Chemical Engineering

Forty-Fifth Annual Report to the Alumni

1993
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Dear Alumni . . .

While change has been our watchword for many years, the past year and next year may well outdo them. Another year of change for the Department has Professors Won-Kyoo Lee and Kent S. Knaebel left the University. Won-Kyoo had been on special leave heading a research lab in Seoul, Korea and decided to continue on a permanent basis. Kent started his own business, Adsorption Research. He has continued as an Adjunct faculty member advising his Ph.D. students. They both contributed a great deal to the Department, and we wish them well in their new endeavors.

To replace them, we have hired Dr. David Tomasko and Dr. Bhavik Bakshi. David received his degree in March 1992 from the University of Illinois (Professor Chuck Eckert advisor) and had an NSF-supported post-doc at the University of New South Wales in Australia before joining us in March 1992. His research is on separations utilizing supercritical fluids. Bhavik completed his Ph.D. at MIT in 1992 (Professor George Stephanopoulos advisor), stayed on as a post doc, and worked part-time for Aware, Inc. His research is in modeling, analysis and control of chemical process operations. He will join the faculty in September 1993. Along with Jim Davis and other faculty concerned with systems analysis, we will maintain our strong position in systems.

Because several previous early retirements had depleted our ranks, we have also hired Dr. Kurt Koelling. Kurt did his Ph.D. at Princeton (Professor Bob Prud'homme advisor) in the area of polymer processing. He was hired in coordination with the Manufacturing System Engineering program in the College and he will also be heavily involved with the NSF Engineering Research Center in Net Shape Manufacturing. His polymer processing research will complement that of Professor Jim Lee and together provide a strong basis for our future hire of the Morrow Chair in Polymer Engineering when that endowment is fully funded in 1995.

Dr. Jose Cruz joined the College as Dean in November, 1992. He came to Ohio State from the University of California at Irvine where he had served as Chair of the Department of Electrical Engineering. Dean Cruz has had a distinguished career, mostly at the University of Illinois. He is a member of the National Academy of Engineering.

Under his leadership, the Department Chairs have spent a great deal of time working on a new strategic plan for the College, an effort which will continue in the fall.

A new Provost, Dr. Richard Sisson, who has been Senior Vice Chancellor for Academic Affairs at UCLA, will also begin at Ohio State this summer. Dr. Sisson received his B.A. and M.A. from Ohio State and his Ph.D. in political science from the University of California at Berkeley.

Finally, my fourth (4-year) term as Department Chair ended June 30, 1993 and we are searching for a new Chair. A Search Committee (Professor Jim Lee, Chair; Professors Jim Davis, Umit Ozkan and Jim Rathman; Ellen Silva, Graduate student; Bill Lowrie, ‘66, alumnus; plus Professor Pat Gallagher of Materials Science Engineering and Chemistry) has been screening candidates and will be interviewing candidates in September/October. I will serve as Acting Chair until the search is completed.

In the past two years virtually all units of the University have incurred serious budget cuts as state funding for Ohio State has diminished. The College absorbed earlier cuts of 3.4% and last year an additional cut of 4.3%. Further cuts for 1993-94 will be announced in September. The effect of these cuts has been reductions in staff and in graduate students. In the Engineering College, we have protected the core curricula, but have had to reduce technical elective offerings and reduce the number of faculty and staff.
Nevertheless, our program has continued to move forward. The equipment in the unit operations laboratory is much improved, and we added another new experiment this year - a multi-phase fluidized bed experiment. Dr. Farshad Bavarian taught the lab in Summer 1992 and again in 1993. Farshad received a MacQuigg Outstanding Teaching Award last year.

Our faculty have continued to distinguish themselves and are a very productive group. After his retirement, Professor Bob Brodkey taught Fluid Dynamics and part of Rheology. He has continued his research on image analysis and multiphase flow. Professor Jeff Chalmers was selected as a 1992 National Young Investigator for his biochemical engineering research, one of 9 young chemical engineering faculty members to receive this distinction. This five year NSF award provides a minimum of $25,000 per year plus NSF will match industrial funds supporting his research up to $37,500 per year making a potential total of $100,000 per year. Jeff also served as Secretary of the Central Ohio Section of AIChE. Professor Jim Davis is serving as half time Associate Director for Research Computing, a demanding job in which he coordinates interdisciplinary efforts in many different areas. He is an elected member of CACHE (Computer Aids in Chemical Engineering) Board of Trustees and is Chair of their Curriculum Committee. He is also a Director of the Computer and Systems Technology Division of AIChE. Jim has been involved in short courses on knowledge-based systems. Professor L. S. Fan organized and chaired the very successful First International Conference on Gas-Liquid and Gas-Liquid-Solid Reactor Engineering held in nearby Dublin, Ohio last September and he and Professors Chalmers, Ozkan and Yang were coeditors of the Proceedings. He also was the driving force behind the founding of the Particle Technology Forum which became a Division of AIChE. He received the first International Outstanding Faculty Award given by Ohio State. He is also a regional (USA) Editor of Powder Technology and has played active roles on AIChE National Program Committees. Recently, he received an Alexander von Humboldt Award for Senior U.S. Scientists.

Professor Harry Hershey has been on professional leave for 1992-93. He has been working on environmental problems at Eli Lilly in Indianapolis, and plans to offer a technical elective course in air pollution control next year. Professor Jim Lee is on the Editorial Boards of the Journal of International Polymer Processing and Science and Engineering of Composite Materials Journal. Jim was selected as an Evaluator for the NSF - review of the Case Western Reserve - Akron Center for Molecular and Microstructure of Composites. He also offered several workshops on polymer composites and their manufacture in Taiwan and Hong Kong. Professor Umit Ozkan received for the second time the Union Carbide Corporation Innovation Recognition Award for her catalysis research and was appointed to the American Chemical Society Petroleum Chemistry Division Program Committee. She also received a 1992 College of Engineering Research Award. Professor Jim Rathman's research program on interfacial phenomena is progressing and he has been notified that he will be receiving an NSF Initiation Grant.

Emeritus Professor Slip Slider offered a short course on Gas Reservoir Engineering in Houston last year. Emeritus Professor Ed Smith is active in his fire testing work and as an expert witness in litigation in major fires. He is a member of the Ad Hoc Committee on Toxicity Combustion Products of the National Fire Protection Association. Professor Tom Sweeney continued his administrative position as Executive Director of the Ohio State University Research Foundation. Professor S.T. Yang has received support from the Department of Transportation for his studies on biochemical production of calcium magnesium acetate (CMA) from cheese whey. CMA is a substitute for salt in deicing in situations where corrosion and waste run off are serious problems such as on bridges. Professor Jack Zakin was appointed by the Governor to serve on the State of Ohio Alternate Fuels Advisory Council. The Council is preparing a report for the state legislature outlining the advantages and disadvantages of various alternate fuels for use in automobiles and trucks. He also serves as the Associate Director for Ohio State of the Emissions Reduction Research Center. The ERRC is a research consortium of four universities (New Jersey Institute of Technology, Penn State, MIT and Ohio State), eight pharmaceutical or specialty chemical companies (so far), NSF and EPA whose target is to reduce emissions. Other industries will be added in the next year or two. He also is coordinating the AID-
sponsored program to investigate friction reducing additives to reduce pumping energy losses in district heating systems in the Czech Republic in cooperation with colleagues at the Czech Technical University and the Czech Academy of Sciences.

In 1992-93, 47 B.S. degrees were awarded. We expect the 1993-94 total to be in the upper fifties and the class sizes at the junior and sophomore level are larger still. In our enrollment management plan developed several years ago, chemical engineering will accept up to 100 students (50 in Autumn Quarter, 50 in Winter Quarter) in Ch.E. 200, material balances. As enrollment is now approaching this number, students must now apply for admission to the course. About 65 applied for Autumn 1993. Those not accepted can reapply for Winter 1994.

For a variety of reasons, we believe the overall quality of our undergraduate students is the best in the University. The test scores for freshmen enrolling in the College of Engineering are well above the University average and the chemical engineers are well above the College average. Among College of Engineering freshmen receiving some of the most prestigious scholarships last fall, declared chemical engineering students received 7 of 37 National Merit, 11 of 26 Women in Engineering, 2 of 4 Battelle, 1 of 4 Joyce, 1 of 3 Presidential and 5 of 15 Medalist Scholarships, while making up less than 13% of the new students.

Our graduate students are also a distinguished group. Three new students, Rajeev Agnihotri, John Clay and Donna Gardner, were awarded University Fellowships from the Graduate School in campus-wide competitions. Donna also received an NSF Fellowship and a DuPont supplemental Fellowship. Jacques Gates, another new graduate student, received a GEM Minority Fellowship. Prasad Ramanathan and Niraj Patel were selected as Presidential Fellows. This fellowship is for final year Ph.D. students. About 30 are awarded each year by the Graduate School and clearly two awards in our medium-sized department is an important distinction. I should also mention that Linda Broadbelt, B.S. ‘89 and a Ph.D. candidate at the University of Delaware received a DuPont Teaching Fellowship.

Contributors to our funds are listed on the next pages. Of particular note are the David H. George (BChE ’48) Scholarship Fund established by his sister Marilyn George and a new endowed fund from the estate of Robert M. Kilian (B.S. ’51, M.S. ’51) for equipment purchases.

Our students, the faculty, and I appreciate the contributions many of you have made to the Department over the years. Funds we receive enable us to enrich our programs and provide a margin of excellence in the education of our students. If you contribute to Ohio State through the Development Office, please be sure to designate Chemical Engineering or we will not receive it (or even be notified of it).

Sincerely,

Jacques L. Zakin
Chair

P.S. This is the sixteenth and last time that I will be writing this letter. It has been a privilege and an honor to serve as Chemical Engineering Department Chair at Ohio State and to interact with so many students, faculty and alumni as well as our industrial friends. I intend to continue as a member of the faculty so I expect our interactions to continue.
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1992 Contributors (cont.)

Fred A. Shaffstall
Wilbur H. Sidner
Kay Logan Snider

1964
Dr. Michael B. Cutlip
Girish D. Parikh
William V. Whitmer

1965
Dr. Edward R. Corino
Frederick H. Flor, Jr.
Frederick J. Rerko
Gary L. Street

1966
Dr. Ralph S. Cunningham
Thomas E. Fitz
William G. Lowrie

1967
John M. Yacher

1968
Dr. Lloyd G. Jones*
Dr. Ronald M. Kovach
James W. Sebert
Douglas E. Smith
Dr. Gerald A. Wilcox

1969
Smith E. Howland
Dr. Liu Hee Lee
Dr. M. Anandha Rao
John W. Toussant

1970
David R. Grove
Michael L. Nevin
John D. Rensel*
Dr. Harry H. Yieh

1971
Karen Lafferty Hendricks
Kerry G. Hertenstein
Jeffrey L. Kosch*
William E. Pritchard
Dr. Stephen Zakanycz

1972
Dr. Gerald A. Bullano
David Glenn McCluskey

1973
John C. Bost*
John A. Douglas
Eric J. Linak
Norman F. Lucas, Jr.
Seong Ho Rhee

1974
Bruce K. Dawson
John E. Myers
Michael A. Patterson
Dr. William M. Pekman

1975
John T. Erikson

1977
Mary Etta Lenz Rose#
Kenneth A. Yunker

1978
Douglas T. Brown#
James H. Etherton#
Donald L. McDowell
Dr. Neil P. Stuber
Paul W. Vance Jr.
Thomas E. Winkler
Dr. Johnny O. Wright
Richard J. Yoch

1979
Dr. Donald W. Buchanan Jr.
David M. Frederick#
John F. Kreinbrink#
Wai-Chu Liu
Karen Theresa Murphy
David M. Schilling
Craig W. Sherban
David J. Wasela
Tad K. Williams

1980
Dr. Frederick T. Clark
Peter S. Clark#
Bruce R. De Bruin
Carol Bur Ehrman
Fred D. Ehrman
Matthew J. Galosi
Mark A. George

1981
James C. Blubaugh#
John R. Cromb III
Dr. Nancy Hummel
Ingham
Kimberly Arnold Lauzau
Douglas V. Lenz
Jeffery J. Tokarsky
Harry C. Wolf, Jr.

1982
David B. Boyle
Kathleen Applegate
Hogenson
Victoria Suomela
McCaulley
Joyce Ann Mondak
Debra Worthington
Russell
James J. Toth
Dr. Andrew M. Weber

1983
Dr. Lamont E. Beaver
Richard H. Brandon#
Dr. Likow Chang
Linda Sue Evans
Harold E. Flinn
Ronald A. Howdyshell
Dr. Cheryl Lynn Kennedy
James M. Sauer#
Ben Weinstein

1984
Robert H. Kelch
Robert G. Larsen
Gregory M. Musica#
Scott R. Northrup

1985
Becky Kiessling Bur
Roger G. Facer
Maria Ciliberti Grosser#
Timothy A. Johnson
David J. Moonay
C. Douglas Moss
Sharlyn A. Veley

1986
Timothy M. Allen#
Rajeev Lochan Gorowara
Thomas J. Paquin
Kit Wai Yam

1987
Dr. T.J. Green
Karen S. Johnson
Ens. Martin D. Legg
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Timothy A. Rash#

1988
Amy Schmitt Doty
William M. Irvin IV

1990
Kara Bernadette
Blachowski
Darrin L. Lacheta
William B. Nortrup#
Dr. Derrick K. Rollins

Friends
Dr. Robert S. Brodkey
Norman E. Bernstein
Dr. Liang-Shih Fan
Marilyn E. George
Judy Harris**
Dr. Harry C. Hershey#
Don L. Kime
Dr. Kent S. Knebel
Irving J. Olson*
Dr. Umit S. Ozkan
Charles F. Porter***
Diane D. Porthouse
Laura A. Russell
Alma Sanders
Reuben****
Tsae-Hwa Shen
Eleanor W. Syverson
Johannes Trampler
Dr. Jacques L. Zakin

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*In memory of
Harry B. Warner
**In memory of
Todd Harris
***In memory of
E.L. Pendleton
****In memory of
James R. Robinson

#Unit Ops Contributor
Professors
R.S. Brodkey (Emer.)
L.S. Fan
M.H. Friedman (Biomed Eng.)
C.J. Geankoplis (Emer.)
E.R. Haering (Emer.)
H.C. Hershey
L.J. Lee
W.B. Kay (Emer.)
R.E. Lynn (Emer.)
D.R. Skidmore (Emer.)
H.C. Slider (Emer.)
E.E. Smith (Emer.)
T.L. Sweeney
(Research Foundation)
J.L. Zakin

Assoc. Professors
J.F. Davis
U.S. Ozkan
K. Svanks (Emer.)
S.T. Yang

Asst. Professors
J.J. Chalmers
K.W. Koelling
J.R. Rathman
D.L. Tomasko

Adjunct Professors
D. Bigg
R. Booth
N. Brockmeier
J.A. Brothers
S.C. Chen
C. Scaccia

Post Doctoral Research Associates
F. Bavarian
P. Cai
T. Hong
X. Mao
J. Tsai
J. Tzeng
B. Wang
J. Wang
J. Twu
C. Zhu

Visiting Research Scholars
P. Jiang
Y. Ma
M. Ptacnik
T. Xia
Y. Zhang

Secretaries
**C. Camm
*S. McDonald
S. Newsom

Administrative Assoc.
J.P. Glazier

Design Engineer
M.B. Kukla

Instrument Maker
R.R. Renshaw

Teaching Associates
M. Elsass
R. Gooding (Chem.)
S. Haam
P. Jacyk
Y. Jirapinyo
P. Kust
R. Lytle
S. Mahuli
L. Moore
C. Opoku
I. Park
S. Schudt
O. Schuss
C. Shu
K. Trinh
Y. Tseng
F. VonFahnestock
J. Yen

Research Associates
P. Cai
D. Chattopadhyay
C. Cheng
Y.-Y. Chiu
Y.C. Chou
S. Driscoll
M. Garcia-Briones
A. Ghosh-Dastidar
A. Goodaker
S. Haam
W. Halvorsen
C.P. Hsu
C. Hsia
S. Kannan
S. Kumar
M. Kumthekar
R. Lee
S. Lee
S.C. Liang
T.-J. Lin
B. Lu
X. Luo
J. Marchio
L. Moore
S. Muzumdar
S. Ni
J.Y. Nieh
N. Patel
P. Ramanathan
J. Reese
D. Reichley
V. Rohatgi
C.-H. Shu
B. Smith
K. Sravana
J.W. Yen
R. Venkat
C. Wang
J. Xu
L. Zhang
H. Zhu

Administrative Associates
J. Grashel
T. Harris
W. Halvorsen
(College)

INDUSTRIAL SUPPORTERS

Akzo Salt & Basic Chemical Div.
Alcoa Foundation
Amex Foundation
Amgen
Amoco Foundation
Ashland Chemical Co.
Baxter Healthcare Corp.
Bayer-Mobay Foundation
Betz Metchem
B.P. America
Brewster Dairy Inc.
Cargill
Chemineer
Council for Chemical Research
Dow Chemical Co.
Dow Corning
E.I. Du Pont De Nemours
Eli Lilly
Exxon Education Fdn
The French Oil Mill Machinery
Gencorp
General Motors
Goodyear Tire & Rubber
Hoechst-Celanese
HRI Inc.
International Paper
Isotech
Kerr-McGee Corp.
Kraft
Lubrizol Foundation
Mobil
MRI
PPG Industries
Procter & Gamble Co.
Rohm & Haas Co.
Shell Companies Fdn
Texaco
Union Carbide
UOP Inc.

*Editor
**Co-Editor
Fellowships and Scholarships

FELLOWSHIPS

Amoco
J. Clay
M. Smith

Dow Chemical
S. Schudt

DuPont
D. Chattopadhyay
C. Cheng
D. Gardner
M. Perry
S.-H. Shu
Y. Tseng

Engineering Research Center
N. Dziewatkoski
M. Kinkelaar
M. Perry

Exxon
M. Elsass

Fieldner
U. Utojo

GEM
J. Gates

ISOTECH
R. Gooding

Koffolt
C. Opoku
P. Jacyk
R. Lee
O. Schuss

National Science Foundation
D. Gardner
E. Silva

PPG
S. Mahuli

Presidential
P. Ramanathan
N. Patel

Procter and Gamble
R. Gaines
J. Gates
E. Silva

Roberts
T. Harris
G. Wheeler
J. Yen

Rohm & Haas
R. Gaines

Shell
L. Moore

Union Carbide
J. Reese

University Fellowship
R. Agnihotri
J. Clay
E. Silva

Bayer-Mobay
Matthew DeWitt
David Luck
Rolland Neutzling
Linda Tiong

Betz Metchem
Sean Crowley
Thomas Knuth
Gary Strugill
Trinh Tran

Cargill
Thomas Forsthofer
Todd Richmond
Jeremiah Spires
Leonard Trem

Class of 1941
Mark Elkovitch
Melissa Koebbe
Konstantinos Matheou
Cincin Siswanto
James Toth

Dorothy & Herbert Fenburr
Christopher Connors
Scott Johnson
Ronald Kaminski
Salomeh Keyhani

Allan I. Gordon
Min Joo

Raymond D. Hammond
Cassandra Foltz
Angela Kleman
Andrew Mauk
Tyler Newsom
Frank Seipel
Thomas Paxton
Philip Rancitelli
Linda Yeoman

Withrow
Tom Cuthbert
Paul Huzyak
Lisa Mangen
James Trout

Webster B. Kay
Laura Schworm

Lubrizol
Craig Olwort
Jasper DeChristopher

Procter & Gamble
Incentive
Aisha Barry
Charmaine Burgin
Cathy Gordon
Nichole Hoskins

Aldrich Syverson
Kathryn Ferguson
Brandon Harbaugh
Thang Hoang

Texaco
David Klepak
Meredith Lewis
Christopher Money

8
Row 1:  Dr. Jeff Chalmers, Salomeh Keyhani, Julie VanderMeer, Lindawati, Kelli Hayes, Sue Schulze, Leonard Tren, Saputra, Dr. Liang-Shih Fan

Row 2:  Roger Enyert, Dr. Umit Ozkan, Terri Weckenbreck, Arnie Thoroughman, Pat Whitaker, Cathy Gordon, Lance Croft, Tim Pajk

Row 3:  Jim Barnes, Dave Plummer, Dave Repasky, Kurt Wright

Row 4:  Joe Cobb, Steven Wong, Tiffany Kennedy, Paul Schacht, Paul Jacyk, Mike Kovalski, Tom Cuthbert

Row 5:  Dr. Harry Hershey, Mike Wallace, Chris Connors, Matt Stanfanowicz, Rajesh Rathi, Mike Glover, Jim Trout, Mike Tucker, Matt Burton
Placement of Chemical Engineering Graduates

June 1992

**Master of Science**
- N.A. Dziwatkoski, DuPont, Circleville
- M.A. Garcia-Briones, Graduate School, OSU
- D.L. Reichley, Arbor Research, Toledo
- H. Zhu, Graduate School, OSU

**Bachelor of Science**
- P.J. Archer, Ohio Consumer Council, Columbus
- J.A. Barnes, Medical School, OSU
- C.F. Berardi, No Information Available
- M.A. Burton, Amoco Production, Houston, TX
- L.A. Croft, GFS Chemicals, Columbus
- R.E. Enyart, Eveready, Marysville, MO
- T.A. Harris, Graduate School, OSU
- K.Y. Hayes, Procter & Gamble, Cincinnati
- A.J. Jacobsen, Honda of America, Marysville
- M.S. Kovalski, Wheeling Pittsburgh Steel, Pittsburgh, PA
- Lindawati, Returned to Indonesia
- M.D. Lutz, BP America, New Orleans, LA
- E.M. Marszal, UOP, Des Plaines, IL
- T.M. Pajik, Dow Corning, Carrollton, KY
- M.A. Pignataro, B.F. Goodrich, Brecksville
- D.K. Plummer, Orsanco, Cincinnati
- D.J. Repasky, Primatech, Columbus
- W.G. Roetzer, No Information Available
- Saputra, Graduate School, OSU
- P.A. Schacht, Graduate School, Univ. of Conn.
- S.A. Schulze, Himont, USA, Gahanna
- A.E. Thoroughman, Abbott Laboratories, IL
- M.J. Tucker, Medex Inc., Dublin, OH
- J.E. Vander Meer, Procter & Gamble, Cincinnati
- M.W. Wallace, Amoco, IN
- T.J. Weickert, Dow Corning, Carrollton, KY
- P.E. Whitacre, Eli Lilly, Indianapolis, IN
- K.-L. Wong, No Information Available

**August 1992**

**Master of Science**
- J.L. Grashel, Union Carbide, Charleston, WV
- S. Kannan, Nielsen Advanced Info. Technology Ctr., Nielsen, IL
- A. Maldonado, Eli Lilly, Indianapolis, IN

**Bachelor of Science**
- A.M. Glover, No Information Available
- P.A. Jacyk, Graduate School, OSU
- M.S. Kresovsky, M.K.-Ferguson, Cleveland
- R.B. Rathi, Sudarshan Chemical Ind. Ltd., INDIA
- K.T. Wright, Occidental Chemical, Carrollton, TX

**December 1992**

**Doctor of Philosophy**
- C. Cheng, President Enterprise, Taipei, Taiwan
- C.-P. Hsu, Cook Composia & Polymer, Port Washington, WI
- C.-H. Shu, Food Industries Research & Development Institute, Hsinchu, Taiwan
- B.C. Smith, International Paper, Mobile, AL

**Master of Science**
- A. Ieumwananonthachia, Graduate School, University of Illinois
- M.W. Kumtheekar, Graduate School, OSU

**Bachelor of Science**
- J.P. Casey, II, Detrex Corporation, Ashtabula
- J.E. Cobb, Jr., Cartwell Technologies, Columbus
- C.S. Connors, PPG Industries, Lake Charles, LA
- T.R. Cuthbert, Procter & Gamble, Cincinnati
- C.M. Ellis, Procter & Gamble, Cincinnati
- L.M. Mangen, Procter & Gamble, Cincinnati
- J.T. Peoples, Kari Shamus, Columbus
- J.E. Trout, Procter & Gamble, Cincinnati
- D.A. Vulcan, Mead Paper, Chillicothe
- T.A. Weckenbrock, Ashland Chemical, Orange, CA

**March 1993**

**Doctor of Philosophy**
- P.P. Ramanathan, Honeywell Inc., Minneapolis, MN

**Master of Science**
- C. Opoku, No Information Available
- S. Thapliyal, Graduate School, Notre Dame
- K.K. Trinh, No Information Available

**Bachelor of Science**
- B.A. Fuller, Graduate School, OSU
- C. Gordon, Lockwood Greene, South Carolina
- S. Keyhani, Graduate School, University of California at Berkeley

MEDIAN SALARY

B.S. 39,965
M.S. 42,100
Ph.D. 51,000
Student Awards

James Trout
The American Institute of Chemists Award
Presented by Dr. Umit S. Ozkan

Paul DeRoussel
The Dow Outstanding Junior Award
Presented by Rich Brandon

Pamela Archer
Department of Chemical Engineering Service Award
Presented by Dr. Jacques Zakin

Laura Landers
AIChE National Award for Scholastic Achievement
Presented by Dr. Harry Hershey
Student Awards

Lisa Mangen, Julie Vander Meer and Thomas Cuthbert
The AIChE Outstanding Senior Award
Presented by Dr. James Davis

Paul DeRoussel and Tyler Newsom
The AIChE Outstanding Junior Award
Presented by Dr. Umit S. Ozkan

Trent Wurster, John Martin and Craig Olwert (not pictured)
The AIChE Outstanding Sophomore Award
Presented by Dr. Jacques Zakin
1992 Distinguished Alumnus Award

Ronald D. Harris is Vice President-Technology for Kraft USA, an operating company of Kraft General Foods. He received the Bachelor of Science and the Master of Science degrees in Chemical Engineering from Ohio State University in 1961.

Between 1961 and 1971, Mr. Harris was employed at Procter and Gamble, where he worked on improvements to Jif, Crisco, and Crisco Oil, and earned two patents. During this period, he also served two years in the U.S. Army.

In 1971, he joined the Clorox Company, where he founded and managed the Food Product Development Department. Two years later, he became Director of Research and Development, overseeing the development of such products as Soft Scrub cleanser, Clorox 2 bleach, and Hidden Valley Ranch salad dressings.

Mr. Harris was appointed Vice President-Research and Development of Anderson Clayton Foods in 1977. There he directed the development of buttermilk dressings, imitation cheeses, and industrial fat and oil products, as well as new packaging.

He became Vice President-Technology of the Retail Cheese Division of Kraft, Inc. in 1987 and was charged with developing new low-fat cheeses. He also laid out a strategic plan for the Division, established systems for managing technical brands, and recruited employees. In 1990, he was promoted to his present position in Kraft USA.

In addition to participating in professional societies and holding a number of public and civic offices, Mr. Harris has served on the advisory board for Ohio State’s Department of Chemical Engineering.

1992 Benjamin G. Lamme Meritorious Medal

William G. Lowrie is President of Amoco Production Company. He received the Bachelor of Science degree in Chemical Engineering with petroleum option from Ohio State University in 1966.

Mr. Lowrie began his career in production and reservoir engineering positions with the Amoco Production Company in Louisiana. He rose steadily through the ranks at Amoco, becoming Area Superintendent at Lake Charles, Louisiana in 1974 and Assistant Division Engineering Manager in Denver the following year. He was promoted to Southern Division Production Manager in 1978.

Mr. Lowrie became Vice President, Production (USA) in 1981. In this capacity, he supervised the innovative Bravo Dome project, which enhanced oil recovery from mature wells in West Texas, as well as the Overthrust Belt Project in Wyoming. In 1983, he was appointed Vice President, Supply and Marine Transportation of Amoco Corporation a position in which he was responsible for Amoco’s worldwide crude oil acquisitions of 100,000 barrels per day.

In 1985, Mr. Lowrie served as President of Amoco Canada Petroleum Company, and he became senior Vice President, Production of Amoco Production Company in 1986. He became President of Amoco Oil Company in 1990, focusing on developing environmental fuels. In 1992, he was appointed President of Amoco Production Company.

Mr. Lowrie is a member of the Society of Petroleum Engineers and the American Petroleum Institute, and serves on the advisory boards of Stanford University’s School of Earth Sciences and of Ohio State’s College of Engineering. He chairs the Department of Chemical Engineering Advisory Board. He received the Texnikoi Outstanding Alumnus Award in 1979 and the College of Engineering Distinguished Alumnus Award in 1985.
BOOKS AND BOOK CHAPTERS:


REFEREED PAPERS:


PROCEEDINGS PUBLICATIONS:


Publications and Presentations


Software Licenses: (J. F. Davis)

Knowledge-based diagnostic system development software generated as an expression of the theoretical approach developed has been licensed for specific applications to the following companies during the calendar year 1992:

Amoco Chemicals Corp.
Shell Development
Mobil Research and Development

Neural net development software generated as an expression of the theoretical approach developed has been licensed for specific applications to the following companies:

BP Research


TECHNICAL REPORTS:


Publications and Presentations


PATENTS:

OTHER SCHOLARLY/CREATIVE CONTRIBUTIONS:
A. Invited Lectures, Seminars and Short Courses
Lee, L.J., Workshop for Composite Manufacturing, Institute of Applied Mechanics, National Taiwan University, Taiwan, April (1992).
Lee, L.J., "Resin Transfer Molding and SMC Compression Molding," Department of Mechanical Engineering, Concordia University, Montreal, Canada, September (1992).
Lee, L.J., "Reactive Processing of Polyurethanes and Urethane-Based IPNs," Department of Chemical Engineering, Tsinghua University, Beijing, China, October (1992).
Lee, L.J., "Liquid Composite Molding Technology,"
Publications and Presentations

Department of Mechanical Engineering, Beijing Institute of Chemical Technology, Beijing, China, October (1992).


B. Additional Paper Presentations


Publications and Presentations


Yang, S.T., H. Zhu and Y. Li, "Calcium Magnesium Acetate


C. Organizers and Session Chairs of National and International Meetings.


Brodkey, R.S., Organizing committee for the 1992 Symposium on Turbulence, Rolla, Mo.

Brodkey, R.S., Organizing committee for the 1993 Beer Sheva Seminar on Magnetohydrodynamics and Turbulence Jerusalem, Israel.

Chalmers, J.J., Session Chair "Effects of Agitation and Gas Bubbles on Cells" at AIChE Annual Meeting, Miami Beach, FL, Nov. 1-6, 1992

Chalmers, J.J., Session Co-Chair "Biological Membrane Processes" at AIChE Annual Meeting, Miami Beach, FL, Nov. 1-6, 1992


Fan, L.S., Founder and Organizer, The First International Conference on Gas-Liquid and Gas-Liquid-Solid Reactor Engineering (co-sponsored by European Federation of Chemical Engineering, Society of Chemical Engineering of Japan, Ohio State University), Columbus, Ohio, Sept. 13-16, 1992.


Fan, L.S., Member, Steering Committee, 3rd World Congress on Particle Technology, Los Angeles, August 21-25 (1994); Organizer for the Fluidization and Transport Phenomena program.


Lee, L.J., Session Organizer and Chair, Polymer Processing Society Meeting for the Americas, Knoxville, TN.


Yang, S.T., Co-Chair and Organizer, session on *Applications of Enzymes and Immobilized Cells in Biotechnology and Food Processing," AIChE Annual Meeting, Miami Beach, Nov. 1-6, 1992.
Publications and Presentations

Yang, S.T., Chair and Organizer, session on "Food Fermentation," AIChe Summer National Meeting, Minneapolis, Aug. 9-12, 1992.

Yang, S.T., Co-Chair and program organizer, Ohio Symposium on Advances in Science and Technology - 1992, sponsored by Ohio Chinese Academic and Professional Association and Ohio State University, Columbus, April 18, 1992.

Yang, S.T., Co-Chair and Organizer, poster session on "Advances in Food Biotechnology and Bioprocessing," Conference on Food Engineering (CoFE '93), Chicago, Feb. 21-24, 1993.

Zakin, J.L., Co-Chair, Organizer and Session Chair, Turbulence Symposium, University of Missouri-Rolla, September 1992.


Zakin, J.L., Program Committee Council for Chemical Research Annual Meeting, Cleveland, October 1992, also Co-Chair of Session on High Polymers.

Presentation of Unit Ops Contributors Plaque by Dr. Harry Hershey

Professor Ozkan greeting guests on Ace Day.

Classmates reminiscing

Socializing
Ph.D. Theses

C. Cheng, B.S. (Tunghai University); M.S. (Ohio State University); Engineering Strategies to Optimize Plasmid Stability and Protein Production in Recombinant Saccharomyces Cerevisiae Fermentation. (S.T. Yang)

C.-P. Hsu, B.S. (National Taiwan University); M.S. (Ohio State University); An Integrated Analysis of Styrene/Unsaturated Polyester Free Radical Cross-Linking Polymerization. (L.J. Lee)

P. Ramanathan, B.S. (University of Bombay); M.S. (Ohio State University); Diagnostic Knowledge Based Systems for Continuous Chemical Processes: Enhanced Knowledge Acquisition & A Generic Problem-Solving Framework. (J.F. Davis)

C.-H. Shu, B.S. (Tunghai University); M.S. (Ohio State University); Continuous Recombinant Yeast Fermentation in a Novel Three-Phase Fluidized Bed Bioreactor. (S.T. Yang)

B.C. Smith, B.S. (Clarkson College of Technology); M.S. (Ohio State University); Flow Birefringence, Nuclear Magnetic Resonance and Corrosion Measurements on Drag Reducing Cationic Surfactant Solutions for District Heating and Cooling Systems. (J.L. Zakin)

M.R. Smith, B.S. (University of Pittsburgh); M.S. (Ohio State University); The Partial Oxidation of Methane to Formaldehyde over Molybdenum-Oxide-Based Catalysts. (U.S. Ozkan)

Master’s Theses

N.A. Dziewatkoski, B.S. (Ohio University); Improving of Surface Quality in SMC Molding Parts. (L.J. Lee)

M.A. Garcia-Briones, B.S. (University of San Luis Potosi); Computer Simulation of the Bubble Breakup at a Gas-Liquid Interface and Its Implications in Animal Cell Damage in Large Scale Cultures. (J.J. Chalmers)

J.L. Grashel, B.S. (Ohio State University); Knowledge-Based Dynamic Control In Discrete Operations. (J.F. Davis)

A. Ieumwananonthachia, B.S. (Chulalongkorn University); An Experimental Simulation to Determine Fiber Orientation in SMC Compression Moldings. (R.S. Brodkey)

S. Kannan, B.S. (Indian Institute of Technology); Knowledge-Based Framework for Integrating Sensor Validation and Diagnosis in Chemical Process Plants. (J.F. Davis)

M. Kumthekar, B.S. (University of Bombay); Role of Ammonia Oxidation in Selective Catalytic Reduction of Nitric Oxide Over Vanadia-Based Catalysts. (U.S. Ozkan)

A. Maldonado, B.S. (Texas A & I University); Xanthane Gum Production from Whey Permeate by Xanthomonas campestris. (S.T. Yang)

C. Opoku, B.S. (Univ. of Science & Technol. Ghana); Small droplets formation in Liquid-Liquid Dispersion in Turbulent Elongational Flows. (R.S. Brodkey)

D.L. Reichley, B.S. (Ohio University); Oxygen-Argon Separation Using Pressure Swing Adsorption. (K.S. Knaebel)

S. Thapliyal, B.S. (Indian Inst. of Technology, New Delhi); An Operator Advisory System for On-Line Execution of Operating Procedures In A Discrete Operation. (J.F. Davis)

Anniversary Classes

1918
Thomas A. Boyd
Leonard T. Capell
Robert A. Fisher
Willard F. Tressel
*Spencer G. Weber

1923
*Angel F. Acosta
Durain C. Butts
*Harry G. Carrell
*Dean M. Cleaveland
*Harold M. Davies
*Elmer J. Fisher
Joseph F. Gorman
*Elmer H. Haux
Edgar C. Hendrickson
William L. Lonsway
*Clare S. Martin
Edward G. Melter
*Wesley H. Miller
*Harold L. Moon
Gordon H. Mutersbaugh
*Wayne C. Norris
*Gerald G. O'sterhof
*Gordon D. Patterson
Alvin H. Peters
Ying Lain Pun
Albert Schwensen
*Lawrence E. Stout
*Edward D. Turnbull
George H. Wilkinson

1928
William C. Barnett
Harry E. Chambers
*Yun-Hao Feng
*Chieh Ma
Arnold H. Nieman
*Kenneth E. Steele
Edwardo A. Urusta
*Wei Yang

1933
Ralph E. Cramer
Henry S. Curtis
John S. Eckert
Robert E. Elliott
*Elmore A. Faine
Albert L. Fishback
Kermith K. Fligor
George E. Fromm
Edward H. Fournier
Donald H. Gardner

1938
*Robert S. Armstrong
Gerald L. Benson
Thomas A. Boyd
Carl S. Casto
Norman C. Cammerer
Jefferson C. Cole
Maynard E. Collier
Robert W. Conaway
Frank J. Cserenyak
Paul F. Cunningham
Dana D. Davis
Daniel W. Duncan
Frederick Eastman
Howard D. Evans, Jr.
Charles W. Gaylord
Harvey H. Grice
John R. Giesset
Louis F. Guentert
Elton B. Gyunoy
David C. Hale
Victor J. Harris
Edward J. Haven
Charles H. Hiser
George B. Hughley
John S. King
Paul H. Lenz
*Leland W. Love
Chester A. McCall
Keator McCubbin
John W. McKinney
Adolph S. Miller
Daniel M. Miller
Frederick E. Miller
Frederick C. Neuhart
Wayne L. Oberlin
James R. O'Rorak
Woodrow W. Portz

1943
C. Dixon Arrich
Nicolaen N. Bcacaint
Richard Bengston
Thomas E. Bieterman
*Charles E. Boyd
Robert L. Brehmer, Jr.
Chester J. Brown, Jr.
Melvin Browning
Lloyd J. Breidenbach
Edgar E. Buxton
James R. Cameron
William H. Cameron
Robert W. Cescinian
Constantin L. Chase
Halve S. Christenson
Walter E. Crawford
Howard S. Dammeler
Dalton F. Drake
Robert E. Farison
Richard M. Garrett
Paul K. Gaulke
Glenn L. Gifford
Dean C. Glass
Hart F. Graff
Max F. Grandey
Harry J. Green, Jr.
Gabriel Grushcow
Dean F. Haberkast
Ernest Handley
Leonard Harris
Dyanne D. Herman
Gordon C. Inskeep
*John Kekich
Robert Lange
Thomas Lavery
Alexis W. Lemmon
*Walter S. Lodge
Richard E. Loftfield
Roger Long
William C. Louis, Jr.
Walter Luce
William C. Martin
William C. McConnell
*Richard L. McMillan
Kenneth Mercer
Daniel A. Meyer
Charles W. Miller
Myrl E. Miller
*Donald E. Morgan
Jack R. Oldenburg
Harold J. Pierce, Jr.
James R. Randall
Raymond K. Ritzert
Charles J. Schmidt
Roy E. Schneider
*Elmer F. Schrader
*Vernon C. Seguin
Carlyle E. Shoemaker
John K. Siddle
Leonard Skolnik
William D. Thomas
*Ralph O. Tribble
Augustus R. Van Kleeck
William J. Verross
Richard A. Walther
Thomas A. Weisz
Edward E. White
Wade Wolfe, Jr.
Paul T. Whiteman
Gerald V. Wooten
James C. Wynd
Hong Ton Yee

1948
Dale B. Baker
Paul W. Baker
Charles C. Ballard
Saul Barron
Frank Bauman
James A. Bierlein
Maurice E. Bondurant
Kenneth Brandstetter
John A. Burgbacher
John E. Buskirk, Jr.
Robert V. Carlisle
Irvine B. Chang
John C. Cobb
Arthur L. Cochereill
Anniversary Classes

Charles W. Conklin
Norman R. Cox
Donald E. Darr
*Donald Dewey
Marc Dunnam
Richard E. Durst
George Epstein
Franklin M. Ernest
Walter S. Fagley, Jr.
William Fell
Herbert Fisch
Lee B. Fosdick
Paul A. Fritsche
John R. Galloway
Donald Garrett
John G. Gerlach
Earl W. Goodman
William L. Gray
Herbert L. Green
*John B. Griffith
David Grove
Hanford L. Gunnerson
Allen C. Guy
William L. Hammond
Richard C. Harshman
Abdul M. Hassan
Maurice E. Hatten
Lloyd T. Hendrix
*John R. Hill
Rollin Hoelscher
Richard Hoffman
* Dale S. Holl
Arthur R. Horsburgh
Max H. Humphrey
Daniel Hyman
*Joseph Ivancic
David E. James
Hugo C. Johnson
Jeanne H. Johnson
Newton H. Johnson, Jr.
Lewis Jones
William Jurevich
Robert M. Kelly
Charles M. Kincaid
Lucille D. King
Harlen W. Kline
William A. Klink, Jr.
Jack Kolins
Robert E. Kraus
Henry B. Lange
William L. Larcamp
George R. Lewis
Ju Luan Ma
John C. Marting
F. Robert Mayforth
Robert G. McCammon
Louis V. McIntire

Clement McLain
Thomas J. McLean
William J. Mead
William R. Meredith
Chester Milewski
Myrl E. Miller
Robert H. Miller
Robert N. Miller
Enze T. Min
Ralph Montello
*Harry L. Moore
Milton E. Nathan
Leonard H. Ogden
Douglas Ordahl
Dorothy E. Patten
Robert E. Petry
Howard H. Pickrel
Frank C. Price
John Purdom
Joseph Quattlebaum
Manuel Ramos
Cloyd Reeg
*Harry F. Reid
Douglas O. Robinette
Harold Robinson
Robert T. Scharenberg
Karl Scheller
Arthur C. Seccrest
George Secrist
Carl Setzer
Dale B. Shull
Allan L. Sluizer
Alexander Stern
Jack C. Stewart
Paul J. Stubber
Richard O. Stuckey
Aaron J. Supowit
Robert Tarr
David G. Thomas
Ohn Tin
William Tomlinson
Donald E. Walker
Leroy Wallace
*John M. Wallen
* Lan-Ching Wang
Richard E. Warner
Fred Warzel
Admiral Arnold Watts
*Earl L. White
*Robert G. Wilkinson
Myron Wilson
Jack Wunderle

1958
Anthony F. Altamura
William J. Asher
Donald D. Baker
Edward H. Bollinger
Charles N. Carpenter
Sheldon Chapman
John J. Connelly
Clifton W. Cooke, Jr.
Victor A. Crainich
Kenneth E. Davis
George W. Dittrick
James R. Facer
Thomas E. Ferris
Edward J. Freeth
Phillip H., Gifford, II
Mahmoud H. Hamdy
Barry C. Hartley
Dan M. Hayes, Jr.

1963
*Jawad N. Al-Sheikh
Nelson W. Barnhill
Keith E. Bazaire
Gary L. Beeler
John D. Birle
James Chin
William C. Corder
Jon E. Fletcher
Donald L. Furry
Scott C. Gordon
Myers G. Hammond
John P. Henry, Jr.
Robert P. Kasper
Alan L. Keller
Heung T. Kim
Isabel K. Logan
James C. Meck
Ajinkumar V. Mehta
Stanley A. Metelko

Thomas E. Hedge
David W. Jones
Donald S. Kerrigan
Richard P. Kistler
Albert W. Krock
Phasook Kullavanijaya
Jon H. Lee
James C. Leslie
William T. Leslie
Glenn F. Leverett
Werner S. Lichtenstein
Tommy R. Loy
Michael J. Lucas
James McCaffrey, III
Frank J. Nagy
Valdis E. Petrits
Charles D. Ruff
Robert G. Savageau
Marcus D. Scharf
William H. Seaton
Richard J. Shafer
Steve Simecek
James M. Skates
Richard M. Smith
Mitchell J. Somers
Harold A. Sorgenti
James W. Stark
Lawrence R. Steele
Mark D. Tawney
John D. Turner
John M. Uncapher
Wolf R. Vieth
Richard Y. Walter
Bruce W. Wilkinson
Donald J. Wilhelm
Robert M. Yarrington

Lee F. Athaean
Robert A. Bates
Graydon C. Bazell
Richard N. Beals
Robert L. Bighouse
John V. Bishop
Roger L. Briggs
David E. Buskirk
William H. Casto
Felice Celli
Walter E. Donham
Chris C. Elleniss
Louis Elsaesser
Donald E. Findlay
John A. Fisher
Robert T. Hewitt, Jr.
Richard L. Huntington
George E. Koch
Herbert G. Krane
Paul R. Kummer
Winfred Ling
William L. Maag
Donald A. MacDougall
John G. Mahoney
Leo C. Peoples
Willard H. Potter, Jr.
Ernest Reinmuller
Manojkumar Sangvi
Thomas F. Sashihara
Geoffrey R. Snelling
Harold L. Stutzer, Jr.
Michael A. Tallarico
David G. Thomas
John Van Sise
Y.F. Venkatesham
Kenneth E. Whitehead
Alfred E. Williams
James L. Wilson
Robert Wiseman
William H. Wiseman

1953

24
## Anniversary Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>James E. Williamson, Larry E. Wing, John M. Yacher, Hugh J. Zeller</td>
</tr>
<tr>
<td>1978</td>
<td>Gary R. Strickler, Allan W. Strong, Samuel S. J. Tam, Larry D. Tanner, Dennis D. Terry, Timothy J. Thomas, Sutrisno B. Tirtawidjaja, David P. Turtle, Donald L. Weaver, Mark D. Westbrook, Johnny O. Wright, Paul J. Zerella</td>
</tr>
<tr>
<td></td>
<td>*Arthur X. Vurgaropoulos, John M. Weeman, Brian K. Weider, Thomas E. Winkler, Johnny O. Wright, Sin-Hoi Yam (Benny), Richard J. Yoch</td>
</tr>
<tr>
<td>1968</td>
<td>Jerry R. Barber, Arthur D. Bare</td>
</tr>
<tr>
<td></td>
<td>Arun V. Mandiekar, Kenneth N. McKeveley, Paul R. Michl, Merrill L. Minges, Faramarz Nazem, Herbert A. Newhouse, Sung C. Pak</td>
</tr>
<tr>
<td></td>
<td>Joseph E. Suhr, Joseph L. Taraba, Arthur W. Thornton, David J. Walters</td>
</tr>
</tbody>
</table>

25
Anniversary Classes

Laurence A. Ice
Paul A. Jarasek
Sudir S. Jindal
Cheryl L. Kennedy
Bamin Khomami
Waid S. Khouri
James Konuch
Sank Hak Lee
James A. Leonard
Elliot L. Levine
Robert P. Lewis
Carolyn M. Lin
Shawn-fen Lin
Dan D. Lindley
Jim F.S. Liu
Thomas M. Maloney
Frank T. Marriott
Kim H. Maza
Michael R. Melick
Anne E. Meyers
A. Dickerson Mitchell
Elizabeth A. Mulvaney
Julie G. Murphy
Martindale Nelson
Carl Norman
Keith R. Nowak
Julie M. Ockajik
Jeffrey W. Patterson
John P. Paulos
Crystal D. Penn
Lananah T. Pham
Lee A. Raymond
Morad Razmiafshari
Thomas A. Regrut
Robert A. Richard
Christopher R. Richied
N. Richard Ricks, Jr.
Timothy H. Robison
Cora B. Rogerson
Eric L. Rohr
Ariel A. Sanmartin
James M. Sauer
Steven M. Schlanser
David J. Sebold
Gwo-Chyau Shen
Hani K. Silwani
Susan J. Slane
Alan H. Smith
Gordon D. Smith
Stephen L. Spanoudis
Ronald J. Stapleton
Christopher P. Stolarski
Ralph W. Tyree
David G. Vanek
Clark B. Wade
Christina M. Warner
Jeffrey A. Watson
Ben Weinstein
Kevin M. Weithman
David L. White
Karen S. Wilson
Keith D. Wisecarver
Bruce K. Wishon
Leonore C. Witchey
Tatsuki Yamashita
James B. Young
Robert E. Young
Robert E. Zimmerman

1988

Mohammed S. Alhindal
Lofti Ben-Said
Talivaldis V. Berzins
David A. Boerner
John A. Bohlmann
Annette L. Brough
Jonathan J. Caldera
Garret D. Cawthon
Tai-Wai David Chan
Chingyuan Cheng
Brain C. Costa
Julia M. Courts
David E. Davis
Erice S. DelliGatti
Laertis Economikos
Joseph F. Ennis
Jyh-Dar Fan
Rogelio Figueroa
Cathy A. Finafock
Josef A. Franz
Paula R. Fulk
Murthy S. Gandikota
Rajeev L. Gorowara
Mark A. Grady
Mei-Ning Guo
Susan N. Hanusz
Ronald R. Hill, Jr.
Christopher A. Holbrook
William M. Irvin IV
Rongher Jean
Maher T. Karadshet
Mark R. Kinkelaa
Steven R. Lang
Daniel J. Littlefield
David W. Miller
John A. Molnar, Jr.
Dianne M. Monnin
Michael F. Morgan
Paul Murray
Dimitar B. Nastoff
Michael J. Nodianos
Heidi M. Oesch
Kimberly L. Oney
John W. Oren
Ali T. Ozbek
David J. Parker
Bhavesh Patel
Todd K. Pencarinha
Jian Qi
Thomas E. Reardon
Michael R. Reed
Keith M. Russ
Bram Saadavandi
Amy Schmitt
Louise A. Seeley
Heung-Soo Shin
Craig L. Shoemaker
Chin-Hang Shu
Dimitrios Sioupikis
Bryan C. Smith
Marianne R. Smith
Wen-Tzung Tang
Marshall L. VanDeWalle
Ronald B. Villanueva
Hung-Chen Wen
Susanne T. Woodland
Yeong-Show Yang
Craig E. Yussen

Class of 1934
Ed Slowter

Class of 1947
Charles M. Kincaid and
Billy L. Larcamp

*No current information available. If you know their address, please send it to us.
Class of 1942
Randall E. Bailey, Dale B. Baker, Edmund Duplaga, Paul J. Stuber, Donald S. Arnold
John F. Janousek, Forrest R. Hurley, Frederick L. Hanson, John Hur, John Rex
Lynn S. Kelley, Simon Bonta, David E. James Jr., Emery L. Stewart, George W. Luckey
Clyde H. Kearns, Jr., Donald L. Henthorn, Edwin G. Willing, F.D. Peterseim

Class of 1952
Allen Raymond

Class of 1957
Gary Higinbotham
Class of 1967
John Yacher and Dennis Hurley

Class of 1972
Harold Conkle

Class of 1977
Kenneth Yunker

Class of 1982
Sumner Saeks