Message from the Department Head

I would like to extend a warm welcome to all our students for the new academic year. We are particularly excited with the sophomore class and the new graduate students who have joined our program. We have 70 sophomores and 34 new graduate students (20 Ph.D., 14 Masters) an all-record high over the last four years. We hope that our department will not only meet, but will exceed your expectations. I would also like to welcome the exchange students and the visiting researchers with whom we look forward to interact.

I have the pleasure of announcing that the final report that we received from ABET was extremely strong and positive. ABET was impressed by the quality of our students and program and dedication of our faculty. Thanks for all the students, faculty and especially Professors Myung Jhon and Bob Tilton for helping us in this evaluation. As a result, ABET has granted accreditation to our program for the next six years.

I am also very pleased to announce that Professor Lee White has been selected for the Thomas Baron Award from the Particle Technology Form of AIChE. This award joins the string of recent awards received by our faculty (two NSF Career Awards for Professors Jim Schneider and Lynn Walker; Sloan Research Fellowship for Professor David Sholl; McAfee AIChE Award for Professor Larry Biegler; Kun Li Award for Professor Gary Powers). All these awards are a clear recognition of the high quality of our faculty.

We have the pleasure of welcoming back Professor Mike Domach from his sabbatical leave at the National Science Foundation. We also welcome Justin Dawber, our new Computer Manager who replaces Tom Holtz, who has finished his MBA and joined Bristol-Myers Squibb. Also, a warm welcome to Linda Dorsey who has taken the position of Graduate Admissions Coordinator.

Over the summer we saw the completion of the renovation of the CPS Lab on the 3rd floor, which was made possible with a generous donation of $500,000 from the PPG Foundation. Also, in June we reached our $1 million goal of the Chemical Engineering Campaign which was aimed at undergraduate scholarships and graduate fellowships. The success of this campaign has been possible due to the strong support of our loyal alumni. You may have also seen the renovation that is taking place in the second floor for the new Biomedical and Health Engineering wing, which is being headed by Professor Todd Przybycien from our department. You should also know that the University is undertaking a $25 million project for the new science labs that are being built between Doherty Hall and Wean Hall. The new labs are scheduled to be completed in the Fall of 2003. We certainly welcome this development as it will benefit our chemical engineering students in the Chemistry lab courses.

An important event this semester will include the Toor Lecture by Dr. Al Lopez from ExxonMobil on September 27. Another important event will be the CHEGSA Symposium that will feature Professor Ed Cussler from the University of Minnesota as a speaker. Professor Cussler was a faculty member of this department from 1967 to 1980. You will find out that he is an outstanding speaker. I hope you enjoy reading the write-up by Professor Erik Ydstie, the faculty member who we are featuring in this issue.

I very much hope that you all have a great semester!

Ignacio E. Grossmann
**Department News**

The 2001 Herbert L Toor Chemical Industry Lectureship is proud to have Dr. Alfredo M. Lopez, Vice President of Research and Development at ExxonMobil Research and Engineering Company, speak on “Innovation Processes Provide Competitive Advantage in the Petroleum Industry” on September 27, 2001, from 4:00- 5:00 p.m. in the Singleton Room, Roberts Engineering Hall.

The Center for Complex Fluids Engineering hosted the 75th American Chemical Society Colloid and Surface Science Symposium, June 10-13, 2001, bringing 569 international scientists and engineers to the Carnegie Mellon campus. This annual symposium is the premier conference in this important field that serves a wide variety of technologies, from pharmaceuticals and drug delivery devices to “genetic labs on a chip,” high definition display technologies, and future nanotechnologies. The Symposium was co-chaired by Chemical Engineering Professor Bob Tilton and Physics Professor Steve Garoff. This was an outstanding multidisciplinary team effort. Individual technical symposia were organized by Chemical Engineering Professors Lynn Walker, Andy Gellman, Jim Schneider, David Sholl, Lee White, Dennis Prieve, and researcher Ana Morfesis. CMU faculty from other departments organized symposia as well: Bob Suter (Physics), Fred Lanni (Biological Sciences) and David Dzombak (Civil and Environmental Engineering), as did scientists, including several alumni, from 15 other universities. Many thanks go to Dr. Annette Jacobson and CPS instructor Rose Frollini who organized both the Symposium Banquet, held in the majestic Hall of Music Foyer of the Carnegie Museum, and the Open House in the newly renovated CPS Lab.

We can be particularly proud of our graduate and undergraduate students who volunteered as session aides and were widely praised for their professionalism. Ray Dagastine deserves special recognition for his fine work developing and managing the symposium website. By all accounts, the 75th Colloid and Surface Science Symposium was a tremendous success that we hope will bring greater recognition to Carnegie Mellon’s leadership position in this highly interdisciplinary field.

The CPS Program continued its active Outreach Program this past summer. Along with other CIT faculty, they participated in the Society of Women Engineers "Engineering Your Future" program for girls ages 12 -15. CPS's topics this year included Macromolecules in Food and Toys and Soap Manufacturing and Product Evaluation.

Three presentations were given for the Governor's Institute for Physical Science Educators (GIPSE) sponsored by the PA Dept. of Education and hosted by MSC. Approximately 50 K-12 teachers attended this two week residential program. CPS's sessions were Polymer Workshop, Molecular Art, and Forensic Science.

The next Outreach programs will be SWE’s "High School Day" in October and National Chemistry Week at the Carnegie Science Center in November. Volunteers, both students and faculty, are always needed. If you are interested in participating, please contact Dr. Annette Jacobson or Rosemary Frollini for more information.

The Short Course “Conceptual Design, Optimization and Process Operations” was offered by Professors Biegler, Grossmann and Westerberg on June 21-27, 2001. Twelve participants from the US and several countries attended this course.
**Faculty News**

**Welcome Back from Sabbatical to Mike Domach** who was working as Program Director in the Bioengineering and Environmental Systems NSF in Washington, D.C. and to Art Westerberg who traveled to Norway.

**Congratulations to Professor Lee White** for having been selected for the Thomas Baron Award in Fluid-Particle Systems by the Particle Technology Forum of AIChE. He will receive the award at the AIChE Meeting in Reno.

**Congratulations** to **Gary J. Powers** who received the Kun Li Award for Excellence in Education at the 2001 Commencement ceremony. The Kun Li Award has been established to promote excellence in teaching in chemical engineering, and to recognize Emeritus Professor Kun Li who taught in the department from 1962 to 1988.

**Welcome to Professor Ricardo Perez** from Universidad Catholica in Santiago, Chile. Professor Perez will be visiting for one year and collaborating with Professor Larry Biegler.

**Staff News**

Welcome to the department **Justin Dawber**, Computer Manager , who is located in A225.

Welcome to the department **Linda Dorsey**, located in DH 3114, as the Graduate Admissions Coordinator and assistant to Professors White, Sholl, Przybycien, Domach, Jacobson.

Congratulations to **Toni McIlhrot** who has been elected by Carnegie Mellon staff to be a representative of Staff Council for the August 2001 to August 2003 term.

**Undergraduate News**

**Chemical Engineering Alumni Scholarships.**

**Congratulations** to the following recipients:
Gregory Allen
Rebecca Gerard
Benjamin Karlow
Brendan Mack
Mithun Shenoi.

**Congratulations** to **James Tseng**, who won the "Co-Op of the Semester" Award at AMD this semester. He is going to continue his internship in the fall in a wafer fab support position.
Exchange Program  - A Study Abroad Perspective
by Meaghan Kelly

There was something about studying abroad that always appealed to me. It was most likely the thoughts of learning a second language, traveling, and escaping the typical American college lifestyle, that influenced my decision to study in Germany. Having now experienced a year in a German university, I would have chosen to study abroad for many other reasons.

While living in Aachen, Germany and studying at RWTH, one of the finest institutions in the world, I lived a year in the life of a German chemical engineering student. At the beginning of term, I attended classes probably not understanding seventy percent of the lanaguage. By the third month of class I was understanding the vocabulary and was able to participate in the classroom environment.

Not only did I learn the language by being placed in a "sink or swim" situation, but I really learned the engineering subject matter. In Germany, professors expect you to fully utilize your resources and learn most of the material independently. By this I mean that there is no graded homework and only one exam is the grade determining factor. I think being afforded the opportunity to be responsible for my own education and learning at my own pace was a great advantage.

In terms of my everyday life, I lived in an apartment with three other German students, which also helped me improve my German. Studying at RWTH and taking language courses with many European exchange students, I found myself integrated into their group and learned about other cultures in the region. Typically, I had time to practice my German and socialize with friends three out of the five weeknights. Many weekends and holidays were spent traveling to nearby countries such as France, Belgium, Italy, Austria, and the Netherlands.

Though it was important for me to study abroad for my own growth and maturity, it was just as important for the personal development of the Germans and other nationalities that I met. It was beneficial for those that I worked with and socialized with to realize that foreigners were not a certain way as dictated by stereotypes of their respective countries. I only hope that those I met learned as much from me as I did from them. Being thrown into a new culture does something positive to you that I cannot fully explain. Though I had some initial fear of learning the language, these feelings quickly disappeared, as interacting in German and a new dynamic became my daily life.

TOC Breakfast
The TOC Breakfast for seniors and potential employers is scheduled for September 25, 2001, at 8:00a.m in the Rothfus Lab. Information on the TOC and list of companies seeking chemical engineers can be found in http://www.cmu.edu/toc/

Undergraduates who are interested in research opportunities in the department should contact Dr. Annette Jacobson. Dr. Jacobson’s office is DH 3102B, or e-mail at jacobson@andrew.cmu.edu.
Members of SAC – Student Advisory Council

**Sophomores:** TBA

**Juniors:** Ali Berliner, John Coleman, Alex Perry

**Seniors:** Alex Meyer, Prabhath Nanisetti, Eloissa Wells

**Officers of AIChe Student Chapter**
(American Institute of Chemical Engineers)

**AIChe Officers:**

President: Sini Jacob  
Vice President: Christian Koschil  
Treasurer: Earl Solis  
Industry Liaison: Alex Meyer  
University Liaison: Chris Csider  
Social Chair: John Coleman  
Sophomore Representative: Alex Welander

**Faculty Advisor:** Jim Schneider

**Placement statistics for the 2001 Senior Class was as follows:**
The average starting salary was $53,782. The high was $62,000 and the low $38,000

**Seniors were hired by the following companies:**

<table>
<thead>
<tr>
<th>Company</th>
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<th>Company</th>
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<tr>
<td>Accenture</td>
<td>Dupont</td>
<td>Lubrizol</td>
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<tr>
<td>African Inland Missions</td>
<td>Eastman Kodak</td>
<td>Merck &amp; Co. (2)</td>
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<tr>
<td>Air Products</td>
<td>Enron</td>
<td>Procter &amp; Gamble</td>
</tr>
<tr>
<td>Bank of America</td>
<td>ExxonMobil (2)</td>
<td>Putnam Investments</td>
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<tr>
<td>Securities</td>
<td>Ford Motor Company</td>
<td>Raytheon Systems Corp.</td>
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<tr>
<td>BOC</td>
<td>Immunix</td>
<td>SAIC</td>
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<tr>
<td>Bristol Myers Squibb</td>
<td>Intel (2)</td>
<td>Schlumberger</td>
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</tbody>
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**The class of 2001 went to the following graduate schools:**

Berkeley CMU (2) George Mason – Law George Washington - Law
Congratulations to the following students who were on the CIT Dean’s List for Spring 2001:

**SENIORS**
Joyce M. Boss  
Stacey L. Carothers  
Sarah K. Dence  
Thomas E. Hewitt III  
Christian D. Koschil  
Heather D. Leifeste  
Ann Chi Lin  
Eric D. Miller  
Simin Ong  
Rohit U. Rao  
Jerome Sauser  
Lutz Schapp  
Prateek P. Shah  
Zachary Smith  
Katrina L. Snell  
Eloissa D. Wells  
Sara M. Royce  
Alexander B. Smith  
Earl Osman P. Solis  
Elizabeth J. Williams

**SOPHOMORES**
Benjamin S. Anderson  
Zachary T. Britton  
Eveline I. Chao  
Mary E. Chopard  
Michael W. Danielson  
Tim L. Donegan  
Jarett L. Feldman  
Rebecca D. Gerard  
Matthew E. Helgeson  
Mariel A. Hosier  
Kristopher E. Howard  
Benjamin A. Karlow  
Brendan C. Mack  
Lam A. Mays  
Sung June Park  
Parag P. Shah  
Mithun Kumar M. Shenoi  
Gregory L. Szeto  
Derek S. Underwood  
Adam Michael Welander

**JUNIORS**
Jennifer L. Airone  
Brian C. Baker  
Anthony G. Balducci  
Christopher J. Csider  
Jordan Green  
Hanyong Lim  
Aarian S. MacDonald  
Christopher R. Pierce

Welcome to our Sophomore Class!

Ashraf Abu-Akeel  
Gregory Allen  
Benjamin Anderson  
Simana Basu  
Vishal Berry  
Robert Blaney  
Eric Boudreaux  
Lisa Branden  
Zachary Britton  
Daniel Caballero  
Lisa Campus  
Eveline Chao  
Mary Chopard  
Steven Clifford  
Brian Cloutier  
Michael Danielson  
Kofi Darkwa  
Daisy Digmanese  
Corey Dixon  
Tim Donegan  
Elizabeth Durfee  
Jonathan Fasson  
Jarett Feldman  
Carla Fereday  
Rebecca Gerard  
Mark Goldman  
Seung Han  
Matthew Helgeson  
Bri-Mathias Hodge  
Rachel Holbrook  
Luke Holbrook  
Mariel Hosier  
Janice Hou  
Kristopher Howard  
Daniel Jimenez  
Benjamin Karlow
Chris Kay
Ameet Kulkarni
Moha Kulkarni
Victor Lee
Belinda Lee
Brian Leukart
Carl Lindahl
Brendan Mack
Lam Mays
Dale Min
Chelsea Monty
Allison Muehe
Jonathan Ng
Michelle O'Malley
Seung Jun Oh
Sara Ohanessian
Martha Ottenberg
Sung June Park

Tamika Perry
Margrit Rosado
Luke Schwartz
Parag Shah
Mithun Kumar Shenoii
Kurt Sieber
Danyelle Sinclair
Gregory Szeto
Derek Underwood
Priyanka Vaddi
Laura Vaillancourt
Adam Welander
Aaron Welsh
Hann-Chung Wong

Exchange Program Participants
Good luck to our students, Jordan Green, Arun Wahi and Wai Yip who have traveled to Imperial College and James Wertman who traveled to Aachen University for their junior year.

Welcome to our Exchange Students!
Imperial College, London
Eng Dih Teo
Sunil Patel
Jiun Tan

RWTH Aachen University, Germany
Clemens Fritzmann
Korbinian Krämer

ITESM – Monterrey Tec, Mexico
Gustavo Fimbres

Exchange Program Deadline
The deadline for submitting applications to participate in the exchange program is January 15, 2002. Note this is the Tuesday after winter break is over. Stop by Elizabeth’s office in DH 1101 to pick up an application packet. Information about the exchange program can be found on the chemical engineering undergraduate web site at http://www.cheme.cmu.edu/ugrad/

PISCES—Practical Internship for senior Chemical Engineering Students
Welcome Back to last year’s PISCES participants: Sam Byun – IBM; Seth Knaebel – Bayer and Jake Williams – IBM.

Good Luck to this year’s participants: Betty Huang at Bristol-Myers Squibb and James Tseng at AMD.
Graduation 2001 Awards

The Mark Dennis Karl Outstanding Teaching Assistant Award recipient was Daniel Milam.

AIChE Professional Promise Award was presented to Vanessa Dorn.

Ken Westerberg Award was presented to Wan-Yu Rengie Chan. The memorial fund "The Ken Westerberg Memorial Prize for Excellence in Chemical Engineering Research" has been established by our department with a generous contribution from Aspen Technology. This prize will be presented every year during the departmental graduation ceremony to a senior who has shown exceptional promise for research in chemical engineering. This prize has been established in the memory of Ken Westerberg who died of Leukemia at the very young age of 35. Ken was the son of Art & Babara Westerberg

Geoffrey D. Parfitt Award for Excellence in Research was presented to Joy C. Appel.

American Institute of Chemists Foundation Award “For Ability, Character, Scholastic Achievement and Potential” was presented to Matthew R. Strohl.

Carnegie Mellon McCabe Society honors the memory of Warren McCabe, one of the great leaders in this department’s history, by recognizing students who show an unparalleled dedication to their community. The inductees from the Class of 2001 are: Cindy Echevarria; Amy Lin; Sakeithia C. Mason; Michael J. Pignatiello; Jaimin B. Shah; Alyssa A. Werthman

Graduate News

Welcome to our new graduate students!

<table>
<thead>
<tr>
<th>Ph.D. Students</th>
<th>UG School</th>
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<tbody>
<tr>
<td>Michael Bartkovsky</td>
<td>University of Pittsburgh</td>
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<tr>
<td>Michael Gerber</td>
<td>North Carolina State University</td>
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<tr>
<td>Sartaj Ghai</td>
<td>I.I.T., Delhi</td>
</tr>
<tr>
<td>Soumitra Ghosh</td>
<td>I.I.T., Kharagpur</td>
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<tr>
<td>Qian Guo</td>
<td>Beijing University of Chemical Tech.</td>
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<tr>
<td>Shivakumar Kameswaran</td>
<td>I.I.T., Madras</td>
</tr>
<tr>
<td>Carl Laird</td>
<td>University of Alberta</td>
</tr>
<tr>
<td>Min Luo</td>
<td>Tsinghua University</td>
</tr>
<tr>
<td>Marvi Matos</td>
<td>University of Puerto Rico</td>
</tr>
<tr>
<td>David Newsome</td>
<td>Georgia Institute of Technology</td>
</tr>
<tr>
<td>Anton Pfeiffer</td>
<td>University of South Florida</td>
</tr>
<tr>
<td>Danilo Pozzo</td>
<td>University of Puerto Rico</td>
</tr>
<tr>
<td>Albert Presto</td>
<td>Cornell University</td>
</tr>
<tr>
<td>Rees Rankin</td>
<td>Trinity University</td>
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<tr>
<td>Isha Sahni</td>
<td>I.I.T., Delhi</td>
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<tr>
<td>Nicholas Sawaya</td>
<td>McGill University</td>
</tr>
<tr>
<td>Eric Steinhauser</td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>Jessica Tucker</td>
<td>Princeton University</td>
</tr>
<tr>
<td>Yang Yun</td>
<td>Beijing University of Chemical Tech.</td>
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<tr>
<td>Hao Zhou</td>
<td>Tsinghua University</td>
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</table>

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M.S. Students
Michael Aboagye                  Univ Science & Tech, Ghana
Dong Gun Kim                    Yonsei University
Robert Mmereole                Georgia institute of Technology
Gitanjali Seevaratnam          Imperial College
Premin Suchato                 Kasetsart University
Luiz Felipe Tavares             Pontificia Universidade Catolica
Miguel Vescovacci              University of Puerto Rico

M.Ch.E. Students
Nasser Abukhdeir               Simultaneous BS & M.Ch.E. student
Muhammed Al-Sahli             King Fahd University of Petroleum & Min.
Jonathan Davis                Colorado State
Christian Koschil              Simultaneous BS & M.Ch.E. student
Hang Yong Lim                Simultaneous BS & M.Ch.E. student
Katrina Snell                Simultaneous BS & M.Ch.E. student
Jason Steig                   Carnegie Mellon

Seminars on Academic Careers
As a complement to the course, 39800 “Preparing for a Faculty Career”, which is taught by Professor Cliff Davidson (Tuesday, 12:00PM to 1:20PM in PH A7A), Professor Andy Gellman will be organizing with the help of other faculty, a seminar consisting of four meetings to discuss academic careers in chemical engineering. These meetings will take place on Friday, 12:00 noon-1:30PM, September 7, 14, 21 and 28, in the Chemical Engineering Conference Room DH1102. Graduate students interested in academic careers are welcome to attend.

Carnegie Mellon Alumni in Academia
Since 1980, the department has produced over 40 Ph.D. students who have taken academic positions in the US and overseas. The names of the students are listed below, with their affiliation and their Ph.D. advisor in the department.

Luke Achenie (Connecticut/Biegler)                                      Kyung Hee Lee (Postech/Cussler-Evans)
Kimberly Anderson (Kentucky/Jain)                                       Jae-Woo Lee (City College NY/Westerberg)
Ruth Baltus (Clarkson/Anderson))                                        Il Moon (Yonsei/Powers)
Rene Bañares (Roviri Virgili,                                        P. Neogi (Missouri-Rolla/Miller)
Spain/Westerberg)                                                        Robert Ofioli (Michigan State/Prieve)
Mike Bevan (Texas A&M/Prieve)                                             Nuno Oliveira (Portugal/Biegler)
Stacy Bike (Michigan/Prieve)                                             Joseph Pekny (Purdue/McRae)
Donna Blackmond (Hull Univ./Ko)                                          Jose Pinto (Sao Paulo/Grossmann)
Lisa Bullard (North Carolina/Biegler)                                    Stratos Pistikopoulos (Imperial
Stephanie Butler Velegol (Bucknell/Tilton)                              College/Grossmann)
Jaime Cerda (INTEC-Argentina/Westerberg)                                Sayed Qutubuddin (Case Western/Miller)
Hyoung Jin Choi (Inha/John-Prieve)                                      Vicente Rico-Ramirez (Celaya-
Yonsoo Chung (Seoul/Westerberg)                                           Mexico/Westerberg)
James Cunningham (Tennessee/Westerberg)                                  Eva Sevick (Texas A&M/Jain)
Chris Floudas (Princeton/Grossmann)                                     Nikolaos Sahinidis (Illinois/Grossmann)
Rakesh Govind (Cincinnati/Powers)                                       Joseph Shaeiwitz (West Virginia, Cussler-
Aaron Goldstein (VP/DiMilla)                                             Evans)
Andy Hrymak (McMaster/Westerberg)                                       Ross Swaney (Wisconsin/Grossmann)
Chris Hrenya (Colorado/Sinclair)                                         Metin Turkay (Koc Univ/Grossmann)
Annette Jacobson (Carnegie Mellon/Casassa)                              Darrell Velegol (Penn State/Anderson-Garoff)
Huan Jang Keh (National Taiwan/Anderson)                                 John Walz (Yale/Prieve)
Jae Jeong Kim (Seoul National/Sides)                                     G.B. Westerman-Clark (Florida/Anderson)
Selatin Kuru (Bosphorous/Westerberg)                                    (deceased)
Jin-Won Lee (Kwangwoon/Domach)                                           Kijung Yong (Postech/Gellman-Sides)
Congratulations to the following students who recently completed his/her Ph.D. degree. We wish them luck in their future endeavors.

Roscoe A. Bartlett – Lorenz Biegler, Advisor
Thesis title: Object-Oriented Approaches to Large-Scale Nonlinear Programming for Process Systems Engineering
Roscoe is now working at Sandia National Labs in Albuquerque, New Mexico.

Kris Paserba – Andy Gellman, Advisor
Thesis title: The Kinetics and Energetics of Polymer Desorption from Surfaces
Kris also received a Master of Science in Colloids, Polymers and Surfaces degree.
He is now working at Intel Corporation in Portland, Oregon.

Congratulations to our second year Ph.D. students who passed their qualifier exams.

CHEGSA News

The CHEGSA Symposium will take place on October 18-19, 2001. The invited speaker will be Professor Ed Cussler from the University of Minnesota.

AIChE Convention
The department will host the Annual Alumni Reception at the Reno, Nevada, AIChE Meeting on November 5, 2001.

Post Docs

Welcome to the department the following new Post Docs and visiting scholars:

Yuen Yee Jin  DH 4203C
Dae Ho Ko  DH 4202B
Mariana Bartfeld  DH 3116
Fabio Mizutani  DH 2208C
Chul Am Kim  REH 233
Masaru Noda  DH 3106
Tobias Jockenhoeval  DH 4203C
Getting to Know the Faculty and Staff
ERIK YDSTIE

I have been researching and teaching process control for about 20 years. One main interest is to develop systems that learn and adapt to optimize their performance to current situations. I also like to develop connections amongst mathematical systems theory, economics and process control by focussing on thermodynamics and inherent stability properties of physical, rather than abstract, systems. My research group is working on conceptual design of a new aluminum process, control of glass furnaces and Silicon production plants, real time and adaptive process optimization, distributed simulation, multi-scale modeling, supply chain management and solar energy systems. Much of this work is done with industry.

I was a second year student in the Chemistry Department of the Norwegian Institute of Technology when my undergraduate advisor, mentor and friend, the late Prof. Odd Andreas Asbjornsen, advised me to combine chemistry with math and control theory. Two years later he instructed me to read the Westerberg and Sargent “SPEED-UP paper” and then to write Prof. Sargent at Imperial College in London and tell him that I wanted to study with him. This I did - and not hearing back - I assumed my plan had been met with enthusiasm (irrational exuberance)?

Sargent’s first question to me would be – Who are you? After a brief explanation, I was told there is paperwork to do. I was in. I did my master thesis on adaptive control and variable forgetting factors with Dr Lester Kershenbaum. I made friends with other students - among them a certain Ignacio Grossmann.

A year later I started my PhD on adaptive control with forgetting and extended prediction horizon with Sargent. I learned to be more rigorous and critical in my thinking. I learned more about one little problem (forgetting) than anyone else cared. It may sound strange - careful forgetting is as useful as remembering. (I have found many applications of this idea). Chemical engineering, I discovered, is a great field. There are enough problems to work on for all of us. I never met anyone who regretted doing a PhD in chemical engineering.

I joined the faculty at UMass in 1982, It was a great place! I learned from students and colleagues. Professor Jim Douglas taught me there is more to process design and control than dx/dt=f(x,u), g(x)<0 and min h(x) subject to u in U. He brought me back to my roots in chemistry and taught me that process physics and economics matter. I try to combine these points of view with the math I learned in Norway and at Imperial College and the optimization methods that are being developed here at CMU by my illustrious colleagues.

Governor Dukakis of Massachusetts froze UMass salaries and the Ydstie family was approaching ruin of Dickensian proportions. But, as Micawber put it; “Something will turn up” - and it did. In 1992 I was offered a position by, then Department Head, now Dean, John Anderson.

I got my industry experience in 1999. During my leave in Norway I tried my hand at running the R&D organization of ELKEM. I discovered that there are wonderful opportunities and challenges to solve in industry too. But, academics suits me just fine and Carnegie Mellon is a great school for me. I hope it is for you too.

At Carnegie Mellon I have learned to enjoy teaching more than research. Teaching and working with and through students is challenging and rewarding. One main objective now is to bring the undergraduate control course in line with current industrial needs.