers in vacuum was computed by using the equation $\sigma_{\text{vac}} = 1/(n\lambda_{\text{air}})$, where n was computed from Edlen's 1953 equation for the refractive index of air. Wave numbers are given to the nearest 0.001 K (cm^{-1}) for wave lengths from 2000 to 7000 A in volume I, and 7000 A to 1000 μ in volume II. Proportional tables are given for linear interpolation between entries of λ. Also included are the vacuum increase in wave length, $(n - 1)$, and the refractivity of standard air in the form $(n - 1) \times 1000$.

Authors' Summary

11[W]. Guy H. Orcutt, Martin Greenberger, John Korbel & Alice M. Rivlin, *Microanalysis of Socioeconomic Systems: A Simulation Study*, Harper & Brothers, New York, 1961, xviii + 425 p., 21 cm. Price $8.00.

In this book the authors discuss an experimental calculation carried out on a