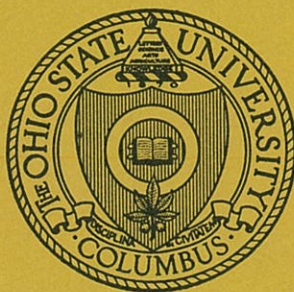


CHEMICAL ENGINEERING

Twenty-seventh

Annual Report to the Alumni

1975



THE OHIO STATE UNIVERSITY



Row 1 (l. to r.) S.H. Alkire, B.H. Hurd, P.M. Auh, K.Y. Park, Y.S. Song

Row 2 (l. to r.) T.L. Sweeney, K.R. Cox, B.K. Dawson, B.T. Bayne, S.D. Brown, S.H. Cho, D.W. Buchanan

Row 3 (l. to r.) W. Surjowidjojo, R.E. Lynn, S. Svanks, R.S. Brodkey, D.P. Maddox, W.B. Kay, B. Ghorachi, W.R. Fontaine

Row 4 (seated l. to r.) S.S. Tam, S.K. Scheel

Row 4 (standing l. to r.) M.E. Forry, M.J. Clark, R.J. Weaver, H. G. Bravo, E.H. Beadle, B. Frazier, S.M. Benner, A.K. Praturi

Row 5 (l. to r.) A.R. Harrison, E.A. Grulke, F.C. Johnson, D.W. Hester, J.O. Wright, J.T. Heibel, W.M. Pekman, D. Fair, J. Sullivan, A. Syverson, C.R. Beharry, M.R. Okos, B.A. Robinson

Row 6 (l. to r.) K.L. Montague, J.L. Rhode, R.L. Schroeder, M.B. Kukla, E.R. Haering, J.A. McCaw, T.W. Marker, J.J. Krejci

Twenty-Seventh Annual Report
to
Chemical Engineering Alumni

March 17, 1975

Dear Alumni:

Another good year for Chemical Engineering seniors! Starting salaries are now \$14,000 to \$15,300 for those with the B.S. degree with no experience - and offers are numerous. This year's senior class is the smallest we have had in many years (30) - these are hardy souls who decided to make chemical engineering their chosen work when the media was saying "engineering is an overcrowded profession." The dynamics of enrollment in higher education is very sluggish compared to that of our economic system - apply a stimulus today and wait four to six years for the response. Considerable recruiting effort by our faculty and the Engineering College Office as well as improvement in employment opportunities have brought increased enrollment. We should have 42 seniors in 1976, 46 in 1977, and 50 or more in 1978. According to a recent report the national trend in graduates of chemical engineering shows a drop of almost 50% from 1973 to 1976 and remaining there until 1978. It is our conviction that chemical engineers will be very much needed in the foreseeable future. Let's hope that our economy can provide the opportunities for them to help solve the crucial problems ahead - some of which maybe at the very root of the survival of our system.


Ed Haering was appointed Vice Chairman this past year. We are very fortunate to have a person of Ed's talents and experience to serve in this important work. John Heibel was promoted to the rank of Associate Professor. John has done outstanding work in bringing our program in computers to the forefront. "Faculty Sketches" of Ed and John published in News in Engineering are presented later in this report. Bob Brodkey has been on a leave of absence for the Winter and Spring quarters to serve as a "Senior U.S. Scientist" at the Max Planck Institut fur Stromungsforschung, Göttingen, West Germany. Mazen Anastas, a recent Ph.D. graduate now employed at Battelle, is teaching the course in Rheology Winter quarter. Joe Koffolt seems to be about the same as last year. Web Kay, although retired, is still very active.

We are proud of our Mike Kukla who received the first Service Award presented by The Council of Graduate Students "for his selfless interest in the graduate students at The Ohio State University." Mike designs, builds and maintains our instruments including keeping our PDP computer operating. I am sure all recent alumni who know Mike share our view that his contributions have been outstanding and the award is well deserved. We are pleased to have Susan Knopp on our staff as an Administrative Specialist and Loretta Woody as a Clerk-Typist. We regret losing Jane Dunwoodie and Phil Lombardi to other University positions and Debbie Fair to private industry.

Universities are not immune to the ravaging effects of inflation. Our administration is working hard to improve faculty salaries (OSU faculty salaries are the lowest in the Big Ten). To give some help we are all "belt tightening" with less office help, teaching associates, and departmental services. Up to this point we think we can still maintain the quality of our program and hope to come out stronger than before.

Our faculty joins me in sending our best wishes. Please keep us informed about promotions and changes of address.

Sincerely,


Aldrich Syverson
Chairman

ANNIVERSARY CLASSES

1915

O.P. Gephart X
 H. Mitzen X
 G.T. Ross OKAY
 C.J. Strobel OKAY

X 1925

B.B. Annis
 N.T. Beynon
 M.W. Braidech
 R.C. Gregg CAPPELL
 R.O. Klotz
 F.P. Lasseter
 F.H. Manchester
 A.M. McCollister
 P.M. Mowen
 R.J. Paddock
 J.C. Pew
 R.W. Rothrock
 W.O. Stauffer
 R.J. Sutton
 O.A. Thompson
 H.M. Trimble
 N.C. Turner
 E.F. Vogel

X 1950

R.E. Albert
 R.M. Allen
 James Anderson
 W.K. Averitt
 W.J. Berk
 H.D. Bowser
 John Bradfute
 O.B. Brice
 T.B. Burkholder
 D.E. Calvin
 T.R. Campbell
 E.H. Chao
 John Chocholak
 H.S. Christianson
 W.E. Donham
 R.E. Duval
 D.G. Floyd
 D.E. Garrett
 Walter George
 W.H. Graves
 W.W. Grimes
 J.A. Gurklis
 R.D. Haber
 J.G. Hahn
 D.R. Hamilton
 T.J. Hanratty
 S.C. Hansoti

1950 (cont.)

D.W. Hardesty
 J.R. Harrison
 E.L. Hawk
 J.R. Hill
 Preston Hill
 R.H. Immel
 G.H. Kearns
 R.F. Kelley
 R.S. King
 H.E. Knowlton
 B.L. Larcamp
 R.W. Laurell
 Wm. Leavitt
 W.H. Lee
 Chas. Lindberg
 Milton Litvan
 C.J. Lyons
 J.L. Ma
 F.A. MacDougall
 S.S. Majmudar
 D.S. Mauer
 R.J. Mayfield
 Hobart McGinnis
 Lewis Michael
 P.W. Miessler
 J.R. Milne
 R.I. Mitchell
 V.C. Nanavati
 T.D. Nevans
 L.J. Nowacki
 J.A. Olah
 K.D. Patel
 D.F. Pickard
 D.A. Plautz
 Eugene Pontius
 J.H. Quattlebaum
 Geo. Ramboseck
 R.J. Rathi
 C.C. Reddy
 H.F. Rein
 F.A. Retzke
 V.R. Rinehart
 R.B. Ritter
 J.D. Rogers
 E.C. Rosenberger
 Bernard Rudin
 A.M. Sabroff
 L.F. Salzberg
 R.L. Scott
 F.E. Sennett
 R.E. Sieber
 A.H. Smith
 E.C. Summer

1950 (cont.)

Julius Teres
 R.E. Thompson
 J.J. Uebelhart
 Jos. Verkamp
 L.J. Weis
 P.L. Wells
 L.J. Weiz
 D.W. Wilson
 F. Winterkamp
 Alfred Withrow
 B.T. Wolfson

X 1965

C.R. Anderson
 F.C. Arnold
 C.E. Bauman
 E.R. Corino
 J.M. Davidson
 O.L. Davies
 V.L. DePaola
 T.W. Doub
 R.M. Dunlop
 R.S. Evanko
 F.H. Flor
 J.P. Gegner
 J.M. Genco
 K.S. Ghandi
 D.W. Hissong
 R.R. Huddleston
 W.J. Kerns
 D.S. Kim
 H.W. Kim
 K.H. Lee
 W.E. Lewis
 R.G. Magley
 T.C. McKelvey
 E.K. Middleswart
 J.W. Mills
 A.H. Morth
 L.R. Perkins
 L.W. Perkins
 F.J. Rerko
 M.C. Royer
 R.J. Rundt
 J.M. Sanghavi
 P.H. Schmitz
 F.A. Shaffstall
 W.A. Smith
 D.J. Stazenski
 L.A. Stichweh
 G.L. Street
 R.M. Veazie
 J.A. Weaver
 E.N. Wheeler

X
ANNIVERSARY CLASSES

1970

C.M. Auh
L.P. Clark
P.E. Cooke
G.E. Cressman
J.F. Dietz
B.F. Dunn
R.E. Fajardo
G.W. Good
T.S. Groh
D.R. Grove
D.C. Grulke
C.G. Guttman
D.C. Haberkost
A.E. Hafeez
G.Q. Johnson
J.A. Kaplan
C.A. Klingensmith
D.O. Kutscher
H.R. Lander

1970 (cont.)

A.L. Larez
M.S. Lerch
M.L. MacMillan
M.M. Mehta
B. Moc Choy
M.L. Nevin
R.W. Nixon
D.R. Painter
A.C. Patel
G.A. Patel
J.D. Rensel
S.E. Russell
W.P. Skinner
J.N. Stambolis
R.B. Strait
F.A. Teeters
Rosy Uy
D.B. Wolfe
H. Yieh

DECEASED CHEMICAL ENGINEERING ALUMNI

1909	H.V. Main W.B. Pritz	1924	P.O. Holmstrom
1911	A. Guillaudeu	1925	A.R. Hershberger H.E. Wening W.F. Underwood
1912	G.A. Nesbitt	1929	W.A. Hammond W.H. Whirl
1914	P.E. Sprague	1930	C.V. Spangler H.P. Simons
1916	G.D. Brooks R. Maeder	1931	Stephen Reho H.M. Rife
1917	J.E. George E.R. Schafter	1932	John Poast
1918	L.J. Trostell	1933	H.L. Barnebey
1920	R.D. Baker	1937	H.F. Hackenburg
1921	G.O. Foster C.O. Teichert	1940	G.T. Carr
1922	G.B. Estabrook R.J. Gotter	1941	C.D. Helm
1923	M.L. Dundon R.H. Ferguson R.C. Kintner P.S. Speer	1942	E.D. Leeth
		1952	J.P. Geaman

College of Engineering

DISTINGUISHED ALUMNUS AWARD

May 10, 1974

EDWARD M. SCHOENBORN JR.

Edward M. Schoenborn Jr. is the Charles H. Herty Professor of Chemical Engineering at North Carolina State University at Raleigh. Formerly the chairman of the department, Dr. Schoenborn has devoted most of his professional life to engineering education, research, and professional society activities. As an engineering educator he has served in all academic ranks at two major universities, North Carolina State and the University of Delaware. One of his most important contributions has been the development of a strong and highly respected Department of Chemical Engineering at North Carolina State University. When Dr. Schoenborn became head of the department in 1945, the department was small, was not accredited, and had no significant research program. Through his leadership the department grew, obtained accreditation, and developed an active research program. Before relinquishing his chairmanship in 1966, Dr. Schoenborn had made many contributions in the specialty of distillation. During World War Two he did extensive research and consulting for the synthetic rubber program and for the aircraft industry. For his contributions to chemical engineering, he was recently awarded the rank of Fellow in the American Institute of Chemical Engineers. A Registered Professional Engineer in Delaware and North Carolina, he belongs to the American Chemical Society, the American Society for Testing Materials, and the American Society for Engineering Education. Dr. Schoenborn received his formal education at The Ohio State University. He earned a bachelor of science degree in chemical engineering in 1932, a master of science degree in chemical engineering in 1934, and a doctorate in chemical engineering in 1941. Author of nearly 30 publications in various areas of chemistry and chemical engineering, Dr. Schoenborn is a director of the Medical Plastics Corporation of America in Greensboro, North Carolina. A native of Columbus, Ohio, he currently teaches courses in diffusional operations and coordinates research in phase equilibrium, distillation, and other mass transfer operations. Although most of his time has been devoted to education, Dr. Schoenborn has been active in industry, research, and consulting.

STUDENT AWARDS

A.I.Ch.E

1974 Annual Chapter Scholarship Award

STEVEN P. LANKTON

A.I.Ch.E. Central Ohio Section Award

1974 Student Contest Problem Award

BARRY T. BAYNE

KENNETH R. COX

FACULTY AWARDS

A.I.Ch.E. Fellow

ALDRICH SYVERSON

THE OHIO STATE UNIVERSITY
DEPARTMENT OF CHEMICAL ENGINEERING
1974-1975 List of Faculty and Staff Members, Fellows, Scholars,
Research Associates and Teaching Associates

Professors

Aldrich Syverson, Chairman
Robert S. Brodkey
Edward J. Freeh
Christie J. Geankoplis
Webster B. Kay (Emeritus)
Joseph H. Koffolt (emeritus)
Waldron D. Sheets (Emeritus)
Edwin E. Smith
Thomas L. Sweeney

Associate Professors

Edwin R. Haering, Vice Chairman
John T. Heibel
Harry C. Hershey
H.C. Slider (Pet. Engr.)
Karl Svanks

Alcoa Associate Professorship

R. Emerson Lynn, Jr.

Adjunct Associate Professors

Robert L. Bates
John S. Eckert
John B. Martin

Adjunct Assistant Professor

Mazen Y. Anastas

Teaching Associates

Hyun S. Cho
Bahman Ghorashi
Martin R. Okos
William R. Ramakka
Patrick A. Reynard
John T. Rhode
Yoon S. Song

Administrative Specialist

Susan A. Knopp

Secretary

Betty M. Frazier

Stenographers

Loretta A. Woody
Jane E. Dunwoodie

Specialist

Michael B. Kukla

Mechanic

Keldon H. Latham

Fellowships

Amoco Foundation, Inc. Fellow
Leslie S. Fishler
DuPont Company Fellow
Steve M. Benner
Exxon Company Fellow
Gary S. Cullen
Arno C. Fieldner Fellow
Ananda K. Praturi
B.F. Goodrich Company Fellow
William M. Fugel
Gulf Oil Foundation Fellow
Donald W. Buchanan, Jr.
Larry D. Zeagler
Procter & Gamble Company Fellow
John E. Myers
Louis A. & Lucille Roberts Mem. Fellow
Paul C. Auh
David G. McCluskey
Shell Companies Foundation Fellow
Gary B. Tatterson
Texaco Company Fellow
Thomas B. Hackett
Scholarships
Dow Chemical Scholars
Dale C. Gyure
Elizabeth A. Porczak
Richard J. Torchia, Jr.
E.I. duPont deNemours Co. Scholars
Robert C. Armstrong
Christopher P. Eppig
Goodyear Foundation, Inc. Scholar
Stephen P. Lankton
Gulf Oil Corporation Scholar
Christopher D. Green
Hammond - PPG Scholars
Mary E. Lenz
Luanne J. Procter
David L. Thaman
David H. Wells, Jr.
Lubrizol Company Scholars
John T. Erikson
Dennis L. McGinn

Scholarships (cont.)

Monsanto Company Scholars

Keith E. Bowers
John D. Farison
Douglas J. Hallenburg
John R. Stout
Jeffrey J. Thomas

Rohm & Hass Company Scholars

Dale F. Arnold
Carol L. Payne

Union Camp Scholar

Mary R. Vercellotti

Union Oil Co. of Calif. Scholars

John R. Farison
John R. Stout

Dr. J.R. Withrow Memorial Scholar

Robert B. Tait

Graduate Research Associates

Engineering Experiment Station

Michael A. Patterson
Peter E. Steacy
Johnny O. Wright

National Science Foundation

Larry D. Zeagler

ACE DAY - May 9, 1975

The Awards Conclave for Engineers and Architects (a variation on our traditional ACE Day event) will include an awards luncheon at the Ohio Union at 11:00 a.m. followed by an informal Open House at the Chemical Engineering Building at 2 - 4 p.m. There will be no morning session.

Three outstanding alumni of our Department will be honored: Richard Morrow (Pet.Eng.1948), and William W. Grimes (B.Ch.E., 1950) will receive Distinguished Alumnus Awards; Harry B. Warner (B.Ch.E., 1938, M.S., 1939) will be one of the first recipients of a Meritorious Service Citation.

All alumni are invited; we offer a special invitation to the families and associates of the awardees to attend the luncheon and the presentation of the awards.

If you plan to attend, please send requests for reservations to:

Professor Aldrich Syverson
Chemical Engineering Department
140 West 19th Avenue
Columbus, Ohio 43210
Telephone (614) 422-6986

The Class of 1925 is planning a reunion this spring. Is your class planning a reunion? Let us know - we'll help.

The Ohio State University
 Department of Chemical Engineering
 Salary Offers for 1973-74

Bachelor of Science

Plant Trips

Salary Offers (underscore indicates salary accepted)

2	<u>1075</u> , 1075
11	1055, <u>1025</u> , 1060
5	1080, 1080, <u>1070</u>
7	1075, 945, <u>1085</u> , 1075, <u>1025</u>
2	<u>1070</u>
3	<u>1025</u> , 1025
13	990, 1020, 1025, 1065, 1035, 980, 1040, 1080, <u>1075</u>
8	1055, 1042, 1080, 1100, 1055, 1020, 1025, 1040
7	1020, 1025, 1000, <u>1045</u>
14	1033, 1040, 1036, 1014, 1025, 1020, 1075, 937
7	1033, 1066, 1015, 1050, 1010, 1040, <u>1050</u>
8	1085, 1075, 1045, 1075, 1060, 1055, <u>1020</u>
6	1063, 1150, 990
15	1050, <u>1020</u> , 1040, 1075, 1020, 1065, 1033, <u>1060</u> , 1075, 1040, 1075
6	1025, <u>1065</u>
6	1020, <u>1010</u> , 1025, <u>1000</u> , 1030, 1035
6	<u>964</u>
11	1045, <u>1050</u> , 1045, 1100, 1040, 950, 1050, 1060, 1080, 1050, 1060
2	930, 1040
10	1018, 1075, 1025, <u>1050</u> , 1050, 1075
9	1075, 1044, 1030, 1065
1	<u>1100</u>
5	<u>1062</u> , 1075
8	1075, 1050, 1050, <u>1075</u> , 1000
6	1065, 1050, 1050, <u>1085</u>
1	1000

Master of Science

3	<u>1250</u> , 1193, 1083
7	1210, 1150, 1175, 1200, <u>1275</u> , 1160

Doctor of Philosophy

9	1375, 1475, <u>1640</u> , 1500, 1475, 1474, 1520, 1520
5	<u>1525</u> , 1500
10	1583, 1541, 1583, <u>1625</u> , 1650, 1583, 1585, 1600, 1650, 1550

PLACEMENT OF CHEMICAL ENGINEERING GRADUATES
MARCH, 1974 - DECEMBER 1974

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

MARCH, 1974

Stephen M. Irwin State of Indiana, Waste Water Div., Indianapolis, Ind.

JUNE, 1974

Steven H. Alkire	Amoco, Inc., Lafayette, Louisiana
John J. Antolik	Ohio State University, Department of Pharmacy
Barry T. Bayne	Monsanto, St. Louis, Missouri
Ernest H. Beadle, Jr.	Dow Chemical, Midland, Michigan
Christopher R. Beharry	Procter and Gamble, Cincinnati, Ohio
Edward D. Brooks	Hercules, Kalamazoo, Michigan
Steven M. Brown	Graduate School, Purdue University
Raymond T. Collins	Procter and Gamble, Cincinnati, Ohio
Kenneth R. Cox	Graduate School, University of Illinois
Gary S. Cullen	Graduate School, Ohio State University
Bruce K. Dawson	Air Products, Bethlehem, Pennsylvania
Louis R. Dossie	Graduate School, Ohio State University
Herbert Flugin	Core Laboratories, Singapore
Mark E. Forry	Procter and Gamble, Cincinnati, Ohio
Timothy L. Goslin	Hooker Chemical, Niagara Falls, New York
Alan R. Harrison	Union Carbide (Linde) Tonawanda, New York
Dan W. Hester, Jr.	Eli Lilly, W. Lafayette, Indiana
Brooks H. Hurd, Jr.	Air Products, Bethlehem, Pennsylvania
James J. Krejci	Information not available
Dannie P. Maddox	Goodyear Atomic, Piketon, Ohio
James A. McCaw, Jr.	Ohio Edison, Toronto, Ohio
Robert C. McKee	Celanese, Charlotte, North Carolina
Kenneth L. Montague	Dow Corning, Midland, Michigan
Edward C. Myers	Standard Oil of Indiana, Naperville, Illinois
John E. Myers	Graduate School, Ohio State University
George L. Ott	Graduate School, Purdue University
Michael A. Patterson	Graduate School, Ohio State University
William M. Pekman	The Pritzker School of Medicine, Chicago, Illinois
David B. Ramey	Union Carbide, Mobile, Alabama
John L. Rhode	Graduate School, Ohio State University
Barry A. Robinson	Sun Oil Company, Corpus Christi, Texas
Steven K. Scheel	Hooker Chemical, Niagara Falls, New York
Randall L. Schroeder	Shell Oil, Houston, Texas
Dana K. Thompson	Graduate School, Ohio State University
Gary J. Walter	Family business, Canton, Ohio
Isaac M. Worthalter	Returned to home in Bogata, Columbia, S.A.

AUGUST, 1974

Hernan G. Bravo	Graduate School, University of Massachusetts
F. Daniel Linton, Jr.	Information not available
Robert J. Weaver	Lincoln Electric, Cleveland, Ohio

DECEMBER, 1974

Frederick C. Johnson	Information not available
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MASTER OF SCIENCE

MARCH, 1974

John C. Reindl	Standard Oil of Indiana, Naperville, Illinois
John P. Sponseller	Eastman Kodak, Rochester, New York

JUNE, 1974

Michael J. Clark	Standard Oil of Indiana, Naperville, Illinois
Thomas B. Hackett	Graduate School, Ohio State University
Kenneth E. Waller	Procter and Gamble, Cincinnati, Ohio

AUGUST, 1974

James D. Fleshman	Foster Wheeler Company, Livingston, New Jersey
Michael J. Pedersen	Atlantic Richfield, Chicago, Illinois

DECEMBER, 1974

Steve M. Benner	Graduate School, Ohio State University
Linda M. Curran	Battelle Memorial Institute, Columbus, Ohio
Leslie S. Fishler	Graduate School, Ohio State University
Robert H. Nimitz	Monsanto Company, Miamisburg, Ohio
Keon Y. Park	Graduate School, Ohio State University
Wibowo M.H. Surjowidjojo	Returned to home in Bandung, Indonesia

DOCTOR OF PHILOSOPHY

MARCH, 1974

Peter N. Bartram	Hooker Chemical, Niagara Falls, New York
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JUNE, 1974

Danley B. Wolfe	Standard Oil of Indiana, Naperville, Illinois
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AUGUST, 1974

Michael A. Curran	Self employed, Columbus, Ohio
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DECEMBER, 1974

No degrees granted

College of Engineering Registration*
 Autumn Quarter, 1974**
 (Ranking Identified with Students' Progress Toward Degree)
 October 3, 1974***

	1st YEAR	2nd YEAR	3rd YEAR	4th YEAR	TOTAL	ENP R
Aero	7	22	23	23	75	
AgE	0	10	8	14	32	
Cer	0	3	11	8	22	
ChE	2	30	45	31	108	
Civil	11	72	59	71	213	4
CIS	9	38	41	49	137	
Elec	35	139	92	91	357	2
E Phys	1	4	5	6	16	
ISE	9	31	29	27	96	2
Mech	15	99	79	88	281	
Met	3	13	8	8	32	
Weld	4	8	15	29	56	
UND	10	7			17	
Total Reg.	106	476	415	445	1442	8
Irreg					9	
P.T.E.O.					68	
Grand Total						1527

* Does not include engineering decided students in UVC
 ** As of August 30, last day to file Registration Forms
 *** Additional late registration as of this date: 21

EDWIN R. HAERING

("Faculty Sketch" presented in News in Engineering, January, 1975)

He catches his own nightcrawlers and makes his own three-hook worm harnesses. He calls himself a "bass fisherman," claims four-pound small mouths have been landed but says a five-pound Lake Erie sheepshead was the largest fish he ever caught. He prefers inland lakes, stream banks and artificial lures and avoids stories about the big one that got away. He enjoys fishing even though few fish are caught and tests his fishing skills a couple times a week during the warmer months. He owns two boats, both motorless are less than 12 feet long, lives along the Scioto River and recently named vice chairman of the Ohio State University department of chemical engineering.

Also a professor of chemical engineering, Edwin R. Haering was born, reared, and educated near Columbus, Ohio. The only child of Edwin, a policeman, and Mary, a housewife, he admits being a "spoiled brat" who was spanked only occasionally. His first memory is living in a "row house" near Ohio State during the depression.

Married to high school sweetheart, Suzanne, and father of Cynthia, 15, David, 13, and Elizabeth 9, he is a specialist in kinetics and catalysis, the study of the factors that influence the rate of a chemical reaction. Teaching one course per quarter, he advises two master degree students and 15 undergraduates while solving scheduling and curriculum problems for many others.

Haering received his formal education at Ohio State after winning a Naval Reserve Officer Training Corps scholarship in high school. "I could have never attend college without the scholarship," he states. He graduated cum laude and was awarded his bachelor and master of chemical engineering degrees in June, 1956. He completed a doctorate degree in 1966.

Upon graduation from Ohio State in 1956, he was commissioned an ensign in the Navy and assigned to the U.S. Donner as the assistant operations officer in charge of communications and after six months was made a navigator. He spent two of the three years on six or eight month cruises and visited Gibraltar, Greece, Turkey, Sicily, and Italy. Calling the Navy duty "an enjoyable time," he has never regretted his military tour. The highlight, he says, was cruising through a hurricane.

Haering got his first job in the fourth grade. "I was the janitor's assistant," he recalls, "and washed the blackboards and emptied the wastebaskets for a dollar a week." Encouraged by his parents to save, 50 cents a week was banked and 50 cents was spent on movies, candy and comic books.

Daily childhood chores included feeding the two rabbits and the flock of chickens which were kept for meat and eggs. He started carrying the Columbus Dispatch newspaper at age nine and for three years pedalled his balloon-tire Schwinn on the 100-customer route. Growing up during World War Two, he remembers gasoline rationing, which stopped the weekend picnics, Roosevelt's speech to Congress declaring war on Japan, and weeding and hoeing the corn, potatoes, lettuce and cabbage in the "victory garden."

From the sixth to the eighth grade, Haering attended Main Montrose Junior High School. A good student favoring history and mathematics, after school hours and the summer months were spent with the neighborhood gang. Usually playing football, basketball, or baseball, there were also sled rides which ended up in the creek. "My parents always restricted me after I went into the creek," he laughs.

Mathematics, science, chemistry, and physics were his favorite high school subjects while English, grammar and typing were disliked most. He became grade-conscious in the ninth grade when he decided to attend college and studied to get As and Bs. A defensive tackle on the Bexley High football team, he won a letter the last year but admits being only an average athlete. Other activities during high school included The National Honor Society, the high school journalistic honorary and advertising manager of the year book staff.

Haering quit peddling newspapers at age 12 to pump gas and wash and grease cars for 10 cents per hour in a service station. Working Saturdays and the summer months for two years, he got a 10 cent per hour raise after the first year. When 14 years old, he became a mechanic's helper in an automobile repair garage and earned \$20 per week rebuilding engines and painting cars. Saving most of his earnings, he says a few dollars were spent on clothes and dating. Other jobs during high school were fixing street lights cutting weeds, digging ditches and painting road markers for the Bexley maintenance department.

In 1948 with \$200 saved from high school jobs, he bought his first car, a 1933 four-door Chrysler. The car was not a hot rod, he says, but just a mode of transportation. "I was not a car nut." Using his experience as a mechanic, he maintained the car through four years of college.

Engineer Haering claims his high school physics, mathematics and chemistry teachers had a great influence on him. "They encouraged me to do extra work and stayed after school to help me with extra experiments."

A "football nut," Haering calls most outdoor activities including camping, hiking, boating and gardening his hobbies. He reads technical journals, the daily newspaper and news periodicals but prefers "Field & Stream," "Outdoors," and other fishing and hunting magazines. Two weeks per year are spent tent-camping with the family. Past camping trips have been to Michigan, Kentucky and Virginia. Handyman Haering does all home maintenance including electrical, painting, plumbing and appliance repairs.

According to Haering, the future for chemical engineers is bright. The national problems of energy, food and the environment will provide "many employment opportunities." He expects the chemical engineers to help find substitutes for scarce raw materials and to help improve and refine processes already known for coal, gasification, liquefaction, and shale oil recovery. For the next five years, there should be more jobs than college graduates to fill them.

In the classroom, Haering seldom completes all the material scheduled to be discussed during the term. He uses lectures, handouts and transparencies to develop a concept and then asks questions to start the discussion. Class attendance is not required, but says teacher Haering, "attendance influences borderline grades." He judges himself a "tough but fair grader" and gives long examination. His philosophy of teaching is "student involvement." "I like to involve the students in the educational process as much as possible," he explains. Willing to do "whatever is necessary" to help the students learn, his efforts are tempered by the student's needs.

JOHN T. HEIBEL

("Faculty Sketch" presented in News in Engineering, January, 1972)

Dr. John T. Heibel is clearly more comfortable talking about things technical than matters personal. He'd rather speak of realtime data acquisition, research which presumes a river acts like a chemical reactor, or a project to monitor emissions from extra-high voltage transmission lines than dip into politics, religion, or his view of the world.

Pressed to describe himself, he admits being enthusiastic to the point of biting off too much, ambitious enough to "jump in and get it done," and optimistic even when he can't rationally support the feeling.

About his seemingly unquenchable optimism, he says it is sometimes misleading, but insists that without it, things are much rougher. "It's the grease that lets me slip more effort in; and rewards are usually about commensurate with effort."

Heibel, 28, an assistant professor of chemical engineering at Ohio State University since July, 1970, was for a year before that a "visiting" professor charged with ramrodding the computer operation in chemical engineering, an installation he helped design, build, and routinely mother-hens.

He teaches classes in fundamentals of chemical engineering and in real-time data acquisition and analysis. He also teaches part of a class in process development and design, and shepherds a 50-student, one-week chemical plant tour in the spring.

He advises ten undergraduate, five masters degree students, and co-advises a pair of doctoral students. Asked how students view him, he says "I don't really know. I haven't been told off lately. They do a lot of work in my classes and I have a reputation for giving nasty finals though not many flunk."

His view of students is concise. "I respect them. On the whole, they are very competent. So much so that I consistently underestimate their ability to solve a tough math problem or think through a complicated situation. They surprise me, and perhaps that means that I'm not all that much beyond them."

Born in Brooklyn, Heibel grew up for a time in Farmingdale, New Jersey, a town of about 200. His father, a weather forecaster, was assigned near Bermuda for awhile, and Heibel recalls taking a boat in order to reach the Catholic school every day except during hurricane weather, when he had to double the mileage by a bus trip. Later, when his father was assigned to the Alameda Naval Air Station in California, he lived on base for a year, and then in Alameda, graduating from Encinal high school in 1960 as valedictorian of his 130-person class. As a junior in high school, he began taking classes at the University of California, Berkeley, and received a bachelor of chemical engineering degree from that school in 1964.

At Berkeley, he had an alumni scholarship, won Bank of America and Bausch and Lomb competitions, and is taken with the irony of being Catholic and winning a Scottish Rite scholarship. Working his way through school - "I had a dozen jobs before one was permanent" - he spent one summer fighting fires in the Sonora National Forest and another driving a Pacific Intermountain Express truck. He also was a lab assistant, warehouseman, oil refinery worker, and guitarist in espresso houses in the Berkeley area.

After the bachelor degree, he worked for a year in the Office of Naval Research biological lab in Oakland, California, as a research engineer building "bug detectors." Using ultraviolet wavelengths, he explains, it is possible to "spotlight" airborne particles in suspension. "In case you care, there's a bug--a spore or bacterium--in every 10^5 particles in the atmosphere."

In 1965 he began graduate work at the University of Arizona, Tucson. His thesis was a mathematical description of fixed bed reactor dynamics. Building on an interest in ham radio, radio building, and sound equipment construction, he took enough electrical engineering courses to, in his words, "equal a masters degree".

He received the master degree in chemical engineering in 1967, followed by the doctorate in chemical engineering in 1969, also from the University of Arizona. His dissertation involved building "a big, hybrid computer to solve the equations developed from the master's thesis." For four years during his graduate work he held a National Science Foundation traineeship. He also had a university fellowship and was an instructor in both chemical and systems engineering. "It was a way to eat," he shrugs. "And I enjoy teaching, watching students lock on and learn, and I value the freedom to pursue research I want to do."

Apparently a lover of simple things, Heibel judges his "most fun" thing as his family. Asked of what he is proud, he says, "My family. Oh, I'm also proud to work at Ohio State, in chemical engineering, and with friends and associates." Heibel sums up by saying "I enjoy my work, enjoy teaching, and enjoy people. I'm proud of what's there. I love my family, and I'm in a system that works, even though it could be better. I'm not suggesting any radical changes. We should refine and improve rather than lay waste and reinvent."

THE OHIO STATE UNIVERSITY
DEPARTMENT OF CHEMICAL ENGINEERING
140 WEST 19TH AVENUE
COLUMBUS, OHIO 43210

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