

## Executive Director's Corner by Jack Healy

Another spring has come and gone and our Foundation has helped 13 students enter the working world as engineers. Although this is one of our smallest graduating classes, they left a large imprint on the Maine Campus. They were leaders, they were achievers, and they were active participants.

Our graduates have accepted jobs at SAPPI, Georgia Pacific, Verso, NewPage, International Paper, Albany International, and Proctor and Gamble. They will be working in Maine, Wisconsin, Texas, New York and Alabama. Our graduates this year were highly sought after—they had their pick of companies to work for—it is wonderful that 77% will be working for either a Pulp or Paper Company, or for a Foundation Member. We were pleased that all of our graduates attended and were recognized at our Paper Days Banquet this year.

Our Open House was well attended, and we had terrific speakers who focused on sustainability and attracting top talent to our industry. One of the highlights of this year's meeting was the panel titled "Why I accepted My First Job" chaired by Deborah Burkholder, and staffed by our graduating seniors. Our seniors were extraordinarily poised, well spoken, and all provided keen insight as to why they chose their first job.

At our annual meeting we welcomed 5 new members to our Board of Directors – Dick Jackson, Verso Papers; Mark Cross, Mead-Westvaco; Joe Genco, UMaine; Vic Bilodeau, Align Corporation; and Anthony Lyons of NewPage Corporation. Our Board continues to grow in stature, and its commitment to the Pulp and Paper Industry.

We have continued to attract very talented students to our program. During this past spring we made 34 scholarship offers and we received 32 acceptances – a 94% acceptance rate. Incoming students for the fall of 2008 average at the 93<sup>rd</sup> percentile in their graduating high school class. We are also pleased that the incoming class includes several valedictorians, and salutatorians.

Total students receiving our scholarship will exceed 100 this fall. We are now back to total numbers last seen in the early 1990's.

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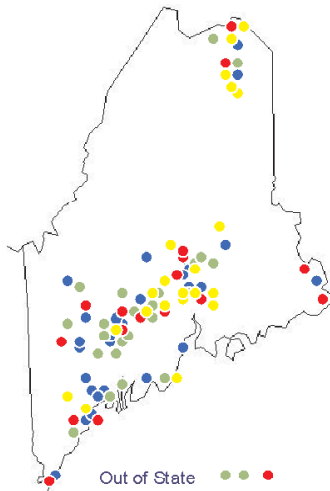
## Pulp and Paper Foundation to Increase the Number of Scholarship Recipients for the 2008-09 Academic Year by More than 67%

The University of Maine Pulp and Paper Foundation Scholarship Committee conducted scholarship interviews in April. Twenty-one students applied, 11 were offered scholarships. Three current scholarship recipients were asked to interview with the committee to show their demonstrated interest in the paper industry and were successful in retaining their scholarships.

More than 100 students will receive UMaine Pulp and Paper Foundation scholarship this coming fall. We anticipate spending more than \$650,000 for scholarships.

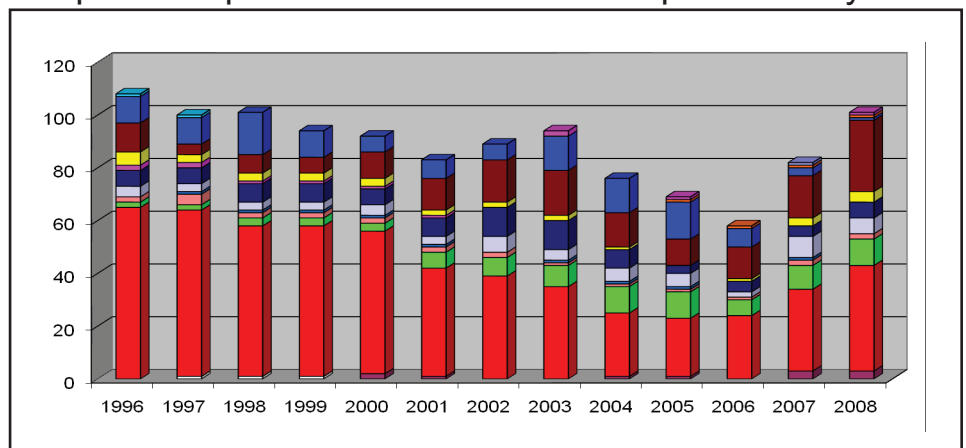
Breakdown of scholarship recipients by class year is: 24 seniors; 25 juniors; 18 sophomores and 32 first year students. By engineering major the breakdown is: chemical engineering (40); mechanical engineering (24); civil engineering (11); electrical/computer engineering (5); biological engineering (4); forestry (3); and one each in mechanical engineering technology, informational systems technology and engineering undecided.

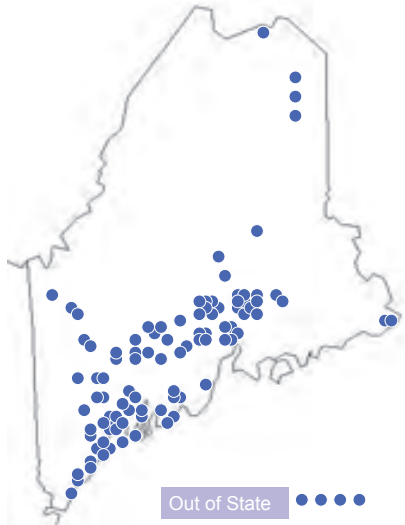
High standards are set for all scholarship recipients. Each student must maintain a GPA of 3.0 or greater while demonstrating an interest in considering a paper industry related career. To satisfy the career interest requirement, all returning juniors and seniors have completed one or two work experiences in a paper related co-op or summer job. Many of this year's sophomores and first year students have summer jobs in the industry, proving to our students that the paper industry is looking for bright, enthusiastic and energetic students. Summer and co-op positions give students the opportunity to put classroom knowledge to work in a career setting as well as providing them with the experience so valued by today's employers in selecting entry level employees.



The graphic depicted above shows the distribution of scholarship recipients in the State of Maine. We also have one student from Nepal, one from New Hampshire and one from Massachusetts.

## Pulp and Paper Foundation Scholarship Awards by Year





The graphic above represents the distribution of students selected to attend the 2008 Consider Engineering Summer Camp. Schools with large multiples of attendees are: Bangor (11); Deering (7); John Bapst (7); Brewer (5); Cape Elizabeth (4), Camden (3) and Skowhegan (3). Four students from outside Maine will attend the program.

*Executive Director - Continued*

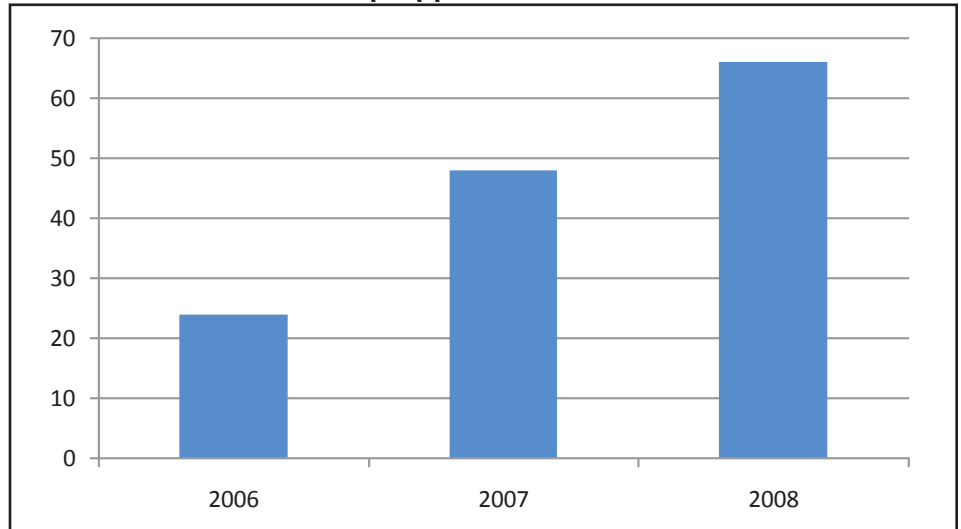
Our scholarship budget will nearly double in 2009, with scholarship expenditures expected to top \$800,000, 80% of which will be supplied by scholarship endowments.

We are excited to be expanding our Consider Engineering program from 2 weeks and 64 students to 3 weeks and 102 students. We had 131 applicants this year, and we are fortunate that a grant from the National Science Foundation will pay the costs for an additional week of this very well received program. Last year, 57% of the students who attended this program came to the University of Maine, and 43% will be receiving our scholarship in the fall of 2008. This program is indeed our premier method of attracting top scholars to study engineering at UMaine with a desire to enter the Pulp and Paper Industry.

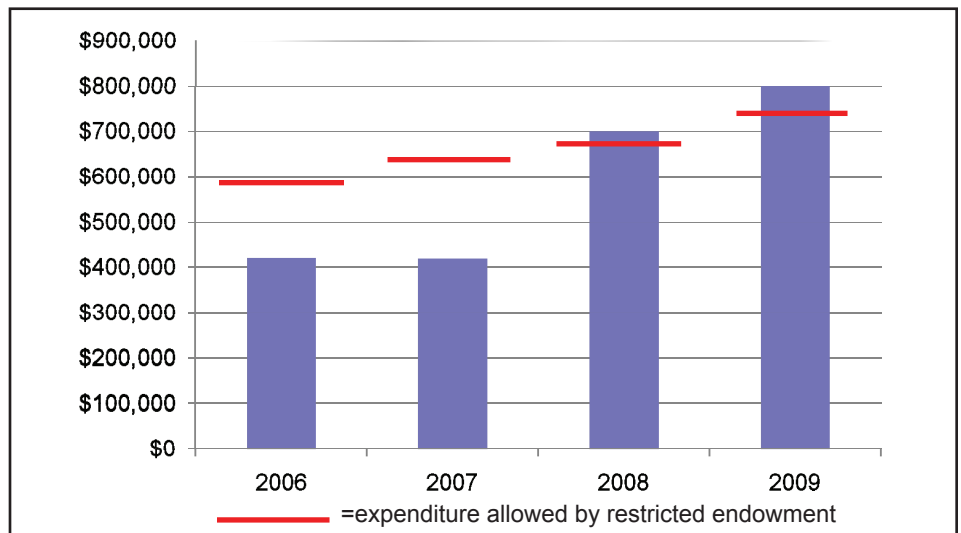
It is exciting to hear from Sean Snyder as he co-op's in Grenoble, France for Hercules. His trip to date has not been uneventful – you can read about Sean's adventure at [www.maineulpaper.org](http://www.maineulpaper.org) under the "Foundation News" section.

As we look to the future our focus will continue to be on our students – helping them succeed and providing new opportunities for them to be connected to our great industry.

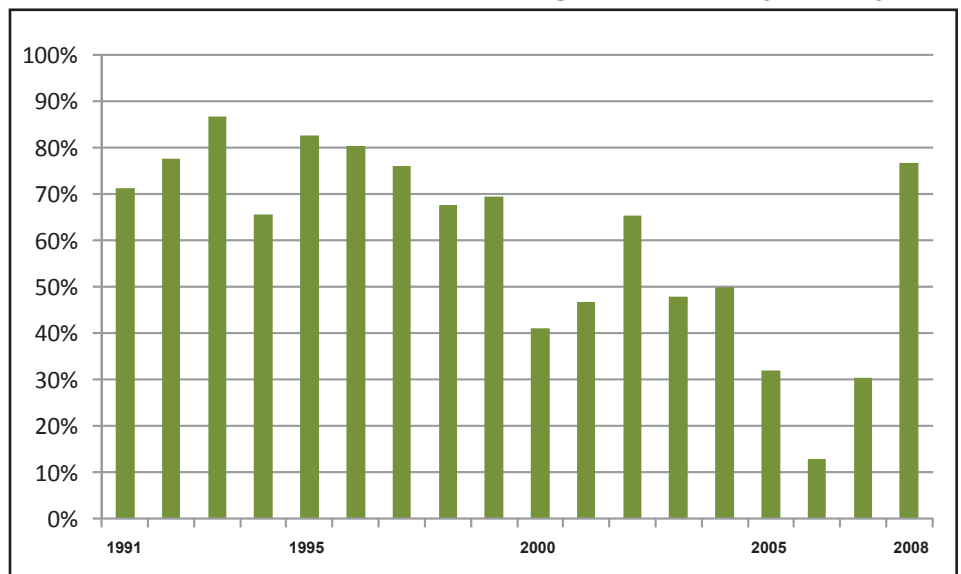
### PPF First Year Scholarship Applications



### Pulp & Paper Foundation Scholarship Expenditures



### Senior Scholarship Recipients Accepting Paper Industry Employment



## 2008 Honor Award to Foundation Scholarship Committee Chair, Jack MacBrayne

John M. "Jack" MacBrayne, III, was named the recipient of the Foundation's 2008 Honor Award. The award, made annually, recognizes a person who has helped to improve the University of Maine's reputation for excellence within the paper and related industries.

Jack, was born in Washington, DC. At the age of three he moved to Savannah, GA where his father was employed with Union Bag and Paper Company. (In the mid-1950's Union Bag merged with Camp Paper to form Union Camp.)

At the age of 12 Jack moved to Mountain Lakes, NJ when his father was transferred to Union Camp's headquarters. After high school Jack attended the University of Maine where he was a Pulp and Paper Foundation scholarship recipient for three years. He graduated in 1969 with a B.S. degree in chemical engineering and a 5th Year Certificate in Pulp & Paper Technology.

After completion of Officer Candidate school Jack served as Supply Officer on the ocean-going minesweeper USS Detector.

In 1971 Jack joined St. Regis Paper Company in Bucksport, ME as a technical assistant. In 1974 he was responsible for the start-up of the wastewater treatment plant. In 1975 he was promoted to Assistant Pulp Mill

Superintendent and in 1976 he was responsible for the start of the Thermomechanical Pulp Mill (TMP). In 1979 he was promoted once again, this time to Pulp Mill Superintendent. In 1984 St. Regis Paper merged with Champion International.

In 1988 Jack was promoted to Director of Mechanical Pulping and transferred to Champion's corporate headquarters in Stamford, CT where in 1997 he was named Director of Capital Management and transferred to Champion's Sartell, MN facility

In 2000, Champion merged with International Paper. Jack retired December 31, 2001 and returned to Maine with his wife, Bonnie, to build a new home in Orland. Jack remains busy with several consulting projects.

Jack has been a member of the University of Maine Pulp and Paper Foundation Scholarship Committee since 1979, serving as the Chair of the committee since 1984.

In announcing the Honor Award, selection committee chair, Roy Barry, retired CEO of Madison Paper, said, "We are pleased to recognize Jack for his service to our Foundation. He has served as a role model professionally and as a member and chairman of the Scholarship Committee he has helped attract and encourage hundreds of talented young people to prepare for careers with our industry."



Jack MacBrayne (left) is presented the Pulp and Paper Foundation's 2008 Honor Award by Honor Award Committee Chair, Roy Barry (right) at the April Paper Days/Open House Honors Banquet.

## Consider Engineering Program Applications Increase By 40% - Program Expanded to Three Sessions in July

The Consider Engineering program is offered to talented high school students who excel in math and science and who have completed their junior year of high school. Students will have an opportunity to explore their interest in studying engineering at the University of Maine in one of three sessions scheduled in July.

Traditionally the program is offered to 60 students in two four-day sessions. This year there was an increase of more than 40% in program applications. The decision was made to expand the program by adding another session and increasing enrollment to 34 participants each week allowing us to serve 102 capable students.

The program will start each week on Sunday afternoon with "ice-breaking" challenges allowing the students and staff the opportunity to get acquainted. After dinner students are immediately presented with program challenges to complete.

The next three days will introduce students to more than two dozen engineering students, faculty and practicing engineers. Students will participate in competitions, laboratory experiments and lectures. The students will also tour a local papermaking facility to see how paper is made. While at the mill, students will have an opportunity to talk and ask questions of current engineers.

One of the highlights of the competitions offered is the construction project challenge. Students will be given a packet of materials containing a copy of a newspaper, a roll of masking tape and 1-2 "secret" items. The challenge is to build a "nest" that is able to withstand great weight (up to 100 lbs) to protect its egg.

More than 2,100 students have participated in the "Consider Engineering" program over the last 35 years. Many former participants are now senior mill managers, sales executives, or hold other positions of responsibility within the industry. The "Consider Engineering" program has been an excellent resource for recruiting future scholarship recipients.



## Alumni Personals

**Victor L. Bilodeau**, '74, is now a partner in the Align Corporation, a specialty consulting company in operation since 1993 helping clients with major capital projects. Offices are located in Atlanta, GA and Duncan, SC.

**Donna M. Cassese**, '76, has been named Mill Manager of Sappi Fine Paper's Westbrook, ME mill.

**Brian J. Carey**, '78, is now Maintenance Supervisor with Huhtamaki in Waterville, ME.

**Andrew R. Negele**, '78, is now Technical Services Manager for the BASF Corporation.

**Edward R. Griffin, Jr.**, '79, has joined Nalco as an Account Coordination Manager.

**William "Bill" Manzer**, '80, has been named Senior Vice President, Business Strategy and Projects at Fraser Paper, Madawaska, ME.

**Matthew Nightingale**, '83, has been promoted to Vice President, Marketing, Fraser Papers Limited, the Company's largest operating subsidiary.

**Jeffrey C. Dutton**, '86, has been named Senior Vice President Operations and Chief Operating Officer, Fraser Paper, Madawaska, ME. Jeff will have senior responsibility for the Company's pulp and paper operations.

**Jeffrey C. Lancaster**, '88, has joined AMEC as a Process Engineer in Portland, ME.

**Craig S. Martin**, '89, is now a Senior Account Executive with Dow Chemical Company.

**Darrell M. Waite**, '89, is now a Principal Engineer for MeadWestvaco Corporation's Center for Packaging Innovation in Raleigh, NC.

## Newsworthy



PIMA President, Lee Bingham presents PIMA Mill Manager of the Year award to Jeff Dutton.

Jeff Dutton, President of the University of Maine Pulp and Paper Foundation has been named mill manager of the year by PIMA (Paper Industry Management Association). Jeff was the General Manager of Fraser Papers' East Operations in Madawaska, ME and Edmundston, New Brunswick, and most recently has been promoted to Senior Vice President and Chief Operating Officer of Fraser Papers Inc. Jeff is headquartered at the Portland, ME office of Fraser Papers. Jeff is a 1986 graduate of the University of Maine, and was a Pulp and Paper Foundation Scholar.

Other roles Jeff has held include Pulp and Paper Foundation Director and Secretary, Director of National PIMA, Member of TAPPI, PIMA, PAPTEC and IASPPM and past director of the Mead Foundation Board of Directors.

Congratulations, Jeff!

Dr. Adriaan van Heiningen, UMaine Chemical and Biological Engineering Professor who holds the J. Larcom Ober Chair in Chemical Engineering, was recently inducted as a fellow into the Canadian Academy of Engineering. Van Heiningen, whose pioneering research has been the catalyst for the proposed Old Town ethanol biorefinery project, joined 35 others who were honored by their peers in Montreal, June 17th for their distinguished achievements and career-long service to the engineering profession. "He is recognized internationally as the leading proponent of the Integrated Forest Biorefinery for producing biofuels and biomaterials." the Academy says of van Heiningen. The Academy, established in 1987, is a member of the 25-country Council of Academics of Engineering and Technological Sciences.



Roger Leach, '74, (pictured left) received the Del Boutin Division Service Award at PIMA's awards ceremony held as part of Paper-Con 2008 in Dallas, TX in May. The service award is presented to pulp and paper or affiliate members for devoted service to a PIMA Division. The award recognizes long-term dedication of PIMA members at the local division level. Roger is Safety Manager with the Cianbro Corporation in Pittsfield, ME.

**If you have an item for ALUMNI PERSONALS**  
contact Faye Woodcock Murray at the Foundation Office  
telephone (207) 581-2297 or email [woodcock@maine.edu](mailto:woodcock@maine.edu)

## \$30 Million DOE Grant Comes to Old Town Biorefinery

A partnership involving University of Maine (UMaine), RSE Pulp & Chemical (RSE) and American Process Incorporated (API) has been selected for a grant of up to \$30 million from the US Department of Energy (DOE) to design, build and operate a small-scale commercial biorefinery in Old Town, ME. The proposed biorefinery facility will be installed in an existing pulp mill in Old Town, ME, and will produce fuel ethanol and other chemicals from wood extract. The project uses UMaine's proprietary process for pre-extracting hemicelluloses during the pulping process. This process has been proven on a laboratory and pilot scale in the Process Development Center at UMaine. This new project will adopt the work started by Professors van Heiningen, Genco and Pendse in the Chemical and Biological Engineering (ChB) department at UMaine. ChB Professors, Wheeler and van Walsum, have now joined the project team. Construction is expected to begin in 2009 and a fully integrated biorefinery will be operation in 2011. The Old Town biorefinery is one of seven projects selected for DOE's competitive small-scale biorefinery solicitation. This is the largest grant ever involving UMaine research and certainly one of the largest for any academic or research organization in Maine.

"This work is driven, to a large degree, by the creativity and intellectual capacity of UMaine's researchers," says UMaine President Kennedy. "I want to give special recognition to Hemant Pendse, chair of UMaine's Chemical and Biological Engineering Department, for leading this

effort." This work builds on the research infrastructure investment improvement made possible by the \$6.9 million grant from the National Science Foundation (NSF/EPSCoR) that began in April 2006 as the Forest Bioproducts Research Initiative (FBRI).

Since early 2004, Professor Pendse has been driving the small-scale biorefinery effort beginning with a plan for a manufacturing development facility for technology demonstration and validation. Pendse saw the opportunity for Maine to be a global leader in forest biorefinery development. After evaluation of several versions of conversion scenarios for converting of whole tree chips - or paper mill sludge - into ethanol at several potential sites, Professor van Heiningen's original 2002 concept of Integrated Forest Product Refinery (IFPR) became the foundation of the "UMaine Forest Biorefinery" framework. IFPR concept is based on the pre-extraction of hemicelluloses while preserving cellulose fibers for pulp production. In 2006, with the proof-of-concept in hand and the patent application in the pipeline, the UMaine team began building collaborations to further develop the forest biorefinery plans for Maine. In late 2007, the Old Town pulp mill modified its pulping operations to incorporate UMaine's pre-extraction technology, while researchers at UMaine successfully converted real wood extracts into ethanol, making it possible for the Old Town pulp mill to win this competitive grant. "This is the biorefinery that we have been talking about for the last four years," says Prof. Pendse, "Maine is in the lead. By working together we can save Maine jobs, build new businesses, train future scientists, and make a major impact on our nation."



Hemant Pendse, Chemical & Biological Engineering Chair, at a woodchip pile in Old Town, ME - Changing the way we use wood chips. (photo courtesy Wm. Drake, University of Maine).

## UMaine Pulp & Paper Foundation Hosts Annual All Foundations Meeting



The University of Maine Pulp and Paper Foundation and the UMaine Department of Chemical and Biological Engineering hosted the annual All Foundations Meeting and the PPERA (Pulp and Paper Education and Research Alliance) Meeting at Jenness Hall for two days in June. The All Foundations Meeting is held at one of the eight schools that include a Pulp and Paper Foundation each year in the late spring. Participants this year included representatives from NC State, Auburn University, The University of Washington, Miami of Ohio, TAPPI and SUNY.

## PIMA Student of the Year - Amy St. Peter



Amy St. Peter, from Cross Lake, ME was honored as PIMA Student of the Year at PIMA's annual conference held this year in Dallas, TX in May. Amy graduated with a B.S. degree in Chemical Engineering and will be working for County Environmental. Amy joins Susan Saucier as PIMA Student of the Year (2007). Both students are University of Maine Pulp and Paper Foundation Scholars.



## Three Named Scholarships Presented at Paper Days Honors Banquet



Mark S. Cross, Senior Vice President, Consumer Solutions Group of MeadWestvaco and his wife Melanie announced the establishment of the Mark and Melanie Cross Endowed Scholarship. Mark is pictured (left) presenting the scholarship to Gifts and Bequests Chair, Keith Meyer at the Paper Days Honors Banquet. Mark graduated from the University of Maine in 1979 with a B.S. Degree in Chemical Engineering and is a former Pulp and Paper Foundation Scholarship recipient.



Joseph M. Genco, UMaine L.C. Calder Professor of Chemical Engineering presented the Helen Horner Genco Endowed Scholarship to honor of his wife at the Paper Days Honors Banquet in April. Pictured from left to right are Helen Genco, Joe Genco and Gifts and Bequests Committee Chair, Keith Meyer.

Foundation Executive Director Jack Healy and his wife Candace presented the John J. Healy, Sr. Endowed Scholarship at the Paper Days Honors Banquet. Jack told the audience this is a small token of his and his family's appreciation of a 30 year career in the paper industry as of July 3rd, 2008. Jack went on to say his family is giving the scholarship to honor his dad. Jack said, "Although he did not work in the Paper Industry, he worked in manufacturing as a supervisor. He had a strong sense of the value of education, and had a large influence on my education. When I suggested in 1972 that taking a year off to travel around Europe would be a good idea, I was quickly 'convinced' that a better idea was to complete an undergraduate degree, and that I would see Europe a bit later. My dad was right and I am ever thankful for the support provided to me by both of my parents, John and Helen Healy."



Micki Meggison, Specialities Operations Manager, Sappi Fine Paper N.A., awards Patrick Sage of Falmouth High School a University of Maine Pulp and Paper Foundation Scholarship at the Falmouth Candelight Awards Ceremony. Mr. Sage is one of 32 first year students to receive a Foundation scholarship in the fall of 2008. He will be studying Chemical Engineering. In addition, Lee Marshall, Technical Manager, Sappi Fine Paper N.A. attended an awards ceremony at Lawrence High School, presenting an award to James Melcher, and Foundation Executive Director, Jack Healy presented awards to Jakob Low, and Benjamin Schneider at awards ceremonies in Camden Hills and Presque Isle High Schools. Melcher and Schneider will be studying Chemical Engineering and Low will be studying Mechanical Engineering Technology at UMaine starting this fall.

## NEW Company Members Announced at Paper Days

The Membership Committee is pleased to announce that 12 new Company Members joined the Pulp and Paper Foundation since January, 2007. Representatives of these companies were invited to the annual Paper Days banquet on April 9<sup>th</sup> where they were presented with a Foundation Membership Certificate and spoke about the benefits of becoming a Company Member. According to Membership Chair, John Wolanski; "This is the largest annual group of new Company Members to join the Foundation, and the individual members of the Membership Committee, as well as Jack Healy and Faye Woodcock, are to be thanked for all their efforts in recruiting these fine companies who support our industry." The committee members are

Brad Bingham, Jeff Dutton, Gilly Hitchcock, Jef Howell, Mark Lenentine, Mike Luciano, Craig Martin and Bob Rourke.

New company members are:

- AMEC Power and Process
- Ciba Specialty Chemicals
- County Environmental
- Dow Chemical
- GL & V
- Huhtamaki
- Mowak Paper
- New England Controls
- PPSA Overseas Ltd.
- Red Shield Environmental
- Rohm Nova
- Univar USA Inc.

## Annual Meeting Elects Officers and Approves 2008 Budget

The Foundation's 2008 Annual Meeting, was held on Wednesday afternoon, April 9<sup>th</sup> as part of Paper Days/Open House events. Activities included electing officers, receiving committee reports and adopting the Foundation's 2008 budget.

Donald F. Beaumont, Senior Vice President, Metso Paper USA will continue as Foundation Chairman. Jeffrey C. Dutton, Senior Vice President Operations, and Chief Operating Officer, Fraser Papers will continue as Foundation President.

Elected as one of two student representatives to the Executive Committee for a two-year term is Thomas J. Schwartz a Chemical Engineering student from Amesbury, MA. Our second student representative, Jessica Englehart a Chemical Engineering student from Benton, ME will continue her term.

Incoming directors at large are: Victor L. Bilodeau, Senior Partner, Align Corp.; Mark S. Cross, Senior Vice President Consumer Solutions Group, MeadWestvaco Corp.; Joseph M. Genco, Calder Professor of Pulp and Paper Science and Engineering, University of Maine; Richard Jackson, Vice President, Mill Manager, Verso Paper; and, Anthony J. Lyons, Director of Fiber Supply, Communications and Governmental Affairs, NewPage Corp.

In addition to electing officers the Foundation's committee chairs each presented their 2008 reports describing their activities and outlined their future goals.

The Foundation's 2008 budget will provide \$650,000 for undergraduate scholarships to encourage students with a demonstrated interest in a paper industry-related career. Funding was also approved for the continuation of our summer "Consider Engineering" programs for students with high ability in math and science.

The Foundation will support the University in 2008 with salary supplements for three professors and will also provide honorarium to faculty who teach summer chemical and biological engineering courses allowing the co-op program to continue.

Copies of the Foundation's 2008 Annual Report are available from the Foundation Office upon request. You may also request a copy via email at [pulppaper@maine.edu](mailto:pulppaper@maine.edu).



Carlos Braune, PPSA Overseas Ltd.



Walter Goodine, Huhtamaki



Al Dunham, New England Controls



Bert Martin, Red Shield Environmental



George Milner, MohawkPaper



Robin McGann, Rohm Nova



Craig Martin, Dow Chemical Company



Dave Smart - AMEC

## Return Service Requested

### UMaine Process Development Center Acquires Four Vessel Extraction System

The University of Maine Process Development Center is pleased to announce the startup of a new versatile four vessel extraction system, which can be used to extract lignocellulosic components, such as hemicellulose, from biomass followed by conventional kraft or soda pulping. Four different cooking conditions can be con-

ducted simultaneously, greatly improving laboratory productivity. The system can also simulate processes that require liquor exchanges at temperature and pressure. In this mode, the system can simulate an extraction of hemi-cellulose from wood, followed by displacement of the extraction liquor with white liquor at process temperature, and then

continue the delignification process with a kraft cook. The extractor system can also be used to simulate RDH type batch cooks.

The four reaction vessels are each approximately 40 L in size and each process about 13 kg of wood chips. Other forms of bio-mass can also be processed, including wood strands or wafers. The vessels are heated by external band heaters controlled by a distributed control system to a target H-factor. Because the vessels are slowly tumbled around a central axis, even heat distribution throughout the biomass is assured. At the end of the cook, the liquors are cooled by circulation through a water cooled heat exchanger, and then can be quantitatively recovered.

Please call Pros Bennett, Managing Director, UMaine Pulp & Paper Process Development Center at (207) 949-4176 if you have any questions or would like to utilize this equipment for your next project.



Juan Peredes, UMaine PhD Candidate extracting hemi-cellulose from southern yellow pine strands to improve the strength of OSB.

The UMaine Pulp & Paper Foundation Newsletter is published two times a year by The University of Maine Pulp & Paper Foundation, 5737 Jenness Hall, Orono, ME 04469. Jack Healy, Executive Director, Faye Woodcock Murray, Editor.