

In Memorium



Leon Lapidus

Professor Leon Lapidus, 52, chairman of the Department of Chemical Engineering at Princeton University, died suddenly in his office May 5, 1977.

He was the author of more than a hundred technical publications including four textbooks: *Digital Computation for Chemical Engineers*, *Optimal Control of Engineering Processes*, *Numerical Solution of Ordinary Differential Equations*, and *Mathematical Methods for Chemical Engineers*. Widely sought as a consultant, Lapidus was a member of the National Academy of Engineering, Sigma Xi, American Chemical Society, American Institute of Chemical Engineers, the Association of Computing Machinery, and president of the New Jersey Tennis Association.

The Princeton University Faculty adopted the following memorial resolution at its June 1977 meeting:

MEMORIAL RESOLUTION FOR PROFESSOR LEON LAPIDUS

Dr. Leon Lapidus first came to Princeton in 1951 as a Research Associate in Professor Richard H. Wilhelm's program in chemical sciences on what is now the Forrestal Campus. His previous training included two degrees from Syracuse University in the city of his birth, a doctorate from the University of Minnesota, where he was the first of a long line of outstanding scholars under the tutelage of Dr. Neal Amundson, and a post doctoral fellowship at the Massachusetts Institute of Technology.

In 1953 he became a member of the Chemical Engineering faculty as an Assistant Professor. He was promoted to Associate Professor in 1958 and to Professor in 1962. In 1970 he was appointed

The Class of 1943 University Professor. From 1968 until his untimely death on May 5, 1977, he served as Chairman of the Department of Chemical Engineering. Throughout most of his tenure as Chairman he was the elected member from Division IV on the Faculty Advisory Committee on Appointments and Advancements, making his membership on that important committee one of the longest in the history of the university.

A teacher-scholar in the best Princeton tradition, Professor Lapidus was also a skilled administrator. Indeed, a colleague in another department recently observed that Leon was the ultimate exemplar of the ideal all-round faculty member because his research productivity increased as his administrative responsibilities grew.

With a rare gift of being able to communicate often abstruse and difficult material clearly and enthusiastically, Professor Lapidus gained a wide reputation as lecturer, and student ratings of his courses invariably placed them near the top of all courses in the University. His contributions to teaching were not limited to classroom instruction, however, inasmuch as he authored or co-authored four major textbooks, and in collaboration with his first mentor, Dr. Amundson, he edited the definitive work on chemical reactor theory, written as a memorial to the late Richard H. Wilhelm. In particular his books on digital computation and on optimal control theory have widespread use as teaching tools. The book on chemical reactor theory was published during the week of his death.

In 1955, just two years after joining the Princeton faculty, Professor Lapidus introduced a new course in numerical methods of computation. This course marked the beginning of his professional concentration on the application of numerical analysis and computer techniques to

problems in chemical engineering. Over the years he extended the breadth and depth of this application with special attention to problems in the simulation, control and optimization of chemical process systems. More than fifty graduate students participated in this work, many of whom are now on major faculties throughout the world. The fruits of this work, comprising five books and some 135 articles in scientific journals, have had a major impact on the way engineers in general, and chemical engineers in particular, approach problems.

Many awards went to Professor Lapidus for his prodigious scholarship. He won the Professional Progress Award and the William H. Walker Award of the American Institute of Chemical Engineers. In 1976 he was elected to the National Academy of Engineering, the third member of the Princeton faculty so honored. He has been Chemical Engineering Lecturer for the American Society for Engineering Education, Reilly Lecturer for the University of Notre Dame, Lacey Lecturer for the California Institute of Technology, Mason Lecturer for Stanford University, Distinguished Lecturer for the University of Michigan, and Organization of American States Lecturer at La Plata University in Argentina.

Widely sought as a consultant to industry, Professor Lapidus also served on the editorial advisory boards of the Journal of the American Institute of Chemical Engineers, the International Journal of Systems Science, The Chemical Engineering Journal, and he was Editor of Control Series, Blaisdell Publishing Company. He was also a member of the Visiting Committee to the Department of Chemical Engineering at the California Institute of Technology.

He was an active player and a promotor of tennis, especially among young people. At the time of his death he was president of the New Jersey Tennis Association. Furthermore, he transmitted his enthusiasm for the game to his children, Mary and Jay, both of whom he coached to tournament calibre. Jay, who will enter Princeton in the fall, is generally regarded as one of the most promising tennis players in the United States.

A devoted husband and father, Leon Lapidus most of all enjoyed those activities which included his close-knit, immediate family circle: his wife, the former Elizabeth Kalmes, whom he met and married in Minneapolis, Minnesota, and his children, Mary Kalmes and Jon Jay. In addition to his immediate family he leaves a

sister, Mrs. Florence L. Goldman. He leaves, too, a large number of friends and colleagues, who will deeply miss those personal and professional qualities that made so lasting an impact on his profession, on Princeton University and on the Department.

Ernest F. Johnson
William R. Showalter
Richard K. Toner

ChE letters

FACULTY WORKLOAD CORRECTION

Sir:

In the interest of accuracy, I would like to state that my paper in *Chemical Engineering Education*, Vol. II, No. 3, p. 134, 1977 should be entitled, "Faculty Workload Measurement," and not "Faculty Workload Measurement at NJIT."

I would appreciate having this fact brought to the attention of your readers since the article is not how loads are measured at NJIT. Thanks.

Deran Hanesian
New Jersey of Technology

EDITOR'S NOTE: CEE deeply regrets the error.

ChE book reviews

FINANCIAL DECISION MAKING IN THE PROCESS INDUSTRY

by Donald R. Woods, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1975. 324 pp., \$16.95.

Reviewed by Vincent W. Uhl, University of Virginia, Charlottesville, VA.

The treatment seems to go beyond the title; in introductory chapters the books surveys two important areas related to financial decision making. One is that of the professional making judgements which affects society and the world we live in. The other area is the overall business environment. By this approach Woods manages to scan the full sweep, the spectrum from the individual to society. Then he concentrates on "process economics" in this setting.

Process economics constitutes the core of the work. Basically the methodology delineated is

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