

EDITORIAL AND BUSINESS ADDRESS

Department of Chemical Engineering
University of Florida
Gainesville, Florida 32611

Editor: *Ray Fahien* (904) 392-0857

Associate Editor: *Mack Tyner*

Editorial & Business Assistant:
Carole C. Yocum (904) 392-0861

**Publications Board and Regional
Advertising Representatives:**

Chairman:

Lee C. Eagleton
Pennsylvania State University

Past Chairman:

Klaus D. Timmerhaus
University of Colorado

SOUTH:

Homer F. Johnson
University of Tennessee

Jack R. Hopper
Lamar University

James Fair
University of Texas

Gary Poehlein
Georgia Tech

CENTRAL:

Darsh T. Wasan
Illinois Institute of Technology

Lowell B. Koppel
Purdue University

WEST:

William B. Krantz
University of Colorado

C. Judson King
University of California Berkeley

NORTHEAST:

Angelo J. Perna
New Jersey Institute of Technology

Stuart W. Churchill
University of Pennsylvania

Raymond Baddour
M.I.T.

A. W. Westerberg

Carnegie-Mellon University

NORTHWEST:

Charles Sleicher
University of Washington

CANADA:

Leslie W. Shemilt
McMaster University

LIBRARY REPRESENTATIVE

Thomas W. Weber
State University of New York

Chemical Engineering Education

VOLUME XVII

NUMBER 1

WINTER 1983

DEPARTMENTS

Department of Chemical Engineering

2 ChE at Clemson, *J. M. Haile, D. D. Edie*

The Educator

6 *J. M. Smith, N. McGuinness*

Lecture

10 R. H. Wilhelm's Influence on the Development of Chemical Reaction Engineering: From the Wilhelm Lectures at Princeton
Rutherford Aris

Classroom

16 Integrating Chemistry and Engineering: A Course in Industrial and Engineering Chemistry
G. L. Schrader, R. L. Pigford, B. C. Gates

Laboratory

20 Solar Hot Water Heating by Natural Convection
Richard D. Noble

28 Direct Digital Control Liquid Level Experiment, *M. F. Adb-El-Bary*

Curriculum

24 A Process Control Undergraduate Option
J. C. Hassler, K. I. Mumme'

International

34 TUTCHE-A Program Package for Tutoring Chemical Engineers
F. P. Stainthorp, D. Lomas, J. Alonso

Feature

32 Survey: Computer Usage in Design Courses
Ernest J. Henley

23 In Memoriam: *Ralph E. Peck*

27, 46 Book Reviews

CHEMICAL ENGINEERING EDUCATION is published quarterly by Chemical Engineering Division, American Society for Engineering Education. The publication is edited at the Chemical Engineering Department, University of Florida. Second-class postage is paid at Gainesville, Florida, and at DeLeon Springs, Florida. Correspondence regarding editorial matter, circulation and changes of address should be addressed to the Editor at Gainesville, Florida 32611. Advertising rates and information are available from the advertising representatives. Plates and other advertising material may be sent directly to the printer: E. O. Painter Printing Co., P. O. Box 877, DeLeon Springs, Florida 32028. Subscription rate U.S., Canada, and Mexico is \$15 per year, \$10 per year mailed to members of AIChE and of the ChE Division of ASEE. Bulk subscription rates to ChE faculty on request. Write for prices on individual back copies. Copyright © 1983 Chemical Engineering Division of American Society for Engineering Education. The statements and opinions expressed in this periodical are those of the writers and not necessarily those of the ChE Division of the ASEE which body assumes no responsibility for them. Defective copies replaced if notified within 120 days.

The International Organization for Standardization has assigned the code US ISSN 0009-2479 for the identification of this periodical.