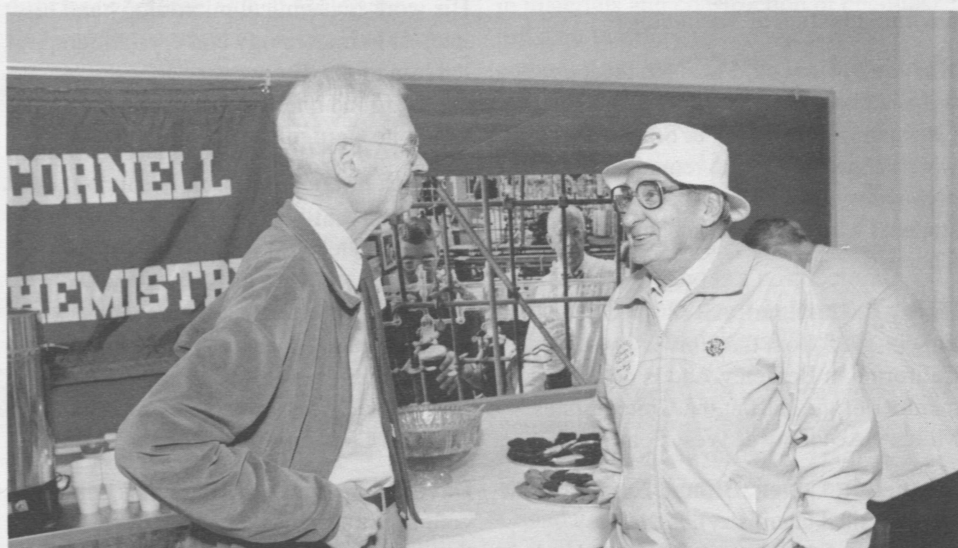


Cornell Chemistry

The Newsletter of the Department of
Chemistry at Cornell University and
the Society of Cornell Chemists

August 1990
Issue 48



Reunion 1990

George F. Polzer, Jr., chats with Professor Emeritus William T. Miller.

We were pleased to see those alumni who came to our open house during Reunion Weekend. **L.C. Cerny**, PhD '55, is now teaching at Utica College; **Phyllis Landau**, BS '65, works at Ciba-Geigy in Summit, NJ; **Walter J. Gadkowski, MD**, AB '65, is an anesthesiologist at Cape Cod Hospital in Hyannis, MA; **Sue Degerstrom Roberts**, AB '70, is a consulting chemist in the Mazama, WA area, where she and her

husband, Dick, operate a family-style lodge called North Cascades Basecamp (I took a brochure and started making plans); **William Brockway**, AB '51, has retired from DuPont and lives in Hagerstown, MD.

Charles Goss, AB '85, and his wife, Karen Weiner, AGR '85, stopped by to say hello. Charlie will receive his PhD in

chemistry this summer from the University of California at Berkeley, and will begin a postdoctoral position at the University of North Carolina at Chapel Hill in August; **George F. Polzer, Jr.**, BChem '40, MA '42, is now retired from WITCO and living in Redbank, NJ; and **Arthur E. Newkirk**, BChem '36, PhD '40, is now living in Schenectady, NY.

Arthur E. Newkirk reminisces with Professor Miller.



Alumni News

Phillip Adams, PhD '50, has been busy consulting in practical organic chemistry, especially for small manufacturers here and in India. He is living in Murray Hill, NJ.

Michael J. Albarelli, PhD '89, is a senior research chemist at Quantum USI in Morris, IL. Michael works on developing on-line analytical techniques for polymer process control. Michael and his wife, Barbara Plonski, have a daughter, Jaime Ann, born on April 14, 1990.

Paul Austin, PhD '30, spent 33 years working at DuPont and 22 years as a research professor at the University of Delaware, retiring in 1990.

Elliot Bergman, PhD '55, is Director of Chemical Research and Development at Griffin Corporation in Valdosta, GA. Elliot resettled in southeast Georgia in 1986 to direct chemical R&D, acquisitions, and patenting at America's oldest (55 years in 1990), fastest growing, privately owned agricultural chemicals company.

David Blain, PhD '86, is a research chemist for Mobil Research and Development in Paulsboro, NJ. He and Susan have two children, Jennifer (3), and Ezra (1). David visits us every year as a recruiter for Mobil.

Susan D. Boettger, PhD '79, is a senior research scientist with Bristol-Myers Squibb Co. in Syracuse, NY. She writes, "For the last two years I have been teaching a Zymark Laboratory robot how to set up and analyze organic reactions. I'm afraid Rex will perennially be in the 'terrible two's'— he never listens and always does exactly as he pleases!"

Donald B. Boyd, who was a postdoctoral associate with Roald Hoffmann, works at Lilly Research Laboratories in Indianapolis, IN. He has published a book, *Reviews in Computational Chemistry*, (VCH, NYC, 1990), covering all aspects of how computers are impacting chemical research.

Joseph H. Brant, PhD '35, lives in Hendersonville, NC, but anticipates a move in early 1991 to a new home in Columbus, NC. Dr. Brant's career included positions as a research scientist at Tennessee Eastman, director of research at Gillette and at Colgate Palmolive, and as a professor in the Textile School at the Georgia Institute of Technology.

Harvey F. Carroll, PhD '69, recently wrote a book, *Preview of General Chemistry*, John Wiley & Sons, (1989), which is designed for a remedial, or preparatory, course for underprepared students who want to take General Chemistry.

Harry E. Cartland, AB '80, received his PhD in 1985 from the University of California in Berkeley, and is now a member of the staff at the United States Military Academy at West Point, NY.

Stephen R. Cohen, BChem Eng '51, PhD '56 (physical chemistry), is the first scientific safety officer at the New York State Institute for Basic Research on Staten Island. He is also the radiation safety officer and head of the local division of the Public Employees Federation, a union of professional, scientific and technical civil service employees.

Todd H. Egener, MD, AB '84, graduated from Cornell Medical College, and is now an anesthesiology resident at Beth Israel Hospital.

William Howlett Gardner, BChem '23, PhD '27, retired from Allied Chemical Company in 1967. His father, **William**, graduated from Cornell in 1880, and his son, **Merritt**, received his AB degree here in 1956. Dr. Gardner remembers that he met Ezra Cornell's daughter at German Tea while taking his PhD. Dr. Gardner was editor-in-chief of the 1922-23 *Cornell Chemist*, and was elected a member of the Cornell Chapter of Sigma Xi in 1934.

Lowell Garner, MD, AB '76, is an anesthesiologist living and working in Ithaca.

Victor J. Hrubby, PhD '65, is a Regents Professor of Chemistry at the University of Arizona. He received the honorary degree,

Doctor of Science, from the Free University of Brussels in May 1989.

Francis T. Jones, PhD '34, lives in Berkeley, CA. He was an assistant in qualitative analysis with Professor Nichols, and assisted in summer school chemical microscopy with Professor Mason in 1937. His work in chemical microscopy and his interest in mineralogy and crystallography led him to the discovery of Jonesite, a crystal found on blue-schist at the Benitoite Gem mine in San Benito County, CA.

Zafra Lerman, who was a postdoctoral associate with F.A. Long from 1969-73, received the National Catalyst Award of the Chemical Manufacturers Association for distinguished teaching of chemistry. She is currently chair of the Science and Mathematics Department at Columbia College, Chicago.

David M. Lubman, AB '75, has edited a volume entitled *Lasers and Mass Spectrometry*, Oxford University Press, 1990. Lubman, who received his PhD from Stanford University in 1979, is an associate professor at University of Michigan at Ann Arbor.

Craig C. Martens, PhD '87, is an assistant professor of chemistry at the University of California at Irvine. He was named an NSF Presidential Young Investigator for 1990.

Ted M. McKinney, PhD '65, is an independent consultant for Rockwell International Science Center, and lives in Riverside, CA. He co-authored (with Ira B. Goldberg) a monograph on Electron Spin Resonance that was published in volume III B of *Physical Methods of Chemistry* in 1989.

Salvatore A. Moscatello, AB '80, is a staff physician in osteopathy with The Medical Group in Kennebunk, ME.

Michael Nancollas, AB '81, is a resident physician in the department of orthopaedic surgery at SUNY Buffalo Affiliated Hospitals, and lives in Williamsville, NY.

Allen W. Nicholson, AB '75, is an assistant professor in the Department of Biological Sciences at Wayne State

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Alumni News

University. He received his PhD from the University of Pennsylvania in 1981.

Allen's research is in the areas of RNA processing and gene regulation, and the structure and function of viral protein kinases.

John C. Owicki, PhD '77, is now the director of cell research at Molecular Devices Corporation in Menlo Park, CA.

Daniel H. Rich, PhD '68, received the 1990 Vincent du Vigneaud Award for Peptide Research, sponsored by BACHEM, at the Peptide Gordon Conference held in Ventura, California, last February. He is currently a professor of chemistry and medicinal chemistry at the University of Wisconsin at Madison.

John E. Roberts, PhD '47, has retired from the University of Massachusetts. He married Marjorie H. Beck on October 9, 1988, and lives in Keene, NH.

Richard M. Roberts, AB '33, PhD '38, is living in Berkeley, CA, where he is retired, but still works on chemistry at home. He was previously associated with Allied Chemical Company and Shell Development Company, and had been an assistant to Dr.

George Kistiakowski at Harvard and an assistant professor of physical chemistry at Cornell.

Walter Lee Sheppard, Jr., BChem '32, received his MS in 1933 from the University of Pennsylvania. He is now living in Havertown, PA, and serves as a consultant in materials and construction of chemical resistant masonry structures. He is the author of the *Handbook of Chemically Resistant Masonry* (1976, 2nd ed. 1982), Marcel Dekker, NYC, and *Corrosion and Chemical Resistant Materials Handbook*, (1986), Noyes pubs., Park Ridge, NJ.

Kevin R. Shoemaker, AB '82, lives in Brookline, MA and is a postdoctoral associate in the biology department at the Massachusetts Institute of Technology.

Robert A. Stairs, PhD '55, has just been named Professor Emeritus in the Department of Chemistry at Trent University, Peterborough, Ontario, Canada.

Arthur J. Taggi, PhD '72, is a group leader at DX Imaging in Lionville, PA, and lives in Hockessin, DE. He writes, "My son, Christopher, who was born in Ithaca

before I finished my degree, will return in September as a freshman in the College of Arts and Sciences (but not chemistry!)."

Charles O. Willits, MS '26, PhD '33, who lives in Medford, NJ, reminds us that his wife, **Mildred F. Button**, also received an MS in sanitary chemistry in 1926. In previous correspondence with us, Dr. Willits mentioned that a third person, **Miss Constance Brown**, also received an MS degree in sanitary chemistry that year. To the best of our knowledge, Miss Brown is living in Burlington, Vermont.

Alumni Deaths

George W. Pawel, BChem '11, May 6, 1990.

Marshall J. Walker, BChem '33, MA '36, October 29, 1989

Willie Joe Frierson, PhD '36, May 10, 1989.

Samuel Reiser, BChem '36, October, 1989.

Ralph Connor, a faculty member from 1932 - 35, May 1, 1990.

Letter From the Editor

Dear Alumni and Friends:

We have received 148 replies to the survey included in the May 1990 Chemistry Newsletter. That represents a 4.8% return on the 3,074 newsletters mailed out. Most of you asked for more news about alumni, and many of you want to see more news about the research going on in the department. We've included all the alumni news we can fit in this issue, while it's still fresh. In the next issue, we'll return to our regular format, in which we feature the research of one or two groups in the department, in addition to alumni, faculty and student news. Please notice that we're publishing just one newsletter again, since most of you are interested in both undergraduate education and graduate and faculty research. We like to hear from you. We depend on you to keep us informed about your change of address, new jobs, honors and awards, and anything else you want to share. Thank you for keeping in touch with us.

Donna Middleton, Editor

The Society of Cornell Chemists asks you to support the cost of printing and mailing this Newsletter with your voluntary, annual dues of \$10. Make your 1990 check payable to "Cornell Chemistry" and mail it to The Society of Cornell Chemists, G-03 Baker Laboratory, Department of Chemistry, Cornell University, Ithaca NY 14853-1301

Department News

Clardy Receives Clark Award and Horace White Professorship

Professor Jon Clardy, chair of the Department of Chemistry, has been honored by the College of Arts and Sciences with a 1989-90 Clark Distinguished Teaching Award.

The award is funded by a grant from the John M. and Emily B. Clark Fund. Its recipients are chosen for their devotion to teaching, classroom presence, student counseling, and for their involvement in the development of new courses.

Six chemistry professors have been named as recipients of the award since it was established in 1965. Previous winners were professors Ben Widom (1972-73), G. Marc Loudon (1975-76), Robert Fay (1979-80), Michell Sienko (1980-81), and Bruce Ganem (1985-86).

Professors Widom, Fay, and Ganem nominated their colleague, noting Clardy's accomplishments as a lecturer in Chem 207 and Chem 359 as well as his involvement with chemistry majors and his activities as a faculty fellow on West Campus. They particularly emphasized his ability to present difficult, abstract concepts in a clear fashion, and said that his exams make students think, not panic.

The university trustees have named Clardy a Horace White Professor of Chemistry. Horace White, a nephew of Andrew Dixon White and a Cornell alumnus, left a large part of his estate to Cornell University for the purpose of endowing the salaries of "members of the faculty...who have rendered distinguished services or who may be of great value to the University..."

We congratulate Jon for both honors, and wish him many more years of distinguished teaching and research.

Chemistry Course - Adult University

Howard Schloss, AB '54, said on his alumni survey form, "I would like to see a chemistry course offered in the summer alumni program. A biochemistry course or something related to Dr. Meinwald's activities in connection with the environment would be of great interest." Well, as it happens, the people who planned the 1990 Cornell Adult University had the same idea, so professors Jerrold Meinwald and Frank DiSalvo led a course entitled, "The Chemistry of Nature and the Nature of Chemistry" from July 8 - 14.

Class participants were not required to have a background in chemistry, but a good complement of curiosity was definitely a prerequisite. Each morning there were two lecture/demonstration/discussion sessions, while afternoons, from 1:30 to 3:30, were devoted to hands-on laboratory experiments. Meinwald and DiSalvo led the class through exercises like extracting organic compounds from plants and making superconductors.

Guest speakers for the week included Professors Chris Ober, from the Department of Materials Science and Engineering, who discussed polymers; Harold A. Scheraga, a member of the chemistry faculty, who talked about the clotting of blood; and David Harpp, from McGill University, who helped the class explore the issue of society and chemistry. (Harpp will return to campus next spring to teach an undergraduate course dealing with the same subject. Watch for an article in the next newsletter.)

In the end, not only did the class participants say they'd do it all again, Meinwald and DiSalvo were equally enthusiastic. You can look forward to more chemistry offerings in the CAU programs of the future.

Pew Symposium

At a Pew Symposium held on the Cornell campus June 17 - 19, **Jerrold Meinwald** delivered an address entitled "A Radical Approach to Teaching Chemistry: From the Chemistry of Nature to the Nature of Chemistry." Symposium participants from Barnard College, Colgate University, Cornell University, Hamilton College, Manhattan College, St. Lawrence University, and Union College were in Ithaca to discuss "Teaching Strategies in the Sciences." The symposium was sponsored by a grant from the Pew Charitable Trusts, which funds the Pew Program in Undergraduate Science Education.

ACS Meeting

Cornell Chemistry will sponsor a continental breakfast at the 200th National ACS Meeting in Washington, D.C., at 8 a.m. on Tuesday, August 28 in the Wilson Room of the Grand Hyatt Hotel. Please check the July 9th edition of *C&E News* for information about how to buy your tickets in advance. Ticket price will be \$5.00.

1990 Baker Lectures

Professor **Ryoji Noyori**, the director of the Chemical Instrument Center at Nagoya University, will be the **Fall 1990 George Fisher Baker Non-resident Lecturer in Chemistry**. Noyori will be at Cornell from September 18 through October 23, giving lectures each Tuesday and Thursday at 11:15 a.m. in Baker 119. The general topic of the lectures will be "High-Performance Organometallic Reagents in Asymmetric Synthesis."

Undergraduate Student News

Chemistry Convocation

The first annual Chemistry Department Convocation and Award Ceremony took place on April 20, 1990, in Baker 200.

Professor Robert Fay presented awards for junior and senior chemistry majors and Professor John McMurry awarded the sophomore and introductory chemistry awards. Professor Jon Clardy presented certificates of recognition to Fernando Torres for receiving the NSF Incentive for Excellence Award and to Sydney Morss who received an ACS Regional Scholarship.

The program ended with some of the student's favorite laboratory demonstrations from introductory chemistry, presented by Professors Peter Wolczanski and Jon Clardy, assisted by Laboratory Coordinator John Terry.

The American Institute of Chemists Medal Award was presented to **Jeehuin Lee**, a senior chemistry major who has a demonstrated record of leadership, ability, character, and scholastic achievement.

The George C. Caldwell Prize was awarded to **Jeehuin Lee** and **Sydney Morss**, two senior chemistry majors who have shown general excellence in chemistry.

The Merck Index Award was presented to **Roger Chin** and **Kathryn Conser**, who were outstanding students of the senior class, majoring in chemistry.

The ACS Analytical Chemistry Prize was awarded to **Alisa Alma** and **Yoko Kato**, students who have completed their third year of undergraduate study and display an interest in, and aptitude for, a career in analytical chemistry.

The Harold Adlard Lovenberg Prize was awarded for general excellence in chemistry to **Jeffrey Snyder**, a junior chemistry major.

The CRC Press Award was presented to outstanding sophomore chemistry majors **Woojin Chon**, **Michael Crowley**, **Kimberly Joyal**, and **Alice Mauskopf**.

The A.W. Laubengayer Prize was awarded to the best students in introductory chemistry, **Amy Hirshfield**, **Leonard Jutkowitz**, **Jeffrey Karlin**, and **Amy Zarrin**.

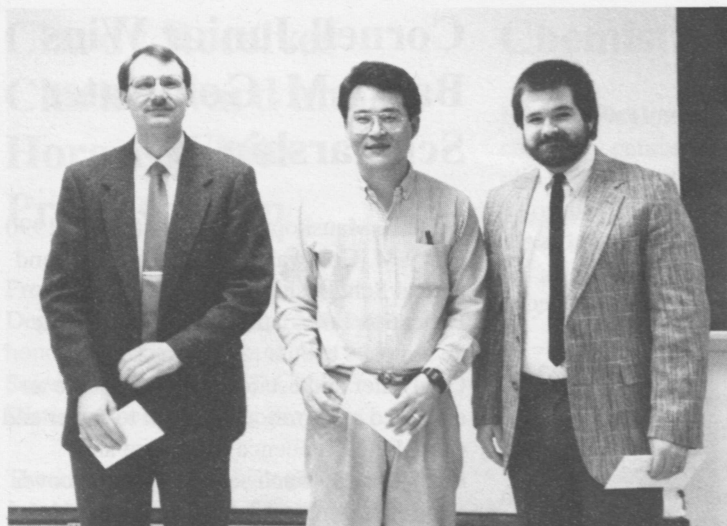
Cornell Junior Wins Barry M. Goldwater Scholarship

Alice E. Mauskopf has been named a 1990 Barry M. Goldwater scholar in the second annual Scholarship and Excellence in Education Foundation competition. The award pays tribute to Senator Barry Goldwater and establishes in his name an endowed recognition program to foster and encourage excellence in science and mathematics. Each scholarship will cover eligible expenses for tuition, fees, books, and room and board, up to a maximum of \$7,000. The award is given to juniors who are planning to pursue careers in mathematics or the natural sciences. Mauskopf was one of 93 awardees out of 650 juniors nominated nationwide.



Professor McMurry awarding Amy Zarrin the Laubengayer Prize.

Graduate Student News



Left to right: Jon Stewart, Yeon Kyun Shin, and Doug Hudgins

Graduate Women in Science Award

Deborah Vennos, a second year graduate student with Professor Frank DiSalvo, was the second place winner in the 1990 Graduate Women in Science Award for Excellence Competition. Vennos and **Ah-Wing Chan**, a fourth year graduate student with Roald Hoffmann, were chosen as finalists after submitting abstracts of their research projects to a panel of professionals in fields represented by all the contestants. First place winner was Adele Turzillo, from the College of Veterinary Medicine.

The competition was sponsored by the Alpha Chapter of Sigma Delta Epsilon/ Graduate Women in Science. Applications were submitted by graduate and undergraduate women from Cornell University, Ithaca College, and Wells College.

Outstanding Graduate Student Symposium

The 1990 Wentink Symposium to honor outstanding graduate students took place on February 9. The Wentink Prize is awarded each year to graduate students who have distinguished themselves both academically and in the quality and quantity of their research. This year's recipients of the award were **Douglas Hudgins**, in his fourth year with Professor Richard Porter; **Yeon Kyun Shin**, in his fifth year with Professor Jack Freed; and **Jon D. Stewart**, in his fourth year with Professor Bruce Ganem.

Fellowships Awarded

Kent D. Henry, in his fifth year of study with Professor Fred McLafferty, received a 1990 summer fellowship from the ACS Analytical Division. The fellowship is sponsored by the Society of Analytical Chemists of Pittsburgh.

Graduate student **Bradford D. Pendley** was one of 10 teaching assistants in the College of Arts and Sciences to win the 1989 Clark Award for Distinguished teaching. In addition Brad was selected to receive a 1990-91 academic year fellowship from the ACS Analytical Division. The fellowship is sponsored by E.I. du Pont de Nemours Company, Inc. Brad is beginning his fourth year as a member of Professor Héctor Abruña's research group.

Paul Rauch, a fifth year student with Professor Frank DiSalvo, has been named the Mobil Fellow for 1990-91.

Duane Smith, who is completing his PhD work with Professor Paul Morrison, was chosen to be the Procter & Gamble Fellow for 1990-91.

Mark Banaszak Holl, who is beginning his fourth year of study with Professor Peter Wolczanski, has been awarded an IBM Graduate Fellowship for the 1990-91 academic year.

Wachter Prize

The 1990 Howard Neal Wachter Memorial Prize was awarded to **Alan Walsh**, a graduate student who is completing his third year with Professor Roger Loring. The prize is given in recognition of outstanding work in physical chemistry. Howard Neal Wachter was a graduate student here in the early 1970's who died in 1975, following a long and courageous fight against cancer. The prize was established by his family in 1985.

Graduate Student News

Doctor of Philosophy Degrees Conferred

August 28, 1989

Michael Albarelli, (thesis adviser Professor H.D. Abruña); **Walter Ausserer**, (G.H. Morrison); **Steven Baxter**, (P.T. Wolczanski); **Dan Bernardo**, (G.H. Morrison); **Russell Dushin**, (J.E. McMurry); **Ying Jiang**, (J.M.J. Fréchet); **Thomas Long II**, (R. Plane); **Karin Musier-Forsyth**, (G.G. Hammes); **David Neithamer**, (P.T. Wolczanski); **Rachel Ogorzalek**, (P.L. Houston).

January 17, 1990

Suzanne Buchau, (thesis adviser Professor R.F. Porter); **Charles Davis**, (G.G. Hammes); **Jing Li**, (R. Hoffmann); **George McBane III**, (P.L. Houston); **Bharati Mitra**, (G.G. Hammes); **Nick Nikolaidis**, (B. Ganem); **Chan Park**, (J.R. Wiesenfeld); **Jay Trautman**, (A.C. Albrecht); **Evan Williams**, (F.W. McLafferty).

May 27, 1990

David Campbell, (thesis adviser Professor D.A. Usher); **John Cleveland, Jr.**, (P.L. Houston); **Mark Dugan**, (A.C. Albrecht); **Stanton Loh**, (F.W. McLafferty); **Jeffrey Myers**, (B.A. Baird); **Douglas Pearson**, (J. Meinwald); **John Protasiewicz**, (K.H. Theopold); **Kenneth Pryse**, (E. Elson); **Deborah Robertson**, (B.A. Baird); **Shawn Sendlinger**, (K.H. Theopold); **Binhuang Wang**, (F.W. McLafferty).



Jing Li and Professor Frank DiSalvo at the Commencement Reception held on the Baker Lawn.

Left to right: John Townsend, Sam Boorse, Stephanie Smith, Chris Phelan and Richard Bretz

DuPont Teaching Prizes

The 1990 DuPont Teaching Prizes were awarded during the General Chemistry Colloquium on May 3, 1990 by department chair Jon Clardy. The prize is given to outstanding teaching assistants, who help to maintain the excellence of the department's undergraduate instructional program. This year's winners were **Sam Boorse**, **Richard Bretz**, **Chris Phelan**, **Stephanie Smith**, and **John Townsend**. All recipients were in their second year of graduate study.

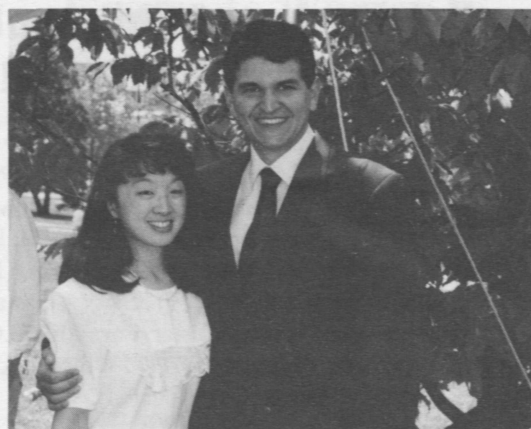


Commencement 1990

Welcome Cornell's Newest Alumni!

The 122nd commencement took place on May 27, 1990. After the ceremonies at Schoellkopf, the graduates came to Baker for their diplomas and an informal reception. Since it never rains on commencement, we held the reception outside, and as tradition would have it — another sunny day! The following received the degree Bachelor of Arts:

Peter Adams, Anthony Brown*, Minh Hang Chau, Wei Chen Cheng, Roger Chin*, Parag Chokshi, Kathryn Conser**, Jeffrey Emerson*, Christopher Gee, Andrew Guzelian**, Paul Hinkle, Hae-Ok Kim, Sandeep Laumas, Eugene S. Lee, Jeehiun Lee***, Matthew Lipson, Angus Lo, Carole Moran, Sydney Morss***, James Rallis, Nicholas Rodak*, Andrew Scribner*, Ken Shimizu*, Eric Skolnick**, Fernando Torres, W. David Wallace, Fred Wang, David Yeh*, and Ka Sin Yeung.**



Jeehiun Lee and Fernando Torres

* - *Cum Laude*, ** - *Magna Cum Laude*, *** - *Summa Cum Laude*

Michael Buenafe, Marc Goldschmidt, Andrea Roberts, and Jerel Saito received their Bachelor of Arts degrees in January 1990.



Sydney Morss and her father, Lester.



Carole Moran with Professor Jean Fréchet and Mrs. Moran.

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