A Letter to our Alumni

This newsletter to the alumni and other friends of the Chemical Engineering Department at North Carolina State is intended to celebrate progress in the Department and to initiate better communications with its many loyal alumni. Unfortunately, the inaugural issue comes at a time when the Department has only begun to recover from the unexpected death of one of its most enthusiastic and dedicated faculty members, Edward P. Stahel II. As a new department head at a university that is new to me, I feel a great personal loss from Ed’s premature passing. During the past year, Ed was a good friend, a wise counsellor and a strong link to the history and traditions of the Department. His contributions — intellectual, organizational, social and personal — will be missed by students and faculty alike.

On July 1, 1990, I completed my first year as Head of the Department of Chemical Engineering. During that year, I’ve found NCSU chemical engineers of all ages and degree levels eager to talk about their experiences in the Department and anxious to hear what’s going on now. I’ve enjoyed learning about their days at NCSU and about how things have changed.

These conversations led to the idea of a newsletter to tell you what changes are taking place, what the Department has accomplished, what the faculty and students are doing, and the challenges and opportunities that we face. Right now, one of those challenges is a cut in the State budget, which is rapidly flowing down to the Department, according to well-established principles of transport phenomena.

Many visitors are surprised to learn how important the Department of Chemical Engineering at State has become on the national scene. In the 1988-89 academic year, your Department ranked Number 4 in the United States in the number of BS degrees awarded in chemical engineering. The only institutions that graduated more BS Chem. E’s were Minnesota, Purdue and Penn State. In addition, the August 20, 1990, issue of Chemical and Engineering News showed that the Department was Number 7 in the United States in expenditures on research in 1988. This reflects the strength of our graduate program.

Our faculty is proud to have that kind of impact on the profession. However, measuring the effectiveness of our teaching is much more difficult than counting the number of our graduates or the dollars we spend. Perhaps you can help us with the question of quality. Let us know what aspects of your chemical engineering education at North Carolina State gave you an advantage in the outside world, and what aspects could have been improved. You can use the Alumni Information blank on Page 8 of this newsletter. Besides providing material for an alumni news section in subsequent issues, the Alumni Information blank will help us to build a comprehensive mailing list. You can help by passing a copy of the newsletter to other graduates of the Department, and by filling in their names and addresses (or just corporate affiliations and locations) on the Alumni Information blank.

Many of the faculty will be attending the AIChE Meeting in Chicago from November 11 to November 16, 1990. Budgets willing, we hope to have a small hospitality suite at that meeting. If you’re planning to attend, keep your eye on the bulletin board for an announcement.

Let me close by inviting you to visit us in Riddick on your next trip to Raleigh. You’ll find a lot that’s familiar and a lot that’s new — besides the Department Head.

George W. Roberts, new Department Head, and Marvel O. Mitchell, long-time Administrative Assistant (who really runs things).
On October 6, 1989, N.C. State appointed James Ferrell as interim dean for the College of Engineering to replace Larry Monteith, who was named NCSU’s chancellor. Ferrell’s primary goal as interim dean is to push forward with the construction of the $32 million graduate research center to be built on Centennial Campus.

Ferrell joined NCSU in 1961 as a full professor and became Head of the Department of Chemical Engineering in 1966. In 1980, he stepped down as Department Head to work on a coal gasification project which removed pollutants from fuel gas before it was burned or fed into pipelines. In 1985, Ferrell became engineering associate dean for research until his recent elevation.

Ferrell said he will retire when the permanent dean of engineering is selected and that he might resume an active research program at that time.

Dr. Edward P. Stahel II, Professor of Chemical Engineering, died on July 20, 1990, of a heart attack at the age of 56. Dr. Stahel, who joined the Department in 1962, will be remembered as a person who took an active interest in his students and his work at the university.

Dr. Stahel received a bachelor’s degree from Princeton University in 1955, a master’s degree from the University of Notre Dame in 1957, and a doctorate from Ohio State in 1962. All of his degrees were in chemical engineering. He was appointed Assistant Professor of Chemical Engineering in 1962 and was promoted to Associate Professor in 1966 and to Professor in 1974. Ed was known as an excellent classical chemical engineer and was widely recognized in the area of polymer research. Ed Stahel’s interest in the University extended beyond the Department per se. As Chairman of the NCSU Faculty Senate Select Committee on Academic Integrity, he recommended some of the important changes that have since been implemented in the organization of the Athletics Department.

Ed Stahel was known as an individual who had an especially strong love for his family and friends. He is survived by his wife, Anne W. Stahel; his mother, Helen M. Stahel of Raleigh; two daughters, Karen E. Stahel Riddell of Atlanta and Ann Winn Stahel of Raleigh; three sons, Edward P. Stahel III of Ohio, John B. Stahel of Virginia Beach, and Peter G. Stahel of Raleigh; and his brother, Peter J. Stahel of New York. He is also survived by three grandchildren.

The Department currently has 15 active faculty members:

**Professors:**
- Ruben G. Carbonell (Hoechst-Celanese Professor)
- Peter S. Fedkiw
- Richard M. Felder (Hoechst-Celanese Professor)
- Carol K. Hall
- David F. Ollis (Distinguished Professor)
- Michael R. Overcash
- George W. Roberts (Department Head)

**Associate Professors:**
- Peter K. Kilpatrick
- Phoii K. Lim
- C. John Setzer (Associate Department Head)

**Assistant Professors:**
- Rey T. Chern
- Benny D. Freeman
- Christine S. Grant
- H. Henry Lamb
- Steven W. Peretti

Several other members of the faculty are serving in important administrative positions in the College of Engineering. James K. Ferrell (Alcoa Professor) is Interim Dean, Harold B. Hopfenberg (Camille Dreyfus Professor) is Associate Dean for Planning and Development as well as Special Assistant to the Chancellor. He was appointed Executive Assistant to the Chancellor effective November 15. Hubert Winston was recently named Assistant Dean for Academic Affairs.

The Department is fortunate to have some very supportive emeritus faculty, including Kenneth O. Beatty, David B. Marsland, Alan S. Michaels, J. Frank Seely, and Vivian Stannett. Dave Marsland is very active in student advising. Ken Beatty does some occasional teaching in biomedical engineering, and Alan Michaels and Vivian Stannett are contributing to several research projects.

## Around the University

### Faculty Members

The Department currently has 15 active faculty members:

**Professors:**
- Ruben G. Carbonell (Hoechst-Celanese Professor)
- Peter S. Fedkiw
- Richard M. Felder (Hoechst-Celanese Professor)
- Carol K. Hall
- David F. Ollis (Distinguished Professor)
- Michael R. Overcash
- George W. Roberts (Department Head)

**Associate Professors:**
- Peter K. Kilpatrick
- Phoii K. Lim
- C. John Setzer (Associate Department Head)

**Assistant Professors:**
- Rey T. Chern
- Benny D. Freeman
- Christine S. Grant
- H. Henry Lamb
- Steven W. Peretti

Several other members of the faculty are serving in important administrative positions in the College of Engineering. James K. Ferrell (Alcoa Professor) is Interim Dean, Harold B. Hopfenberg (Camille Dreyfus Professor) is Associate Dean for Planning and Development as well as Special Assistant to the Chancellor. He was appointed Executive Assistant to the Chancellor effective November 15. Hubert Winston was recently named Assistant Dean for Academic Affairs.

The Department is fortunate to have some very supportive emeritus faculty, including Kenneth O. Beatty, David B. Marsland, Alan S. Michaels, J. Frank Seely, and Vivian Stannett. Dave Marsland is very active in student advising. Ken Beatty does some occasional teaching in biomedical engineering, and Alan Michaels and Vivian Stannett are contributing to several research projects.

### Around the University

#### Ferrell Named Interim Dean

On October 6, 1989, N.C. State appointed James Ferrell as interim dean for the College of Engineering to replace Larry Monteith, who was named NCSU’s chancellor. Ferrell’s primary goal as interim dean is to push forward with the construction of the $32 million graduate research center to be built on Centennial Campus.

Ferrell joined NCSU in 1961 as a full professor and became Head of the Department of Chemical Engineering in 1966. In 1980, he stepped down as Department Head to work on a coal gasification project which removed pollutants from fuel gas before it was burned or fed into pipelines. In 1985, Ferrell became engineering associate dean for research until his recent elevation.

Ferrell said he will retire when the permanent dean of engineering is selected and that he might resume an active research program at that time.

Dean J.K. Ferrell
The Chemistry was Right - Hal Hopfenberg as Athletics Director

Harold B. Hopfenberg served as interim Athletics Director for NCSU from October 16, 1989, to June 15, 1990. This post was yet another in a long line of distinguished appointments and accomplishments for the former head of the Chemical Engineering Department (1980-1987). Dr. Hopfenberg, a professor at NCSU since 1967, was named Camille Dreyfus Professor of Chemical Engineering in 1980.

Internationally known for his teaching and research in transport phenomena, polymers and organic glasses, Dr. Hopfenberg received the Outstanding Teacher Award in 1969, 1975 and 1979 and has published more than 100 scholarly articles. He served as Special Assistant to the Chancellor and as Associate Dean for the College of Engineering from 1987 to 1990. During his tenure as Interim Director of Athletics, Dr. Hopfenberg continued to direct research, publish papers, and serve on the boards of four scientific journals. He was appointed Executive Assistant to the Chancellor effective November 15, 1990.

Chem. E.: Why do you think you were chosen for this position?

H.B.H.: I think that I was chosen because of my long working relationship with Chancellor Monteith, a relationship of mutual trust and respect. As Special Assistant to the Chancellor, I was already part of the system in place. I’ve had seven years’ experience as head of the Chemical Engineering Department to get to know the key campus people. I learned how to deal with line administration and how to motivate people. I think that everything I’ve done in my career has led logically to this appointment.

Chem. E.: When you were appointed by Chancellor Monteith in October 1989, he was quoted as saying, “The charge to Dr. Hopfenberg is to learn enough about athletics to be an advocate for them and to work with the coaches to build more direct bridges to academics.” How did you go about accomplishing this goal?

H.B.H.: A common misconception regarding my appointment was that my assignment was to come in and reform athletics, whereas my actual task was to be an advocate for athletics to the academic side of the university and to the community at large.

Chem. E.: You said, “Engineers make things work . . . I may have entered a different playing field, but our goals are exactly the same.” What are the differences and similarities between being the head of Chemical Engineering and Interim Athletics Director?

H.B.H.: The two jobs had a lot of similarities; in both, I dealt with people who are extremely dedicated to their mission. I was responsible for articulating the point of view of the people in my department to the university in both jobs. The aspects of managing resource allocation and motivation of staff were similar in each situation.

The difference is mainly one of pace. Things happen a lot faster in athletics. Another difference is in the nature of decision making. The head of Chemical Engineering can make a decision and that’s the end of it, whereas a decision made by the Director of Athletics can be just the beginning. There is so much second guessing in the public spotlight that shines on athletics.

A striking difference between the two departments in general is one of philosophy. There is a “can-do” spirit that pervades everything in athletics. Also, you often hear people referring to being “on the same page,” in athletics, meaning that we’re working as a team to accomplish a goal. This philosophy is somewhat foreign to the academic community, but it is an integral part of the athletics community.

Chem. E.: What were some of the more enjoyable aspects of being Athletics Director?

H.B.H.: Getting to know a group of very interesting people as colleagues. Working with dedicated professionals, people who are emotionally dedicated as well as professionally dedicated to what they are doing. It was great to be close to people who could marshal their collective energies in a focused way. It was also enjoyable developing a relationship with student-athletes, to understand the pressure they feel, as well as the hopes, dreams, and aspirations that they have. I also enjoyed being right in there during the peak of competition.

Chem. E.: What was the most difficult aspect of being Athletics Director?

H.B.H.: To learn overnight to become a public figure, to have my actions open to public scrutiny on a national level.

Chem. E.: As an educator known for setting a high standard of excellence, what is your assessment of the damage that has occurred to NCSU’s reputation, and do you think that the university will fully recover?

H.B.H.: This university will do much more than recover. It’s been a difficult and trying time for people who love the university. We have made major positive strides on the road to recovery. The face that the athletics department now presents is a consistent face.

Chem. E.: Are there any thoughts or comments that you would like to add?

H.B.H.: I would like to see the academic side of the university be proud of the athletics side, and for the athletics side to be proud of this institution as an extraordinary resource for teaching, learning, and scholarship. The bridge building has just started; I want to see increased understanding between the two groups. Athletics and academics are inseparable because it is through athletics that the university is presented to the lay public.
The following photographs of scenes around the Department provide an opportunity to profile some of the active faculty.

Peter S. Fedkiw  Professor

Peter is the Department’s newest full Professor, achieving that distinction in 1989. He joined the faculty in 1979 after completing his PhD in chemical engineering at the University of California, Berkeley. His undergraduate degree, also in chemical engineering, is from the University of Delaware. During his decade of service in the Department, Peter has taught a number of graduate and undergraduate courses, including transport processes, unit operations and advanced chemical engineering mathematics.

Peter’s research area is electrochemical reaction engineering. Some of the current applications of his research involve battery and fuel cell design, development of improved processes for the production of chemicals and the removal of trace quantities of pollutants from aqueous streams. His work earned him the Sigma Xi Research Award in 1984.

Peter is one of the Department’s “lunchtime runners.” The Fedkiw family members are avid campers; Peter, his wife, and his three children hope to visit all of the country’s national parks.

Phooi K. Lim  Associate Professor

“P.K.” has been a versatile teacher during the decade that he has been on the faculty. He has taught many of the courses in the undergraduate curriculum, as well as graduate-level courses in kinetics, catalysis, and reaction engineering.

P.K.’s research interests include homogeneous catalysis and surface chemistry. He recently began to apply this expertise to the synthesis of oxygenated fuels and to various problems related to waste minimization and process improvement.

P.K. received the MS and PhD degrees in chemical engineering from the University of Illinois, the latter in 1979. His BS degree is also in chemical engineering, from Cornell University. P.K. enjoys nontechnical reading, jogging and cooking, which he considers a logical extension of his interest in kinetics and catalysis.

Christine S. Grant  Assistant Professor

Christine is the Department’s newest faculty member. She joined us in December 1989 after completing her MS and PhD in chemical engineering at Georgia Tech. Her undergraduate degree, also in chemical engineering, is from Brown University.

Christine’s inaugural to teaching at NCSU was in CHE 205, Chemical Process Principles. Her responsibilities in this first course in chemical engineering have dovetailed with her interests in career development and her work in pre-college programs designed to motivate students to pursue engineering careers.

Christine’s research is in the areas of separations science and surface chemistry. One of her most active research projects involves the removal of contaminant films from glass and metal surfaces, which has application in the cleaning of batch, multi-product reactors.

Much of Christine’s spare time is devoted to music, both listening and singing. Jazz and gospel music are her favorites.

Ruben G. Carbonell  Hoechst-Celanese Professor

Ruben was born in Cuba and came to the United States in 1958. He speaks fluent Spanish and Italian and has taught chemical engineering in Mexico and Italy in the native tongue. Ruben received his BS and MA degrees in chemical engineering from Manhattan College and his PhD in chemical engineering from...
Princeton University in 1973. He joined the department in 1984 after serving on the chemical engineering faculty at the University of California, Davis.

At NCSU, Ruben’s teaching responsibilities have been primarily in the area of transport processes. His current research is aimed at developing new methods for protein purification, new techniques for enzyme immobilization and novel immunodiagnostic assays. He won NCSU’s Alumni Outstanding Research Award in 1989 and has been selected to receive the R.J. Reynolds Tobacco Company Award for Excellence in Teaching, Research, and Extension for 1990.

Outside the classroom, Ruben enjoys boating and fishing along the Outer Banks with his wife and three young children.

Peter K. Kilpatrick  
Associate Professor

Peter Kilpatrick joined the faculty in 1983 after completing his PhD in chemical engineering at the University of Minnesota. His BS degree from Occidental College is in chemistry. Peter has received awards from the University for his abilities in both teaching and research. He was recognized with an Outstanding Teacher Award in 1988 and won the Alcoa Engineering Research Achievement Award this past year.

Peter’s recent teaching activities have been concentrated in thermodynamics, at both the undergraduate and graduate levels. The common denominator of his research is surface chemistry. Although his current projects are predominantly in biotechnology, he has recently initiated some environmentally related research involving breaking oil/water emulsions in refineries.

Outside the Department, Peter’s interests center around his wife and four children. He is also an enthusiastic cook and golfer.

David F. Ollis  
Distinguished Professor

Dave joined the Department in 1984 after previous faculty positions at Princeton University and the University of California, Davis. He is the coauthor of the definitive text on biotechnology, Biochemical Engineering Fundamentals, and has just completed the English cotranslation of Photochemical Technology from the French. Photocatalysis is a growing research interest for Dave. His current work in this field involves the purification of drinking water and the treatment of industrial wastewater.

Dave is another of the Department’s versatile teachers, with assignments ranging from heat and mass balances to chemical reaction engineering to advanced courses in biotechnology. Dave received his PhD in chemical engineering from Stanford University in 1969. His BS was from Cal Tech, and his MS was from Northwestern, both in chemical engineering.

Dave spends most of his extracurricular time helping his wife raise their four sons. He also finds time to indulge his interest in the French language through periodic lecturing in France, Belgium and Switzerland.

Steven W. Peretti  
Assistant Professor

Steve played varsity basketball and studied chemical engineering (some say in that order) at Yale. He then obtained a PhD in chemical engineering from Cal Tech in 1986 and joined the faculty at NCSU immediately thereafter.

Steve’s research is based on the techniques of genetic engineering. One of his projects is aimed at stimulating the production of useful pharmaceuticals by genetic modification of plant cells. Another project is focused on synthesizing enzymes that are capable of destroying hazardous organic compounds. Steve teaches transport processes and process control on the undergraduate level, along with biotechnology on the graduate level.

When time permits, Steve enjoys cycling and playing tennis with his wife. However, both of them are quite occupied chasing after their four young chil-
Researchers at the Pollution Prevention Research Center, based at North Carolina State University (NCSU), say the new waste reduction technologies now under study at the Raleigh campus should help a wide range of industries more easily meet state and federal environmental regulations.

The Center research, aimed at reducing industrial use and output of hazardous substances, covers virtually every production category, including pulp and paper, polyurethane foam, chemical manufacturing, petroleum, semiconductors and textiles, according to Dr. Michael R. Overcash, Center director and NCSU professor of chemical engineering.

“We’re covering a lot of ground here,” Overcash said. “And we think the end result will be some highly innovative technologies that will reduce waste and still be cost-effective.”

The Center was established in February 1989 by the U.S. Environmental Protection Agency’s (EPA’s) Office of Exploratory research to support and expand existing industrial research and development efforts.

“The goal of the research team is to test their findings in actual industrial settings, not just in university labs,” Overcash added.

In fact, one of the six Center projects — a study to reduce fugitive air emissions in polyurethane foam manufacturing — is far enough along to begin in-plant testing.

NCSU engineers, under the direction of key researcher Dr. Cliff Kaufman, have completed initial research on a method of recovering auxiliary blowing agents used in the manufacture of flexible polyurethane foam.

“This project offers a method for minimizing both production changes and related expenses through retrofitting of existing foam-blowing lines,” Kaufman said.

Research findings also address worker safety and offer innovative methods for coping with emissions of chemicals, such as chlorofluorocarbons (CFC’s) and methylene chloride, into the air.

Now that the initial research is completed, Kaufman’s team is trying to establish an industrial consortium to support the research and provide a location for in-plant testing.

Dr. Ruben G. Carbonell, NCSU professor of chemical engineering, and Drs. H. Henry Lamb and Peter K. Kilpatrick, both NCSU assistant professors of chemical engineering, are examining the underlying cleaning mechanisms for particles and organic films.

“This is the first step in looking for substitute chemicals and cleaning methods to replace the chlorinated solvents and high-strength acids commonly used to clean semiconductor wafers,” Overcash added.

Among the alternatives being examined are gas-phase and surfactant cleaning methods. Over the past year, researchers have learned the importance of conducting liquid cleaning experiments on actual patterned semiconductor surfaces, rather than experimenting on models.

A third area of research focuses on the pulp and paper industry’s problem with dioxins, the toxic substances created when chlorine is used to bleach brown wood pulp for production of bright-white paper and paper products.

Another group of Center researchers is trying to help clean up “clean room” technologies, such as wafer cleaning methods used in the semiconductor industry.

Dr. Josef S. Gratzl, professor of wood and paper science at NCSU and a key Center researcher, says the initial step toward reducing dioxin output is to determine what is creating the toxin in the first place.

“We’re trying to determine why dioxins are formed when you bleach the pulp — what is the actual mechanism for formation — and then what we can do to intercept that reaction,” Gratzl said.

“Our ultimate goal is to evaluate process modifications within the mill structure and to recommend alternate bleach sequences which do not favor the production of dioxins,” he said.

Another Center project currently under way focuses on the problem of reducing fugitive chemical emissions from pipes and valves in manufacturing facilities. Dr. P.K. Lim, NCSU associate professor of chemical engineering, is leading the effort to determine how the losses of certain volatile organics occur and how industry may reduce those losses.

Under the Community Right-to-Know provisions of the Superfund Amendments and the Reauthorization Act (SARA) of 1986, major manufacturers must report losses of fugitive emissions into the atmosphere.

Dr. Michael Overcash
New Head of Chemical Engineering at NCSU

George W. Roberts was appointed Head of the Department of Chemical Engineering effective July 1, 1989. Prior to joining NCSU, Roberts was general manager of commercial development in the Process Systems Group of Air Products and Chemicals, Inc., in Allentown, Pennsylvania. At Air Products, he managed a broad spectrum of technology and commercial development activities. Much of that activity was focused in the areas of chemical reaction engineering and separations science. Asked about his accomplishments, Roberts said that he was proudest of his role in developing and commercializing a novel technology for debottlenecking Claus sulfur recovery plants that won the 1987 Kirkpatrick Chemical Engineering Achievement Award from Chemical Engineering magazine. Prior to joining Air Products, Roberts worked for Engelhard Minerals and Chemicals Corp., and for the Rohm and Haas Company.

In addition to his extensive industrial background, he has broad experience in teaching. He served as associate professor of chemical engineering and director of the Chemical Reaction Engineering Laboratory at Washington University (St. Louis), where he was named recipient of the Distinguished Faculty Award in 1971. He also taught chemical engineering at the Massachusetts Institute of Technology and has lectured at Lehigh University on catalysis and chemical reactor design.

Roberts earned his bachelor’s degree in chemical engineering at Cornell University in 1961 and his doctorate at the Massachusetts Institute of Technology in 1965. His leisure activities include skiing and sailboarding.

Scholarship Established to Honor Frank Seely

A Caldwell-Seely Alumni Scholarship has been established in honor of J. Frank Seely, Professor Emeritus of Chemical Engineering. The scholarship recognizes Frank’s many years of service to the University, the Department and its students. The initial endowment for the Caldwell-Seely Scholarship was provided by the Seely family.

After enrolling as a freshman in the fall of 1934, Professor Seely earned both undergraduate and graduate degrees from NCSU. His academic career began in the fall of 1941 and ended with his retirement in 1982 as an Alumni Distinguished Professor. Among his many honors were election as a Fellow of the American Institute of Chemical Engineers and appointment by the Governor of North Carolina to the State Board of Examiners of Plumbing, Heating and Cooling Contractors.

Additional contributions to the scholarship fund are welcomed and may be sent to the J. Frank Seely Scholarship Fund, NCSU Alumni Association, North Carolina State University, Box 7503, Raleigh, NC 27695-7503.

Dr. J. Frank Seely

Awards and Honors

The Department takes pride in the awards and honors given recently to its faculty and students:

Faculty
• Ruben G. Carbonell and Richard M. Felder were appointed Hoechst-Celanese Professors of Chemical Engineering, effective July 1989.

• Peter K. Kilpatrick was awarded the 1990 Alcoa Foundation Engineering Research Achievement Award.

• Michael R. Overcash received the Lawrence K. Cecil Award, AIChE’s highest environmental research honor, for his leadership in waste minimization research.

Graduate Students
• James Hunter received the 1990 E.M. Schoenborn Award for best research.

• James Dautenhahn and Nancy Lynch were awarded prestigious National Science Foundation Fellowships.

• Edward Wolfrum received the Dow Graduate Fellowship to recognize outstanding performance as a teaching assistant.

• John Weidner received two important awards from the Electrochemical Society, the Energy Research Summer Fellowship and the Battery Division Student Research Award.

Undergraduates
• The AIChE student chapter won the Outstanding Chapter award for the Southeastern Region. Peter K. Kilpatrick, faculty advisor, supported an “Officer Corps” consisting of Bedie Roberts, Theresa Cheek, Monica Little, John McLean, Renee Steelman, Marty Buchanan and Amanda Monroe.

• The AIChE student chapter won the annual Engineers’ Day competition

CONGRATULATIONS!
Alumni Information - Fall 1990

Name ____________________________________________

Home Address ______________________________________

Work Address _______________________________________

Tell Us About Yourself (What are you currently doing? What other CHE alumni do you work with or see? etc.) __________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Please Return this Form to: Dr. George W. Roberts
Department of Chemical Engineering
Box 7905
North Carolina State University
Raleigh, NC 27695-7905

Dr. George W. Roberts
Department of Chemical Engineering
Box 7905
North Carolina State University
Raleigh, NC 27695-7905

North Carolina State University is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, sex, age, or handicap. Moreover, North Carolina State University is open to people of all races and actively seeks to promote racial integration by recruiting and enrolling a larger number of black students. 3,000 copies of this public document were printed at a cost of $978.00.