

## Composite Materials and Engineering Center



#### www.cmec.wsu.edu

No. 6, Summer 2010 (Published Irregularly)

# **CMEC Alumni & Friends Newsletter**

Tom Maloney, Editor Suzanne Hamada, Associate Editor

#### Comments from the Editor



Tom Maloney

In these tough economic times, all university activities are impacted. As reported in the last Newsletter, the Center, because of its outstanding productivity, was spared reductions in state support. Since that report, the state tax income has deteriorated even more resulting in further state support to the university. The immediate impact is a loss of a position in the Center. By luck, and this happened to me a several times through my years at the university, the easiest way to reduce support to any unit is to eliminate vacant positions. This has happened to the Center as Dr. Marie-Pierre G.

Laborie resigned to take a leadership position in a German laboratory. This is a great opportunity for Marie but an unforeseen negative impact to the Center. Everyone at the Center wishes Marie the very best. It is hoped that inter-laboratory projects, exchange of staff, etc. can be in the future.

Now to the explanation of the particleboard project and the porcupines shown in the photo in the last newsletter. The photo showed a porcupine wandering among a number of stakes to which two in. square blocks of particleboard were attached. This was the ultimate test of the particleboard—to see if the porcupine would eat the particleboard block. We were in the business of being a chef to porcupines.

This project started for the U.S. Fish and Wildlife Department in about 1968. The forestry industry on the west coast was having a terrific problem with porcupines eating the freshly planted seedlings put in after a logging show. The treatment for taking care of the porcupines at the time was to take a two inch square of a softwood and soak it in strychnine and use this to poison the porcupines. Because it was a deadly poison that could be ingested by other animals and even humans in rare circumstances, they had to nail the blocks of wood well up into trees. This was not conducive to getting at the porcupines as they had to climb the trees to get to the poison.

The Forest Service had just built a new work shed or cabin in northern California and used a plywood made by Simpson in the structure. The

(Continued on page 2)

### Alumni Spotlight: Ernest Hsu



Photo of Ernest and his daughter, Irena, at Manchu Picchu. Peru–Summer 2009

Ernie and his late wife, Julia Hsu, pursued their undergraduate and graduate studies together and spent their professional lives working side-by-side in the same field. Their daughter, Irena, attended the Wharton School of the University of Pennsylvania, and received her Bachelor of Science in Economics. She went on to begin a rewarding career in marketing at American Express's headquarters in Manhattan. Irena was quickly promoted to Marketing Manager. American Express treated her well and Irena had the opportunity to work virtually one week out of every month in order to visit Ernie in Washington. Irena recently decided to leave American Express to pursue an MBA and was accepted to the Kellogg School of Management at Northwestern University. She recently finished her first quarter at Kellogg and is enjoying it greatly.

Ernie graduated in 1978 with a Ph.D. in Materials Science & Engineering with a specialty in wood and polymers. From there, he began a long career in research.

Ernie worked at Forintek Canada for a total of 19 years, Noranda Research Center for 3 years and Louisiana Pacific for 9 years. He was the principal research scientist at Forintek before he joined Louisiana Pacific as a corporate research fellow and was given the responsibility for corporate technology. He initiated a quality improve-

#### Alumni Spotlight: Ernest Hsu, cont'd

ment and cost reduction program for OSB manufacturing and provided technical support for OSB, particleboard, MDF, LVL and other corporate businesses. His leadership has inspired mill personnel to truly believe that they can contribute to improving quality and reducing production costs. In 2002, Ernie was elected fellow of the International Academy of Wood Science.

His research interests include various types of wood-based composites such as OSB, LVL and MDF. He has over a dozen patents related to wood composite products and processes, resin, reduction of VOC and HAPs, I-joist, etc. When he worked at Forintek Canada, Ernie investigated the factors that affect OSB properties and the manufacturing process in order to help the OSB industry during its period of rapid growth. He developed a two-stage pressing strategy that has been widely used in the OSB industry. In addition, in 1990,

he pioneered a press venting technology by using perforated platens to release vapor continuously during the hot pressing cycle. The vented press has since become the norm for multi-opening presses. During his later tenure at Louisiana Pacific, Ernie showed that the combination of knowledge and experience can help with manufacturing quality products while reducing costs. While at Forintek, Ernie's research on aspen LVL resulted in the first LVL plant in Canada.

Ernie retired from Louisiana Pacific in the summer of 2006. Since 2007, he has worked as a part-time consultant to FPInnovations and has developed a unique strand alignment device which enables the manufacture of engineered strand lumber that has an appearance similar to parallel strand lumber, but at lower costs and with better performance than current oriented strand lumber. Ernie enjoys his life working in Vancouver, Canada every other month and relaxing in his Washing-

#### Comments from the Editor, cont'd

porcupines got into this building and ate the plywood. Upon investigation, it was determined that the porcupines were after the glue in the plywood. This is where the Laboratory came in. We were engaged to make a variety of particleboards with the Simpson glue as the binder. Also, used were a number of other attractants for the porcupines—animal feed, peppermint, etc.

The photo below with the porcupine shows the test blocks in the field. There wasn't any poison in these blocks but the porcupines liked the tasty treat. Somewhere in the Laboratory are some of the half eaten test blocks. There was a new poison coming into the market that could be safely used on such stakes thus putting the poison in attractive places for the porcupines.

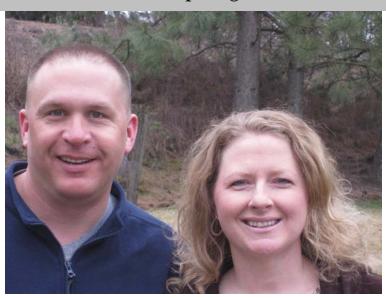
As it turned out, poison was never approved for use so the eradication system was never used. Later on the plastic sleeves for use around the seedlings were developed and are now widely used.

The Engineering Extension Service sent out a story on this project that caught the attention of people all over the country. I spent more time answering phone calls and letters on this project than almost

any project we ever ran. Much of the forestry community was ready to go with this approach for porcupine control as soon as the poison was approved.



#### **Graduate Student Spotlight: Brent Olson**



Brent Olson and his wife, Jen

You might say that this graduate student is a two-timer. He is one that came to us for his master's degree and then went off into industry for a number of years and then, returned to WSU to pursue a PhD. It has been personally heart warming to the Editor to see a young man mature from the usual status of what will I do with my life and career as he leaves college for the first time to the outstanding professional now pursuing his doctorate. Brent's wife, Jen, is a schoolteacher now teaching in Moscow, Idaho. She has been involved in teaching wherever Brent's career has taken him.

Brent is originally from Wisconsin and earned a BS in Forestry from the (Continued on page 3)

### Graduate Student Spotlight: Brent Olson, cont'd

University of Wisconsin - Stevens Point. This is a university that, over the years, supplied us with a number of outstanding students. We had a great relationship with the forestry leadership at Stevens Point.

After Brent earned his undergraduate degree, he moved to Pullman in order to work towards the master's degree. The following are his own words describing his career to date:

"Under the guidance of Tom Maloney & Roy Pellerin at the Wood Materials and Engineering Laboratory, I earned a Master's Degree in Material Science and Engineering from WSU. The title of my master's thesis was "Developing Wood Composites Using Small Diameter Timber Resources From Dense Stagnant Stands". This was part of a large research project conducted with the U.S. Forest Products Laboratory.

After graduation, I went to work for Willamette Industries as a quality control technician at the LVL plant in Millersburg, Oregon. After a year with Willamette Industries, an opportunity arose with Borden Chemical, and I became an Adhesive Technologist working out of the Springfield, Oregon R&D laboratory. Following an almost five year stay with Borden Chemical, I accepted an offer to become the Door Technical Manager at JELD-WEN's R&D laboratory in Klamath Falls,

Oregon.

In 2005, I returned to WSU to pursue a PhD. I'm planning to finish my schooling in December 2010. My dissertation topic involves examining the life cycle of wood composite panels used in residential construction for the purpose of identifying approaches to work toward sustainable development."

A last word about Jen-she has been primarily an English teacher, But she has also taught drama and has added a speech endorsement to her teaching portfolio. Currently Jen is teaching Speech and English at Moscow Junior High and she has been very busy working on her National Board Certification (this is a grueling effort). Brent states that he hasn't the slightest idea how she copes with him and his frequent career changes. He does think it is unlikely that she will want to continue their frequency of relocations.

### Faculty Focus: Karl Englund

I guess it is true that the older you get the faster time goes by. This is certainly the case with Dr. Karl Englund, as it seems to me that he just arrived on campus, not in 1996. He came to WSU to earn his doctoral degree and then stayed on in one of the valuable research roles of faculty in the Composite Materials and Engineering Center. Here is his story:

Karl grew up in South-Central Pennsylvania but was born in Lincoln, Nebraska. He obtained his undergraduate degree from West Virginia University in 1988 and continued on to earn a Masters under Professor Doug Gardner finishing in 1991. His master's work included research on the efficacy of hardwoods treated with CCA preservatives.

Once he finished his master's degree he moved to Athens Georgia taking a position as a Quality Control Supervisor at the Trus-Joist MacMillan (Weyerhaeuser) Parallam facility. He worked there for 2.5 years ending up as a Technical Director/QC Supervisor. In the summer of 1994 he went back to WVU to work as a Research Associate.



Karl Englund (right) working with graduate student, Ted Spicer

Then in 1996 he came to Pullman and started his PhD work under Professor Mike Wolcott at Washington State University. His thesis research included the development and modeling of pultruded\* wood composites. Once he finished his PhD degree he worked in a variety

of positions within the CMEC that dealt with industrial collaborations, primarily in processing wood composites, more specifically wood-thermoplastic composites. In his now 14 year career at WSU, Karl has worked with well over 75 companies. (\*Pultruded wood composites are manufactured via a pultrusion process. The pultrusion process.

(Continued on page 4)

### Faculty Focus: Karl Englund, cont'd

ess utilizes a pulling mechanism to convey the composite through a stationary profiling die. So in other words, it is like extrusion but pulling instead of pushing the material through the die.)

In 2008, Karl became a Research Faculty/Extension Specialist, sharing a split appointment between the Civil and Environmental Engineering Department and Extension. His work continues to be with the processing and performance of wood and wood-based composites. Some of his recent interests have been with recycled materials and their viability as value-added products and the use of phosphate-based cements for binders in wood-fiber composites.

For free time activities, Karl likes to go backpacking, fly-fishing, and biking. He carries his biking to the level of biking to and from his present home in Moscow to work at WSU.

The Editor, as readers know, worked closely with many firms throughout his career and knows how important it is to make the contacts necessary to bring in research projects and to perform the research to the client's satisfaction. It is obvious that Dr. Karl Englund is doing well in further enhancing the reputation of the CMEC in all of its research endeavors.

#### Where are they now? Stephanie Hetrick (Longmire while at the Lab)

Stephanie was our senior secretary (now known as Administrative Assistant) during her time at the WMEL. Not only did she do a superior job in her position she used her talents as a classical violinist to entertain many different groups as a public ser-



Stephanie Hetrick

vice. The editor used to joke that he was afraid to sign any documents as Stephanie was doing all of that workmy signature would be suspect. Roy Pellerin liked to watch her type because she was so fast with her fingers (a natural athlete). She also gave us a lot of concern with some of her adventures such as rolling her car. We had a deal that she would stay with the laboratory until I retired and then she would move on as she did not like the politics behind the scenes at the university. She, however, broke the deal and got married and left a few years before I retired. She continued to have an adventurous life as she describes in the

following. I know those of you who know her will really enjoy this article and those of you who do not will likewise enjoy the article. So here is Stephanie in her own words with some minor editing.

Well here I am now in Humboldt County, California! As you can see from the above photograph, I've changed—dramatically, but I fit in with the locals!

I am finally squeezing in a few minutes to sit down and type this. I can't believe its been about sixteen years since I left the Wood Materials and Engineering Laboratory (as I knew it then), and I might add that even though I left the building.....to this day, part of my heart still remains there. I have so many fond

memories, some of them passing through my mind on a daily basis, as I drive by the Simpson Timber lumber mill every day on my way to work (and I think it's name has changed about three times since I have lived in California).

Yep, I did say California....not West Yellowstone, Montana not the Powell Ranger Station on the Idaho/Montana border, and not Alaska. Its been quite a journey—where to start? I now reside in Northern California (McKinleyville) with my husband Nick, and two children, Shelby 17 and Haley 13. My older daughters, whom many of you from the laboratory would remember, are grown, married and have children of their own. Yes, a grandma too (Tony Nilson, I can hear you snickering)! I can't believe it as I will turn fifty very soon! I'm thankful, however, that those in the laboratory that experienced my famed and feared "50th birthday pranks", now live very far away from me!

Now seriously, when I left the laboratory all those years ago, Nick's position (fisheries biologist) took us on a great journey. First we moved to West Yellowstone, Montana, where we resided with Yellowstone National Park right in our backyard. Shelby was born there (well close, Bozeman, Montana). I remember in the depths of the 8 feet of snow--8 months out of the year, when the doctor in Bozeman was telling Nick the following:

"You have 90 miles between you and the hospital. The Gallatin Valley gives 'white out' a whole new meaning in the dead of winter. If you need to, pull over, find a picnic table, deliver the baby, and use a shoe lace to tie off the umbilical cord. I am listening to this thinking 'over my dead body!"

(Continued on page 5)

#### Stephanie Hetrick, cont'd

Needless to say, we picked a day and induced labor leaving the picnic tables for better use.

After a couple of years we moved on to the Powell Ranger Station at the summit of Lolo pass In the Rocky Mountains. Very isolated, quiet... and extremely beautiful. We went to Missoula, Montana (about 70 miles away) to get groceries/supplies (and see other humans) about every two weeks. There were times when we could not get out due to various things like snow, ice, floods, complete highway collapse (a few months for that one!). We used to camp in our living room for weeks with no power. Driving the other way to Lewiston, Idaho was quite a chore. Little did I know I was being prepared for the real meaning of "isolation and remoteness".

Alaska--after a while at the Powell Ranger Station, we left for Alaska. It was an adventure and I was game. My only question was, what does "living in the bush" actually mean? Does that mean I live in a bush??? Not—they don't have many bushes where we lived in Alaska (they blew away too fast). We moved to King Salmon, Alaska located on Bristol Bay, close to Katmai National Park. I am sure many of you have seen shows like The Deadliest Catch or Brooks Falls (where the brown bears catch the salmon at the waterfall) on TV—that's where we landed. Our community was fly-in only, with groceries sent by barge from Seattle twice a year. There was one 15 mile long "Highway to Nowhere"— no joke! Well, unless it is in the dead of winter and you are going to Russia by dog sled! I remember standing on Bristol Bay, ice as far as I could see, thinking, I am sure I have seen this picture somewhere in National Geographic—and where are the polar bears hiding?

This is where Haley was born....oops.....once again, close, but in Anchorage, Alaska, a 300+ mile plane ride to the hospital. Boy, do we know how to pick places to be pregnant or what! Technically the airlines did not allow pregnant women on the planes after seven months, but I knew I had this down to a science. I got a big down coat (really BIG), again it's the dead of winter so the coat would not be out of the ordinary, and got on a plane to Anchorage on Friday morning. Friday evening Nick and I were doing some shopping at Costco (if you live in the bush, part of any travel always involves shopping). We would stop the cart about every hour or so and let a contraction finish before moving on with the shopping. Got a lot of funny looks! Went to the hospital Saturday morning, had Haley, flew home Sunday. Always the efficient one huh Tom?

We lived in Alaska for eight years and Nick had to really pry me out of there. It was very small, but it was a really great time spent at home raising our family. If you had a nice place to live (which we did) and home was good, then life was grand. If you did not like your spouse.....you were in trouble! We had a school with the highest paid teachers in the U.S., a post office, a grocery store, gas station, a couple of bars, a couple of hotels, and lots of bush planes flying people all over the place. Took me a while to get used to the float plane engines running very early in the morning. There was also an air-force base there where they would practice the fighter jets landing and taking off—just a big circle right over the runway. Did see a several black hawk helicopter trainings. Being buzzed by fighter jets just about blows your ear drums out! At least the swarm of black hawk's hovering over your head aren't noisy, just a little startling!

As the girls got older, I starting volunteering at the school—and very shortly after was employed by the school. It was fun and rewarding working with the kids, including lots of Alaska Natives with their unique different culture. I drove the school bus, took up kick boxing, then got certified and started my own classes. Later I became a swimming coach—was fun flying the girls to swim meets—with the exception of the money we had to raise to do it. They had a beautiful pool facility and a beautiful school for the 200 or so kids. Bristol Bay has the largest Salmon run in the world and the borough (instead of county) received a small percentage of those fisheries earnings which allowed them to build wonderful facilities for the community. This was when there were still lots of high valued fish—but that's a subject I will leave for my husband.

Most people ask me about the danger of the bears. You know, they really are so full of fish and berries that they are not interested in you. You knew what the bear's intentions were whereas I can't really say the same of passing some people in California. I think the bears are less of a threat! You just had to be cautious—like using the peephole on the door when barbequing on the back porch to make sure you don't have any unexpected guests. I have some fantastic videos of the whole bear experience, but there was much more than just bears. In particular, I remember my mother in law's expression when she read the local warning about watching your children closely at the school bus stops as the wolf packs were in town. I literally could go on and on about our wonderful times there.

Now, California, hmmmm. The ocean is beautiful, the redwoods are amazing, but I swear every hippy from the 60's flocked to, and still resides in Humboldt County. Nick is still working for U.S. Fish and Wildlife, keeping him busy with many issues. I started at the school, driving the school bus and teaching classes at the local gym. However, after many budget cuts they eliminated some bus routes, leaving us driving these multi ton vehicles with 70+ children and one driver. I'm now out of driving, it was safer at -50 degrees in the ice and snow of Alaska. I have since switched full time to the fitness center...

(Continued on page 6)

## Stephanie Hetrick, cont'd

teaching classes and am their office manager/bookkeeper. It's a good gig - I learned to multi task from the best—Mr. Maloney.

Haley, my youngest, is 13, playing basketball year round, squeezing in a softball season on top of it... keeping us very busy. Shelby is in high school. She has had some continuing health problems, but is being taken care of by Stanford University and local specialists.

Angela just turned 30 this past Thanksgiving. Her husband, Udo Shonk, is a switch operator for the railroad in Missoula, Montana. Angela is currently working on finishing up college and has a five-year old daughter. I need to find Fred Schenkmann, our old friend in Germany, to help me with some German interpretations.

Danyel is almost 28 and finishing up her masters degree in Seattle, Washington. She is planning on being a high school counselor—very brave. She is doing her internship in a charter school in Seattle right now. Her husband, Joe, is an avid cyclist, racing in his spare time, but also a manager of a local ski shop. Joe used to own a ski school out of Missoula, Montana. I got to meet a few of our current Olympic downhill medalists at their wedding. Very wild and crazy bunch to say the least. Anyway, Danyel and Joe have a two year old daughter.

Well, in a very reduced version, I think that's about it. If any of you are ever in northern California, look us up, would love to see you! To those WSU Cougar basketball fans, we are sending you a very talented basketball player from McKinleyville, her name is Sage Romberg—she is somebody to watch! I'm still, however, affiliated with particleboard as my husband is hoping to replace the failed LP Siding on our overpriced California Home...wish Tony Nilson and Marty Lentz were here to help on this adventure!



Stephanie and her daughters, Shelby and Haley

#### Comments from the Director, Donald A. Bender

We hope this newsletter finds you well. We are keeping busy in Pullman and here are a few highlights.



Don Bender

Students – we currently have 19 MS graduate students and 21 doctoral students participating in the center. Home academic departments for these students include Civil & Environmental Engineering, Mechanical and Materials Engineering, Materials Science, Chemical Engineering and Forest Products (UI). The diversity and quality of our students is a tremendous asset in our research programs.

Staff – Judy Edmister, our principal assistant for over a decade, took a new position in WSU International Programs. Prior to joining our unit, Judy had extensive international experience. This new position is a great fit for her and will offer many new challenges. Judy will be sorely missed and we wish her well. Suzanne Hamada is our new administrative assistant at CMEC. Suzanne's previous positions were with the WSU Women's Resource Center, the Palouse Conservation District in Pullman, and the Asian Pacific Islander Community Leadership Foundation in Seattle.

Faculty – Jinwen Zhang was promoted to Associate Professor and awarded tenure, and Katie Zhong was promoted to full professor. Marie Laborie accepted a faculty position at the University of Freiburg in Germany (close to her family in France). Edward Jiang accepted a faculty position at North Dakota State University and Mohammed Elgawady will be departing WSU this summer. We will miss Marie, Edward, and Mohammed and wish them the best. We have a proposal pending with our Provost for new faculty positions targeting sustainable materials and design. Hopefully we will have good news to report on that proposal in a future newsletter.

**Projects** – Space does not permit me to list all projects, but here are a few areas we are studying: pyrolysis derivatives and recycled materials (Karl Englund); polymer toughening, thermosetting bio-resins, soy protein based fiber (Jinwen Zhang); building energy efficiency, deck safety and diaphragm design (Don Bender); sustainable pavement materials from recycled tires and cooking oils (Haifang Wen);

(Continued on page 7)

#### Comments from the Director, cont'd

carbon sequestration in cementitious materials (Liv Haselbach); polymers, polymer nanocomposites and fiber reinforced composites (Katie Zhong); postbuckling of composite structures, structural health monitoring using smarts materials, and durability of cementitious materials (Pizhong Qiao), fasteners for high wind/seismic, diaphragm/shearwall performance (Dolan).

Drop us an email if you get a chance so we can include you in our next newsletter. Until next time. ....Don Bender

#### The New Associate Editor

This newsletter is late in being published because our Associate Editor, Judy Edmister, has moved on to a position of the Assistant to the Vice President of International Programs. Our new Associate Editor is Suzanne Hamada who came on board in June. The Editor did not ask her to put together this Newsletter until she had some time to become somewhat established in her new position. Her work as an Administrative Assistant is very complicated and she did not need the additional pressure of getting the



Suzanne Hamada

Newsletter out. The Editor, as most of you know, needs help in getting papers and such out in proper order. Suzanne Hamada has already been introduced in Don Bender's comments. Suzanne's photo is shown above.

### **National Recognition**

The Center's Director **Donald Bender** and adjunct professor **Frank Woeste**, with colleagues from Virginia Tech, earned a national outstanding paper award for their research into improving residential decks. Bender is an endowed Weyerhaeuser professor in the Department of Civil and Environmental Engineering.

Their paper, "Development of Design Capacities for Residential Deck Ledger Connections," earned the 2009 Markwardt Wood Engineering Award. The award is given for the most outstanding research paper published in the wood engineering field in the Forest Product Society's two most prominent journals.

The article by Bender and Woeste, and co-authors David Carradine and Joe Loferski, was published in the Forest Products Journal.

The colleagues have conducted extensive research and developed design guidelines for making residential decks safer. Except for hurricanes and tornadoes, more injuries may be connected to deck failures than all other wood building components and loading cases combined.

**J. Daniel Dolan,** professor of Civil and Environmental Engineering, received the 2009 Building Seismic Safety Council's (BSSC) Honor Award. He was recognized for his "passion, energy and unselfish contribution of expertise and leadership" in advancing the purpose and goal of the BSSC and National Institute of Building Sciences.

He also was honored for his commitment and pivotal role in development of the 2006 edition of the "Homebuilders' Guide to Earthquake-Resistant Design and Construction."

He has been at WSU since 2002 and is a recipient of the university's Sahlin Faculty Excellence Award for Public Service.

Dolan has pursued efforts to improve building codes to make the built environment safer from earthquakes and hurricanes. In addition to his work on the home builder's guide, he was involved in another publication of the Federal Emergency Management Agency, "Home Builders' Guide to Coastal Construction."

He served as chair of the International Code Council committee to address the wall sheathing requirements of the International Residential Code (IRC). This committee's work helps define the safety level of single-family houses in the United States.

He was a member of the International Code Council IRC Building and Energy Committee, which evaluates proposals for the IRC pertaining to structural performance and energy conservation to determine if the change is beneficial to public safety.

He has served on the International Building Code Technical Update Committee to evaluate changes proposed for the structural safety portion of the building code governing large buildings.



Frank Woeste



Dan Dolan

As part of the BSSC award, Dolan also was recognized for his service as a member of the Code Resource Support Committee and his efforts as a member of the Provisions Update Committee during development of the 1997, 2000, 2003 and 2009 editions of the national recommended seismic provisions, the precursor to the building code, and ASCE 7, the load standard for all building design.

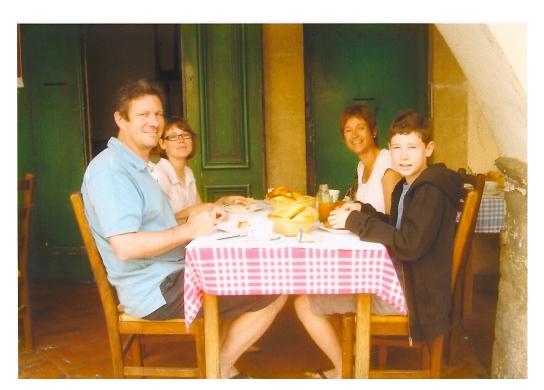
Dan served as the Acting Director of the Center during Don Bender's sabbatical. Reported by Tina Hilding, College of Engineering and Architecture

#### Alumni, Staff and Friends News

Most of the readers of this Newsletter know our good friend, supporter (both personally and financially) and genuinely good person, Fred Fields. Fred as you know was president and owner of Coe Manufacturing until he sold the business upon his retirement. It is my sad task to inform everyone who does not already know this that Fred lost his wife of 52 years, Suzanne or Sue as she was known, in early February. Both Fred and Sue were very giving people supporting in great ways many activities such as the Arthur and Dorothy Schoenfeldt Distinguished Writer Series (named after Sue's parents) at the University of Portland. For the last 15 years she served on the university's Board of Regents and they have donated two residence halls to the university. They both also generously supported Lewis and Clark College where Fred is a life trustee and former chair of the Board of Regents. They helped endow a professorship in the humanities, contributed to a building housing visual arts programs and made significant gifts to advance the College's teaching, research, and service.

Sue, naturally, with all of her gifts was active in many other organizations. All of those who knew them at Washington State University send our sincere condolences to Fred.

The old-timers in the Laboratory will remember Robert (Bob) Seidel who served on the Colleges Advisory Board for 25 years. Bob had a long history in the forest products industry primarily serving in the Simpson Timber Company and affiliates. He held leadership positions such as Vice-President for Research and President of Simpson Paper Company. Bob served as a true advisor to the College and particularly to the Laboratory. He asked tough questions on why we were doing things and was very supportive of our work. Bob recently died at the age of 94.



Marie Vincent (ne Petit) received her MS from WSU in 1986. She is pictured here in with her husband, Marc, daughter Claire (13 years old), and son Julien (14 years old). Vielle St. Girons, France, 2010.



Composite Materials and Engineering Center

PO Box 641806 Pullman WA 99164-1806

Phone: 509.335.2262 Fax: 509.335.5077 cmec.wsu.edu