

Chemical and Petroleum Engineering Class of 1985

25 years later on Sept. 17-18, 2010

Gary Foster (BSc, 1985) President 1985 Chemical and Petroleum Engineering Students Society

Time passes quickly and luckily certain milestones arrive and provide us with the opportunity to look back on our genesis that was the days we spent studying at the University of Calgary. And as many of you may know, studying wasn't everything we did during those 4 or 5 years. Initially apprehensive about meeting classmates who we may not have seen for 25 years, it was not long before smiles of recognition took us back over the many events that occupied our time since graduation. The first event of the reunion was a Friday evening social gathering at the Petroleum club that provided us with the opportunity to review some of those important events of the past 25 years. We had a few drinks, some excellent food and a story or two about those incidents that may not have involved studying. The second event, on the Saturday morning, was a tour of the University of Calgary Chemical Engineering Department and the opportunity to meet with a few of the faculty and present to the Engineering students some insights

into a career in the petroleum industry. It was exciting to meet and see old friends and discover that we had not changed very

much in that time. All the best to the class of 2012!



BACK ROW: Barry Campbell, Bruce Kohse, Larry Waite, Ken Ronaghan, Andrew Vink, Gregg Maxwell, Mike Somerville, Martin Wichert
MIDDLE ROW: Rod Miller, Sam Edgerton, Al Kassam, Colleen Sawatzky (nee Kelly), Cindy Wolfe (nee Cliplef), Heather Bergner, Judy Fairburn, Leslie Young, Chris Sloof, Jamie Betts
FRONT ROW: Kent Sawatzky, Rick Wise, Irene Lee (nee Kim), Gary Foster

Class Scholarships

by Ian Herring (BSc, 1972)

In 2004, five classmates representing the various departments from the Class of '72 got together and decided that we would sponsor an endowed class bursary. We each contacted our colleagues from the respective departments - there were only 4 departments at the time - Civil, Chemical, Electrical and Mechanical - to gauge interest and solicit donations. By 2008 we were funded to the \$50k level and were making annual \$2500 awards from the Class of 1972 Engineering

Entrance Bursary which will continue in perpetuity. Through additional donations and favourable market conditions (yes they do occasionally occur), our endowment now stands at greater than \$76k. Several other Graduating Classes have undertaken similar initiatives.

We have received some heartwarming thank-you letters from various recipients over the years and it is wonderful to know that we have made a difference to students.

A minimum donation of \$20k is required to endow an award. With the larger class sizes of today - a \$50 donation from each graduate would get your class started! These are great initiatives for class reunions.

There is great support available at the Schulich School of Engineering through Serey Sinn ssinn@ucalgary.ca in the Dean's Office or drop me an email at ian-herring@shaw.ca if you would like more information.

CHEMICAL & PETROLEUM ENGINEERING

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With 13 prestigious research chairs, including five NSERC Industrial Research Chairs, five Canada Research Chairs, two endowed research chairs, and one university professorship, the department of chemical and petroleum engineering at the Schulich School of Engineering delivers one of the highest calibre engineering programs in the world.

Alumni, please keep in touch. Please send a story of your recent accomplishment, job changes, or family events, and photos to Jinny Kim at jikim@ucalgary.ca. This newsletter is also available online and by email.

Chemical & Petroleum Engineering

Department News

Message from the Department Head - U. Sundararaj

It has been an exciting year for the department! Research in the department has been exploding. Our department faculty alone raised more than \$24 Million in research funds last year and we funded over 400 researchers and added significant research equipment/infrastructure. This growth has been exhilarating but also challenging. As you will see, by reading the newsletter, our professors are doing great things as evidenced by the number of awards and other accomplishments that they have had.

Demand for our undergraduate and graduate programs remains high. We have exceeded 365 graduate students, which is amazing. We continue to have the highest entrance GPA of all departments for our undergraduate programs. The Chemical Engineering program has the highest GPA cutoff and Oil&Gas Engineering has the second highest GPA cutoff for all engineering programs. We have great students in our department. We have also had great students who graduated and one of them, John Lagasca, is profiled in this issue. The 1985 graduates who had their 25 year reunion last year are also profiled.

I hope as always that you will find the newsletter interesting and informative. We have added more to our Alumni Section and would like to expand it further but need your help. Please send any news (births, marriage, new job or other life-changing events) or updates about yourself to Ms. Jinny Kim at jikim@ucalgary.ca. I am sure that professors and your fellow alumni will be pleased to find out what you are doing now.

If your class would like to have a reunion on campus, please let us know.



Bill & Melinda Gates Foundation grant

Grand Challenges Explorations (GCE) funds scientists and researchers worldwide to explore ideas that can break the mold in how we solve persistent global health and development challenges. Dr. Gates' and Dr. Kallos' project is one of over 85 Grand Challenges Explorations Round 6 grants awarded by the Bill & Melinda Gates Foundation. Dr. Ian Gates and Dr. Michael Kallos will pursue an innovative global health and development research project titled, "Anaerobic Micro digesters with Micro Combined Thermoelectric Heat and Power Generation to Convert Human Excreta to Electricity, Heat, Methane, Fertilizer, and Water."



Ian Gates/Michael Kallos

NSERC/Nexen/Alberta Innovates - Energy and Environment Solutions Industrial Research Chair in Catalysis for Bitumen Upgrading

Dr. Pedro Pereira was appointed as the Chair of NSERC/Nexen Industrial in Catalysis for Bitumen Upgrading is the sustainable upgrading of oil sands resources for the purpose of meeting national and global demand for affordable energy while generating economic and social benefits in Canada, through fundamental and applied research into technologies with dramatically lower costs



Pedro Pereira

and environmental impact than existing commercial processes. Research will develop insights, technologies and train highly qualified researchers. It will create opportunities for industry to transform commercial practices into processes with dramatically improved economic and environmental performance.

Turning bio-waste into fuel

For the past three years, Dr. Nader Mahinpey's team has been toiling away in the basement of the University of Calgary finding better ways to convert organic waste into biofuel. The researchers are also finding ways to turn the waste byproducts of biofuel conversion into useful chemicals and products such as fertilizer.



Nader Mahinpey

Biomedical engineers uncover clues about heart health

Dr. Kristina Rinker and her research team discovered that a specific form of a Protein Smad2 that varies in amount with location in blood vessels. The discovery was made using a device that provides artificial blood flow to cells that line the arteries. Dr. Rinker and her team used a device called a flow chamber to study how Smad2 behaves as a result of exposure to patterns of fluid flow. Cells were subjected to conditions that are similar to actual blood flow patterns in the body. The version of the device used for this study was designed by Rinker and research associate Bob Shepherd.



Kristina Rinker/Bob Shepherd

Killam Awards

Drs. Alex De Visscher and Arin Sen were honoured for their exemplary contributions at the Killam Research and Teaching Awards ceremony on Oct. 4, 2011. A total of six awards were given university-wide, with the department winning two of the six.

Dr. De Visscher was honoured with the Killam Emerging Research Leader Award for his outstanding research achievements rooted in chemical and environmental engineering—which has expanded to include aspects of ecology, atmospheric sciences and chemistry.

Dr. Arin Sen received the Killam Innovation in Teaching Award. This is a university-wide award that recognizes Dr. Sen for his excellence in teaching, commitment to student learning and innovation in the classroom.

The Killam Trusts—funded by the estate of Dorothy and Izaak Walton Killam—support

advanced education and research in Canada. The university is proud to be one of only five universities that benefit from the trusts.

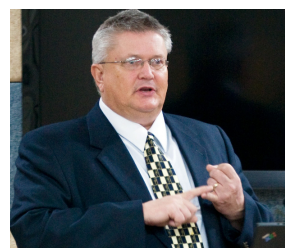
SPE (Society of Petroleum Engineers) Distinguished Lecturer

Each year SPE selects a group of individuals who are experts in their field to share their experience with SPE members through visits to local sections, worldwide.

In February, March and April of 2011 Dr. Hareland generously contributed his time and energy to dispense his expertise to fellow SPE members in the Philippines, The People's Republic of China, South Korea, Texas, Mexico, Russia, The Netherlands and Poland.

Dr. Jensen recently spoke on evaluating interwell connectivity to SPE members in Turkey, Kazakhstan, Russia, and England

in October, 2011. Jensen is scheduled to share his expertise with SPE members in Iraq, Oman, and Northern Emirates in December. Jensen will also visit SPE chapters in South America in February and North America in May, 2012.



Geir Hareland,
SPE Distinguished Lecturer
2010-2011



Jerry Jensen,
SPE Distinguished Lecturer
2011-2012

2011-2012 Zandmer Distinguished Lecture Series

The Zandmer Lectures in Chemical & Petroleum Engineering are designed to attract internationally renowned, distinguished researchers to give two lectures at the University of Calgary. The first is a research presentation in their area of expertise. The second presentation is a general talk about science, engineering, public policy or education.

Dr. Hisham A. Nasr-El-Din

Our first speaker of the year was Dr. Hisham A. Nasr-El-Din, professor of Petroleum Engineering and John Edgar Holt Endowed Chair at Texas A&M University. His research talk was on Thursday, October 20, 2011, “a New Acid System for Matrix Stimulation of Deep Oil and Gas Wells” and his general talk was on Friday, October 21, 2011, “Formation Damage Induced by Chemical Treatments: Case Histories”



Dr. Nasr-El-Din (second from right) meets with graduate students and Dr. Nader Mahinpey (at left) after his presentation

Dr. Eleftherios (Terry) Papoutsakis

Dr. Papoutsakis is a Eugene DuPont Chair Professor at the department of Chemical and Biomolecular Engineering and department of Biological Sciences at University of Delaware. His research talk was on Thursday, November 17, 2011, “The Road to Ex Vivo Platelet Production: Internal and External Stresses that the Cells and We Must Manage”. His general talk was on Friday, November 18, 2011, “The Bioengineering of Blood Cells: Why and How We Could Possibly Produce Platelets and Other Blood Cells in the Factory”

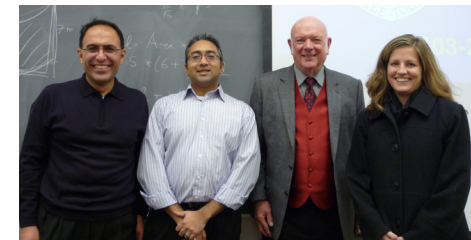
Dr. David Scott

Dr. Scott is a professor at the University of Victoria in the department of Mechanical Engineering and vice president at the International Association for Hydrogen Energy.



Dr. Papoutsakis (third from right) with professors and graduate students in the department

His research talk was on Friday, December 9, 2011. Its topic was “Always Begin with the End in Mind: Hydricity”.



Drs. Mahinpey, Arin Sen, David Scott, and Joule Bergerson (left to right).

Dr. Scott Fogler

Dr. Fogler is a professor at University of Michigan in the Department of Chemical Engineering. His research talk was on Wednesday, January 18, 2012, on “A Novel Application of Chemical Reaction Engineering to the Petroleum Industry”, and his general talk was on Thursday, January 19, 2012. “Globalization and Cooperation: Chemical Engineers Working to Solve Problems in the Next Decade”.



Dr. Scott Fogler

Alumni Spotlight

The most valuable possession

John Lagasca says he always tries to give it his all.

By Jennifer Allford

That effort led to him graduating engineering school with a 4.0 GPA and collecting a fistful of scholarships and awards along the way, including the Seymour Schulich Academic Excellence Award, a Canadian Society of Chemical Engineering Silver Medal, the Chancellor David B. Smith Gold Medal in Engineering and Governor General's Medals.



While maintaining his perfect GPA, Lagasca also found time for a part-time exploitation engineering internship at Husky Energy in his fourth year, working with the Petroleum and Energy Society, as well as holding the position of vice-president academic for the Chemical and Oil & Gas Engineering Students Society.

“You don't know what the future holds, so you have to give it your all,” he says. “You need to achieve well in academics in school because that's your ticket to the future and you never know where it will take you.”

This fall, Lagasca's hard work is taking him—with full financial aid—to Stanford University in Palo Alto where he will pursue his Masters in petroleum engineering. “There's a lot more work to do,” he says.

Lagasca's family moved to Calgary from the Philippines in 2001, when Lagasca was 12. “It was a bit of an adjustment,” he says of the experience of moving to Canada with his parents and younger brother.

“They instilled a sense of excellence when we were young. The Philippines is a very competitive academic nation and my parents always told me that you can have all the inheritances you want, but a great education is the most important thing.”

Ruben and Roselily Lagasca are thrilled with their son's achievements.

Lagasca's father is a chemical engineer and always taught his son “look for the forest, not the trees.” Lagasca says that sort of big picture thinking led him into chemical engineering in the first place. “I wanted to have a bit more control over the process,” he says. “In chemical engineering, you get to see the entire plant and you get to see the holistic nature of design.”

Lagasca's younger brother Joseph is following in the family footsteps by studying chemical engineering at the University of Calgary. “I made it clear to him that since he's the younger one, he should exceed whatever I've achieved,” he says. “And he is.”

As he leaves University of Calgary for Stanford, Lagasca is grateful for the opportunities he's had and the friends he's made. “Finishing university with those guys was definitely a treat,” he says. “There was a camaraderie that was inherent with friends looking after each other and helping each other.”

As he moves on to the next stage, Lagasca isn't sure yet whether he will end up in industry or the academy, but either way, it's certain he will give it everything he has.

Alumni News

Roland B. Saeger, (BSc, 1982) and (MSc, 1985). I have completed 20 years of employment with ExxonMobil Research & Engineering. My wife, Kathy is a school teacher in Camden, New Jersey. We enjoy spending time with family, including our four grandchildren.



Sean Dawson, (MSc, 2011). I took home first prize at the 104th Annual Conference of the Air and Waste Management Association in Orlando, Florida. My paper outlined a method that involves taking petroleum coke, a waste product from oil sands operations, and using it to clean the water that was used in the process so it can be recycled. The conference featured more than 500 presenters and more than 150 posters. I was supervised by faculty members Dr. Alex De Visscher and Dr. Josephine Hill.



Sean Dawson, right, presented with first prize from Raghavan Ramanan, Chair of the Education Council of the Air and Waste Management Association.

Peter Englezos (PhD, 1990), Professor and Head of the Department of Chemical and Biological Engineering at UBC. My main research areas are Clathrate hydrates, chemical thermodynamics, colloid chemistry in papermaking. I live in Richmond, BC with my wife Evangeline Englezos (nee Stathakos) (BComm, 1986) and our two children Chris and Mary”

From left: Evangeline, Chris, Mary and Peter Englezos in Edinburgh, Scotland, July 2011.



Photo courtesy Sean Dawson