

CMEC Alumni & Friends Newsletter

Tom Maloney, Editor
Suzanne Hamada, Associate Editor

Comments from the Editor



Tom Maloney

It is hard for me to believe that this is No. 9 in this series of Newsletters. Since I am now 81 years old, someone else will have to be taking over in the not too distant future. But for now, I am still able to move about and cause trouble. Donna is doing well, struggling with some health problems such as us old people are wont to have.

We now have a saying when someone asks how we are, "We don't ask (our physician) anymore because we might get frightened."

On to serious stuff. There are two great pieces of news. First, Mike Wolcott has been named a Regents Professor at WSU. This is the highest honor the university can give to a faculty member. According to my count, there have been 33 faculty so honored over the past ten years or so. Congratulations are due to Mike as this honor is well deserved. The full story follows in this newsletter.

The second piece of great news is the National Science Foundation (NSF) grant awarded to Vikram Yadama. He recently received a prestigious NSF CAREER award for his work to develop unique, sustainable building materials from wood strands. It is very difficult to obtain such a grant as the competition is quite fierce. So, congratulations to Vik. The complete story is in this newsletter.

I have been featuring in the Alumni Spotlights, older graduates

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Regents Professor: Michael P. Wolcott



Mike Wolcott

Michael P. Wolcott, professor in civil and environmental engineering, director of the Institute of Sustainable Design and Louisiana-Pacific endowed professor of wood materials and engineering has been named a Regents Professor at Washington State University. The promotion honors the highest level of international distinction in the discipline that raises university standards through teaching, scholarship and public service.

Mike is an international leader in bio-based composite research. His work has led to development of advanced materials that are more durable, cost less to manufacture, create less pollution and provide better performance.

His research has appeared in more than 100 publications. He has been principal investigator on more than 40 academic research projects. He managed more than 75 industrial product research and development projects with more than 45 companies. He has received more than \$60 million in funding from numerous federal agencies.

Wolcott has received many honors for his innovative research, including two George Marra Awards for excellence in wood research, the Wood Award for excellence in graduate research and

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Comments from the Editor, continued

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who have been out in the world for many years. My reasoning has been that while we all want to know how they are doing, an important part of the write-ups shows the present graduate students and recent graduates the opportunities that exist for our graduates. And, furthermore, their stories are inspirational. Their success is very gratifying to the faculty and staff that were here during their educational time at WSU. As we sometimes say, they became very successful in spite of the WSU faculty. In this newsletter, **Dr. Richard M. Rammon** is featured.

However, not to neglect our recent graduates, we are spotlighting two in this issue: **Brian Parsons** and **Bailey Rae Brown**. They are continuing the long list of successful graduates in the various programs of what is now the CMEC.

Our Staff Focus will introduce to you **Janet Duncan**, Program Coordinator in the CMEC. Also, **Patricia (Pat) Smith** has retired after 14 plus years at the Center (a total of 32 years at WSU). For those who did not know her she was the "Fiscal Specialist 1" for the Center handling all of the money affairs. During her time at the Center, all audits of her work were perfect—a great recognition of her work. We all wish her well in her retirement.

The 17th International Symposium on Nondestructive Testing was held in Sopron, Hungary late in the last year. **Roy Pellerin** reports on the Symposium in this Newsletter. For the younger readers of this Newsletter, we took over this Symposium at No. 2 although we were an active participant in the first one (the real Symposium as it stands today started with No. 2). We hosted and organized this important series until Roy's retirement. At that time, no one took on the leadership at WSU so the Symposium became a floating event hosted in several different locations and countries. Its importance and longevity is

due to the leadership of Roy Pellerin.

And as it has been occurring too frequently recently, we are remembering three of our great supporters and Hall of Fame members: **Fred Fields**, **Ted Bauer**, and **Ben Bryant**.

Following is a letter from long time friend and character **Alfred (Fred) Shenkman**, president of the machinery company *Shenkman and Piel* of Germany. It has been retyped by the Editor. It was sent to us to be read at the 2002 Symposium. Fred is one of the pioneers in developing equipment for the wood composites industry. I am including this letter to show the great economic impact that the Wood Composite Symposium has had on the research and education of what is now the CMEC as well as on the Palouse region and how Pullman became known as the place to be in the Spring for the Symposium.

As many of you know, much of the world knows about laboratories and universities by the name of the town where they are located. So "Pullman" resonates well throughout our world. It was interesting to me one time, when some of our European friends found out that there was a University of Washington in Seattle. They had never heard of it. So on to Fred's message (in italics).

"After about 30 years of attending the WSU Symposium, it is time to retire and say good-bye. Let me give you a few figures to inform about the impact of people to coming to Pullman. I am only one of many, an average German, soon to be called a European.

Traveling from Germany to Pullman meant:

- 200,000 miles of air/ground travel
- 125,000 \$US in air fares

Comments from the Editor, continued

(Continued from page 2)

- 4,500 \$US for rental cars
- 6,700 \$US for accommodations
- 4,600 \$US for inviting people for dinner
- 5,600 \$US for drinks

(Note: a total of \$146,400 not adjusted for inflation)

I have attached one ticket for wrong parking that I did not pay. I have spent 4,700 hours (65 months—approximately 1% of my lifetime to organize, come to Pullman and go back home).

I have met more than 11,000 people, many of whom know the world. Many are also known around the world. I will miss you all at this years Symposium in April 2002. Thank you all !!!”

(Note: a remarkable contribution to the old WMEL and Pullman by just one person— think about the total financial impact provided by all of the attendees and that is well over \$50 million).

As a final piece of wisdom, I believe from Goethe, “*Nothing is more frightening than ignorance in action.*” We all hope that our graduates are leading the way in overcoming some of the public’s perceived ignorance about our important profession. ■



Don Bender presents Pat Smith with a gift at her retirement party on March 7, 2012.

Wolcott , continued.

(Continued from page 1)

the Cahn Award for applied surface science research. He received an Alumnus Career Achievement Award in 2009 from Virginia Tech and, from WSU, the inaugural Anjan Bose Outstanding Researcher Award. The College of Engineering and Architecture named him Outstanding Research Faculty in 2004 and 2005 and Outstanding Teaching Faculty in 2007.

Adapted from article by **Donna Clark, Office of the Provost** ■

NSF Early CAREER Award: Vikram Yadama



Vik Yadama

Vikram Yadama, Assistant Professor and Extension Specialist in the Department of Civil and Environmental Engineering, recently received a prestigious National Science Foundation CAREER award for his work to develop unique, sustainable building materials from wood strands.

With the ally, it is less burdensome on heating and five-year, cooling systems,” he says.

\$400,000

grant,

Yadama

and his

col-

leagues

aim to develop better sustainable building

materials made from lignocellulosic fibers.

In particular, they are working to expand

knowledge on the design and manufactur-

ing of wood-based composite products for

use in net zero energy construction, par-

ticularly for the outer shell of buildings,

which is called a building’s envelope.

Buildings account for approximately 40

percent of all U.S. energy use, of which

homes are 54 percent and commercial

buildings use 46 percent. The U.S. gov-

ernment aims to increase the develop-

ment of net-zero energy commercial build-

ings by 2015 and residential buildings by

2030, says Yadama. A key to increasing

energy efficiency in buildings is to reduce

heating and cooling requirements. Main-

taining a consistent and moderate tem-

perature inside the building is determined

by the properties of a building envelope.

“If the interior temperature changes gradu-

ally, it is less burdensome on heating and cooling systems,” he says.

Yadama’s project will assess new design concepts that use panelized systems for

residential construction to meet the struc-

tural and energy requirements of the building codes. In particular, Yadama is

working on the development of light-weight, three-dimensional, lignocellulosic

sandwich panels with complex geometries that will be more efficient than the oriented

strand board or plywood that are currently used in the outer shell of buildings.

The work will include computer modeling to carefully analyze how different geome-

tries affect energy efficiency and the material’s behavior. While the materials will

need to have optimal energy efficiency, they also will have to maintain the

strength and stiffness needed to meet building codes, he says.

The materials will be designed and then eventually tested at WSU’s natural expo-

sure testing facility in Puyallup, assessing factors such as how moisture and tem-

perature vary through walls exposed to the natural elements.

Yadama also will be training engineering students to work with and gain better un-

derstanding of bio-based materials, so that they will bring this familiarity with the

materials into their future careers in the building industry. He also hopes that the

new type of materials will provide a way to use low-value wood feedstock to make a

value-added product and thereby help the forest products industry.

According to the NSF website, the Faculty Early Career Development (CAREER)

Program offers that agency’s most prestigious awards for junior faculty for out-

standing research and integrated education and research efforts.

Yadama holds a doctoral degree in Civil Engineering from Washington State Uni-

versity, a master’s degree in Wood Science and Technology from Virginia Poly-

technic Institute and State University, and a bachelor’s degree in Forestry from Iowa

State University. ■

Article by **Tina Hilding, College of Engineering and Architecture**

Alumni Spotlight: Richard M. Rammon



Rick Rammon and his wife, Sue

Written by Rick Rammon

I am another of those University of Wisconsin – Stevens Point transplants that Tom has mentioned before (in earlier editions of this newsletter). I did not, however, go to Pullman directly from Stevens Point. When I completed my bachelor's degree in Forestry at Stevens Point, my wife **Sue** and I wanted to stay a little closer to home and family. I got a great opportunity when I was awarded an assistantship at the University of Wisconsin in Madison to work on a master's degree. I worked on a joint project between the university and the USDA Forest Products Laboratory, so I had the unique experience of working with the scientists and utilizing the facilities of the Forest Products Laboratory.

Those two years in Madison went by very quickly. When I completed my Master's work, the job market was rather bleak. I had met **Tom Maloney** in Madison at a conference and we had talked about my work in "Non-conventional Wood Bonding." At that time, **Professor Bill Johns** was on the faculty at the WSU Materials Science and Engineering Department. He was one of the primary researchers in the industry working on alternative bonding techniques. Tom ultimately offered me an assistantship to work on my Ph.D. with Bill at WSU. I accepted, and Sue and I packed our meager belongings in a U-haul and headed across-country, site un-seen to Pullman.

We both still remember clearly as we drove across Idaho through Coeur d' Alene and turned south at Spokane how the trees all vanished and the rolling hills of the Palouse came into view. It was a bit of a shock, we hadn't expected this, but the rolling hills and the patchwork of colors and the contours of the plowed fields had a striking beauty that quickly grew on us as we made our way into Pullman. We had not been able to make a visit before we moved. Fortunately, our good friends from our time in Stevens Point, **Wally Plagemann** and his wife **Sandy**, were already there at WSU and had found an apartment for us. We arrived in Pullman and settled in for the next chapter in our lives.

I was a little concerned initially because the Wood Composite group was part of the College of Engineering and I did not have any engineering background at all. Tom had assured me that I would not have a problem making up the engineering background. In fact, as I look back the engineering focus of the program turned out to be one of the most helpful aspects I took forward into my career. Over the years as I worked on various product development projects it always held me in good stead. While my colleagues came primarily from Organic Chemistry backgrounds, my Materials Science Engineering background gave me a unique perspective on product development. I always attacked a problem by thinking of the specific physical attributes or performance characteristics that were required. I would then use my knowledge of the unique characteristics of wood and the binders I was working with to engineer the final composite to meet those needs.

One of the things I remember most about those years at WSU was the strong feeling of family that existed between the faculty, staff and students in the department. We were all very tight and did everything together. In particular, I remember fondly all of the racquetball. There was a strong, but friendly-

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Alumni Spotlight: Rammon, continued

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competition between the staff and the grad-students on the racquetball court. We played whenever we could find time between projects, classes and research.

The thing that stands out most, however, was how Tom managed to bring in a wide variety of industrially funded research projects. The department had minimal funding from the University and most all of the grad-student assistantships were funded through contract research. I was able to work on a variety different projects ranging from composites to laminated beams and adhesive formulations. The projects were all real world industry driven and this helped all of the students gain a feel for the type of work they would ultimately be doing once they graduated. The broad range of industrial contacts established through Tom's network in the industry was also a great benefit when it came time to find a job.

When I finally completed my Ph.D. in 1985, I had two job offers to consider. One was with Boeing in Seattle, and the other was with Chembond, a major wood adhesives producer in Springfield, OR. I ultimately decided to stay in the wood products industry and accepted the job with Chembond, and Sue and I moved to Oregon. I went to work at Chembond as a Development Chemist formulating Urea-Formaldehyde resins for Hardwood Plywood and Particleboard applications.

It was while we were in Springfield that Sue and I started our family. We adopted our two great kids, **Anna** and **Michael**. We lived there for about three years before I was approached by Georgia Pacific Resins about a job in their development center in Atlanta. It was again the exposure and contacts related to the Wood Materials & Engineering Laboratory at WSU that led to this opportunity. I had been given the chance to present my graduate research at the Particleboard Symposium and that had

led GP to contact me.

I accepted the job with GP and moved the family to Atlanta. I worked in the Atlanta lab for 5 years and then had the chance to move back to the Pacific Northwest when GP offered me a position managing their R&D lab in Albany, OR. The whole family loved Oregon. We lived there for about 7 years in Corvallis and everyone really felt at home there.

As major corporations often do, GP reorganized and consolidated their regional business units. They asked me to move back to Atlanta and manage the consolidated Wood Adhesives Research group. The new job was a major change and at one time I was managing over 40 people at three different locations. I spent more time on administration than research, and I grew to miss the development work. After several years I got the chance to drop the administration duties and became a Program Manager coordinating and directing the research on specific high profile innovation efforts.

I retired last year after nearly 25 years with GP. I am now enjoying the opportunity to spend time in my wood shop building furniture and boxes. I am doing some consulting and that allows me to stay in touch with the industry. I am also finding time to golf a bit more than I did while working and Sue and I have started traveling a bit. We bought a small camping trailer and have found a couple of great spots nearby where we enjoy spending some quiet time.

The kids are both back with us for the time being still working on getting established. Michael completed his degree in Accounting at Georgia Southern University and is working locally. Anna did her time in college, but determined her interests are with her art and writing and is working to find a path that will let her use

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Alumni Spotlight: Rammon, continued

those talents. We plan to stay here in Georgia for the near term, but most likely we will return to Wisconsin at some point since we still have many old friends and family in that part of the country.

When I look back at the time at WSU and the impact it had my career I can't help but be grateful for the experience. Whenever I ran into other graduates of the Wood Materials & Engineering program at conferences or symposiums we always agreed that the education and experience gained in those years helped to shape our lives and our careers. ■

Staff Focus: Janet Marie Duncan

Janet Duncan is a Coordinator at the CMEC. She has been with the Center since 2000. In her own words, her main job duty is to keep **Mike Wolcott** semi-organized and to keep track of his large research projects. Right now the largest is the new USDA NARA project. For those of you who missed it, following is the official announcement of this project:

"Spearheaded by Washington State University, the Northwest Advanced Renewables Alliance (NARA) takes a holistic approach to building a supply chain for aviation biofuel with the goal of increasing efficiency in everything from forestry operations to conversion processes. Using a large variety of feedstocks, from construction waste to forest residues, the project aims to create a sustainable industry to produce aviation biofuels and important co-products. NARA features a broad alliance of private industry and educational institutions from throughout the Northwest to provide an overarching view to best address the aviation biofuels challenge."

This is a \$40 million project lead by co-leaders Michael Wolcott, LP Distinguished Professor of Wood Materials and Director of the WSU's Institute of Sustainable Design (part of the Center) and **Norman Lewis**, Regents Professor and Director of WSU's Institute for Biological Chemistry.

So, while Janet is modest about her work, one can quickly see that she is a very important person in this massive project. Everyone in a leadership role, if they are smart, quickly realizes that

their co-workers (I always consider such people as co-workers, not support staff) are extremely valuable people in making any project a success. People such as Janet make sure work is scheduled properly, reports are sent in on time, budgets are under control, project leaders are on schedule, etc. Janet has been doing such work for 12 years in the Center, which I might add—very successfully.

Janet has a B.S. degree from WSU in Animal Science with a minor in Agricultural Economics. She has an extensive history with WSU, having also worked in the Department Civil and Environmental Engineering, the Marketing and Inter-

national Business Department and at the Irrigated Agriculture Research & Extension Center in Prosser, Washington. She has also worked for the Farmers Home Administration in Olympia, Washington and as a Legal Secretary in a Law Office. Suffice it to say, she came well equipped for success at the CMEC.

She has participated in many civic activities as well as WSU activities, perhaps high-lighted by her receiving the Staff Excellence Award in the WSU College of Engineering and Architecture in 1997-1998.



Janet Duncan

Staff Focus: Duncan, continued

Janet and husband Bob (featured in the No. 7 Newsletter) have two children. Their daughter, **Christina** will be a M.S. graduate in Civil Engineering at WSU this Spring. She is married and will be starting a job at CH2M Hill in Bellevue, Washington in April. Son, **Burns**, is attending Johnson and Wales University School of Culinary Arts in Denver, Colorado. He will be receiving his A.A. in Culinary Arts this summer and has an internship at Lake Hotel in Yellowstone National Park lined up for the summer. ■

17th International Symposium on Nondestructive Testing & Evaluation of Wood

Reported by Roy Pellerin

The University of West Hungary (UWH), Sopron, Hungary was the host for the Seventeenth International Symposium on Nondestructive Testing and Evaluation of Wood (September 14th-16th, 2011). **F. Divos** (UWH) and **R. J. Ross** served as co-chairs. Support for the symposium was provided by University of West Hungary, Hungarian Academy of Science (Wood Science Sub-committee), and the International Union of Forestry Research Organizations (IUFRO).

(Note: Professor Divos in the past was a Visiting Scientist at the Wood Materials and Engineering Laboratory).

Technical session themes were: 1. Tree and Log Quality; 2. Urban Tree Evaluation; 3. Structural Lumber Grading; 4. Engineered Wood Products; 5. Wood-Based Composites; 6. Vibration Based Methods; 7. Condition Assessment of Historic Structures; 8. Other NDT related areas. A poster session was also included.

Two pre-symposium workshops were conducted in the Sopron area prior to the meeting; one focused on structural lumber grading and the other on evaluation of historic structures. During these workshops participants received formal classroom and hands-on training and in-depth exposure on the interpretation and use of NDT/NDE related assessments.

The Symposium was attended by 133 participants from 31 countries. Three of the International Organizing Committee were from The Wood Materials and Engineering Laboratory Program at Washington State University. They are :

Brian K. Brashaw, Program Director University of Minnesota Duluth, USA

(WSU graduate MS degree 1991)

Robert J. Ross, Project Leader, USDA Forest Products Laboratory, USA

(WSU graduate PhD degree 1984)

Roy F. Pellerin, Professor Emeritus Washington State University.



Bailey Rae Brown, M.S. Civil Engineering

Written by Bailey Rae Brown

I came to Washington in the Spring of 2011 to fulfill my lifelong dreams of living in the Pacific Northwest and earning my M.S. degree in Civil Engineering. The professional yet personable staff, focus on sustainable design, and the impressiveness of the Composite Materials and Engineering Center persuaded me to choose WSU over other schools in the region.

Before arriving in Pullman, I studied at the University of Wyoming for a B.S. degree in Architectural Engineering (structural emphasis) while working simultaneously for Gertsch Baker Engineering and Design as a Designer/Drafter for three years.

From the beginning of my time in Pullman I began investigating building envelope performance, primarily using hygrothermal modeling computer-based simulation software. In April after accepting a research project funding by the USDA Wood Utilization Research Program and lead by **Dr. Don Bender**, I flew to North Carolina for a workshop on WUFI Pro 5.1 – one the industry's leading hygrothermal modeling programs. There I was trained by some of the developers of the program and the Oak Ridge National Laboratory Building Envelope Group Leader and Staff.

Upon my return, my research began on hygrothermal investigation of the application of three-dimensional hollow-core wood-strand composite sandwich panels (HCP) as structural skins for a new high performance building panel. These composite panels were developed by **Dr. Vikram Yadama** and his research team.

The incentives for my research stemmed from the growing popularity of structural insulated panels for use in energy efficient design and the implementation of ever more restrictive building energy codes. Currently, our country stands as the most energy consumptive nation in the world (consuming 40% of all energy), and the catalysts of foreign oil dependence, environmental impacts, and economic downturn have driven the construction industry demand toward more economic and "greener" structures.

The only disadvantage to energy efficient design is doing it wrong – a primary concern for building envelope design when the selection or placement of materials reduces heat flux but may cause the accumulation of moisture. If designed improperly, building envelopes can trap moisture leading to microbial growth capable of damaging indoor air quality and compromising structural integrity.

Research of the HCP for a new high performance building panel included the use of HCP structural skins for a structural

insulated panel (SIP) application. WUFI Pro 5.1 was employed to investigate, (1) how the inclusion of passive ventilation at HCP exterior core voids could increase drying potential, (2) how the implementation of form stable phase change material (PCM) at interior and exterior core voids of the HCP skins could curb peak heat flux – both in comparison to traditional SIP construction with solid OSB skins. Investigations included simulations for long-term behavior of both traditional and modified construction of the SIP for transient heat and moisture behavior.

Analysis of the simulation results demonstrated that incorporation of the HCP as a structural skin reduced if not eliminated the normalized microbial growth potential over standard SIPs by reducing the thickness of the absorptive OSB, the most critical layer for microbial development, and providing more surface area from which to relieve moisture to ventilated air. PCM simulation results demonstrated that inclusion at the exterior

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Brian Parsons, M.S. (2012) B.S. (2010)



Brian Parsons

Written by Brian Parsons

I started my education at Spokane Falls Community College in the Fall of 2006. After completion of my Associate of Science degree in pre-engineering, I moved to Pullman to continue my education. During my undergraduate studies at WSU, I married my wonderful wife **Katie**. Her love and support have really helped me get as far as I have. I completed my B.S. degree in Civil Engineering in 2010. I then decided to pursue an advanced degree in Civil Engineering at WSU. After my first semester of graduate school, I had the opportunity to join the Composite Materials & Engineering Center (CMEC) as a Research Assistant working with **Dr. Don Bender** on the subject of exterior deck safety. Deck safety is an important national problem with over 30 deaths from deck collapses reported over the past decade.

My research addressed two critical needs: 1) quantifying lateral forces generated by deck occupants and 2) characterizing the strength, stiffness and load paths for common deck constructions.

To understand occupant lateral loads, I constructed full size decks in the laboratory and loaded with occupants performing a

variety of dynamic actions, at occupancy levels of 10, 20, 30, and 40 psf. The first was a cyclic side-to-side sway motion that simulated synchronized movement (e.g. dancing or aerobics). The second was an impulse type load which simulated “horseplay” type activities. We discovered that lateral loads from occupancy controlled over those from wind and seismic for over 95% of the US!

The second phase of my research was a great learning experience too. I built decks that were instrumented so I could measure forces, deflections and track the load path from the deck into a simulated floor diaphragm. This involved making my own load cells that were incorporated into each lag screw and tension tie-down that connected the deck to the house. The results of this work will be used to develop prescriptive deck designs in the International Residential Code.

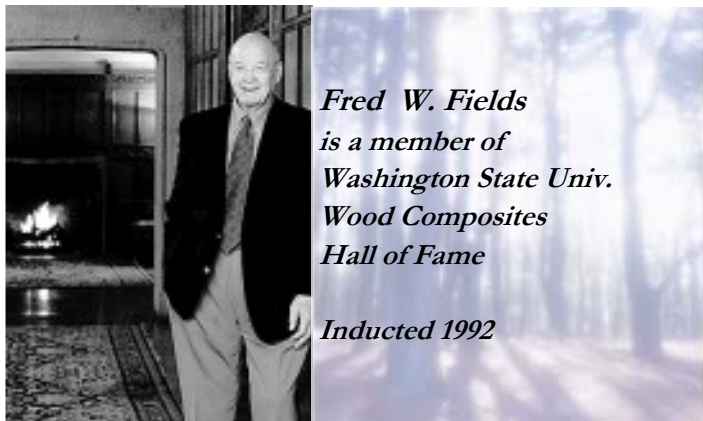
I successfully defended my thesis in January 2012, and accepted a job offer from the Puget Sound Naval Shipyard & IMF to be a Naval Architect. I will be working as a civilian for the Department of Navy and my duties will include the structural design of waterborne vessels. My coursework and hands-on experiences from my M.S research really prepared me well as I launch my career. ■



Passing of Friends

We have had a run of our colleagues and friends passing from the scene. In this issue we are reporting on, with regret, three more friends : **Fred Fields**, **Ted Bauer**, and **Ben Bryant**. These gentlemen have been great supporters of the WMEL. Fred was on our Advisory Board and was also a financial supporter. Ted worked behind the scene for us and sent considerable work our way. Ben, taught many of the students who became forest products leaders as a professor at the University of Washington. All three will be missed.

Fred W. Fields



*Fred W. Fields
is a member of
Washington State Univ.
Wood Composites
Hall of Fame
Inducted 1992*

Some of the readers will remember the Advisory Board that was set up after we had our successful fundraising drive in the 1980's. Such Advisory Boards after meeting with us would also hold a conference with the university president or provost. These boards were quite effective. I was not allowed to be at these meetings but one provost told me that we had a very good Advisory Board and that they were very supportive of our

efforts. I understood the "support" was quite often pointed in our favor.—and Fred was one of those voices.

Fred introduced me to many industrial people while visiting his plant in Oregon and at trade shows in Portland and Germany. Fred was not afraid of voicing his opinion and helped get us support from companies that had not previously engaged our services. Following are excerpts from his obituary. The complete document can be found in *Panel World*, January 2012.

Fred, a Depression-era Indiana farm boy who worked for and then owned the Coe Manufacturing Company and who became one of the wood products industry's leading personality died in Palm Springs, California on December 13, 2011. He was 88 years old.

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Brown, continued

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cores of the HCP skin was able to reduce indoor wall surface peak heat flux between 6 to 28 percent, presenting peak flux delays from two to six hours.

The disadvantage, however, was seen when HCP was layered between PCM and traditional closed cell expanded polystyrene foam insulation core material – two impermeable substances. This con-

figuration prevented the removal of moisture due to incidental wetting or initial conditions.

In February, I will continue to perform hygrothermal investigations and broaden my knowledge of building envelopes as an Engineer for RDH Group in Seattle. Some of my duties will include building enclosure condition assessment with the potential for litigation support, tender package creation primarily involving details and

specifications, performing computer-based modeling, and continuing research to assist technical staff and project managers.

Having already relocated to Seattle, I am very excited to be working in the RDH office and continually learning every day. ■

Passing of Friends, continued

Fred W. Fields, continued

(Continued from page 11)

While his father, Mahlon, worked in a nearby General Motors plant, and his mother, Ethel, tended to chores, a 10-year-old Fred and his brother Eugene farmed the family's 100 acres in Alexandria, Indiana during an era of self-reliance and hard work. Fields always pointed to his upbringing on the farm as contributing to his knack for equipment maintenance and engineering in later life.

He also played sports, especially basketball and football. He was a star athlete in high school and also played football as a freshman in 1941 at Ball State University. He transferred to Indiana University his second year, and then was drafted into the service. He served 42 months in the Air force, spending most of it teaching pilot navigation and advanced instrument flying. He continued his engineering education at several schools through the Army Specialized Training Program.

After the war, he took some engineering classes at Purdue University and then went into industry. He started with a construction company where he first encountered the Coe Manufacturing Company installing some of their equipment at a new rock wool manufacturing plant. He then joined Coe in 1947. This lasted for two years and he was laid off during an economic shutdown. However, he was shortly rehired to oversee the installation of a plywood plant in East Africa.

Fred's history with Coe is long and interesting. He moved up in Coe over the years to where he was the Western Manager in 1959 stationed at Tigard, Oregon. In the 1970's the owners of Coe decided to sell the company. Some companies were interested in purchasing Coe but never finalized a deal. The family owning Coe suggested that Fred buy the company, which he did in 1977. This started his long distance managing career flying constantly between the main Coe plant in Painesville, Ohio and the west coast plant in Tigard. He did this traveling until he sold the company in 2000.

Over the years, Fred built Coe into one of the premier forest products equipment manufacturing companies in the world. Equipment for plywood manufacturing was used everywhere the industry operated. Coe also supplied equipment for the gypsum industry He also brought other manufacturing companies into Coe including Washington Iron Works, Moore Dry Kiln Company, Saab Systems, and Albany International.

Fred and his wife, **Suzanne**, (who died in 2010) were very charitable citizens. They gave generously of their resources and time to Portland, Oregon's Lewis & Clark College, the University of Portland and Lake Erie College in Painesville. Fred served on many non-profit organization's Boards of Directors and on the board of the U.S. Bank. In 2008, Fred received the Bronson J. Lewis award for leadership and industry contribution from APA–The Engineered Wood Association. ■

Passing of Friends, continued

Benjamin Smyth Bryant



Benjamin Smyth Bryant, Professor Emeritus at the University of Washington, School of Forestry, died quietly in his sleep in Seattle, on 11/14/2011. He was 88 years old. Born in March of 1923 to Benjamin Samuel Bryant and Edyth Smyth Bryant, Ben grew up in the Phinney neighborhood in Seattle, skipping a grade at John B. Allen Elementary, graduating from Ballard High with honors (and perfect attendance) in 1940. He was very active in his church, Boy Scouts (Eagle Scout at 16), and mountaineering, scaling all the major peaks in Washington State, and surviving a 1,200+ foot fall down McClellan Butte in 1941.

During WW II, Ben was a 2nd Lt. in the Army Signal Corps, in charge of "colored" troops putting up communication lines across Okinawa in 1945. His experiences with his own men, and with native Okinawans during his year on the island, profoundly affected his view of human nature. In 1947, Ben married **Jean I. Solberg**, then moved to New Haven, CT to complete his education at Yale. He completed his Doctor of Forestry in 1951, having returned to Seattle to teach at the UW.

*Benjamin Smyth Bryant
is a member of
Washington State Univ.
Wood Composites
Hall of Fame*

Inducted 2003

He worked summers in the forest product industry, creating new products, increasingly to meet the global need for low-cost housing. Holder of 8 patents and 70 publications, Ben spent the last decades of his life developing and promoting his low-tech press for making fuel briquettes out of agricultural waste, seeking to stop deforestation and improve the lives of women in developing countries.

Ben was a world traveler, happiest on the road and interacting with other cultures.. He lived his life according to the parable of the talents, believing that all one is given is a gift owed, in turn, to the world. To those he judged needy and worthy, he was generous to a fault. If life did not always conform to his ideals, his faith in his dreams remained unshaken. He was shaped by the depression, WW II, a mind overflowing with ideas, a personality overflowing with enthusiasm, and a belief that on some level all people are of equal value. He tried to make the world a better place. ■

Passing of Friends, continued

Ted Bauer 1930-2011



Ted Bauer celebrating the sales of 6,000,000 m³ of Clonmel-produced Medite in 2008

***Ted Bauer
is a member of
Washington State Univ.
Wood Composites
Hall of Fame
Inducted 1993***

Ted Bauer, one of the leading players in the evolution of the MDF industry worldwide, passed away at home in Medford, Oregon on November 14, 2011 following a long illness. A graduate of Iowa State University, Mr. Bauer became well-known in the US, Europe and Australasia as the driving force behind the growth of MDF and the Medite MDF brand.

He pioneered the MDF revolution in western Europe, most notably in 1978 when he held the FIDOR (Fiber Building Board Development Organization) conference in Eastbourne, England spellbound. Following his presentation, the conference agenda was abandoned when the delegates asked to have an open forum and learn more from him about this remarkable new product. It marked the turning point for MDF as the enormous market potential in Europe was recognized.

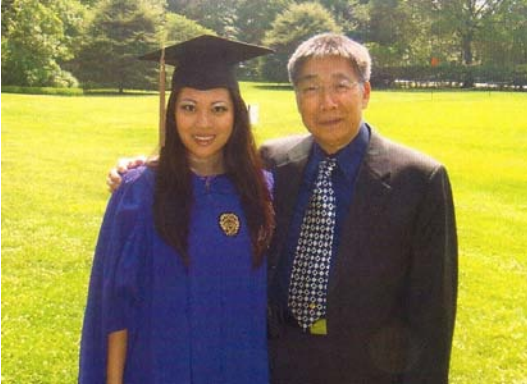
In 1981 Mr. Bauer was instrumental in the decision by the Oregon-based Medford Corporation to invest US\$50m and build a second Medite plant in Clonmel, Ireland. He named it the Shamrock Caper. Irish-made Medite was first produced in 1983.

Over the years, Ted Bauer traveled extensively in Europe, meeting Medite's network of distributors and industrial users, while liaising closely initially with the sales agent Seaboard in Vancouver B.C.; London, England and Utrecht, The Netherlands; and then with Medite's in-house European sales and marketing team when it was set up in 1986. He was highly respected wherever he went, and his unique knowledge, sense of humor and ability to talk and discuss issues with all levels of management became legendary.

In 1987 Ted Bauer was appointed vice-president of Medite Corporation and in 1989 he became president and chief executive officer. He retired from Medite Corporation in December 1993. A dinner with Medite's European staff as well as leading members of the UK panel products trade was held in his honour at the Dukes Hotel in London. However, he continued his strong interest in Medite's European business and in 2006 was a contributor to the first Medite 2006 Compendium, which marked Medite's 30 years of MDF supply to the European market and also Ted Bauer's first foray into the European MDF market.

Ted is survived by his wife **Jan**, to whom he was married for 51 years, and their six children and their families. He is a member of the WSU Wood Composites Hall of Fame. ■

Alumni, Staff and Friends News



Ernie Hsu and Irena Hsu

The following is news sent out by **Ernie** and **Irena** at Christmas. Ernie is continuing his consulting work in his retirement. He lives in Vancouver, Washington where he relaxes. Most of his consulting work seems to be in Canada on what he says he enjoys most—creating new products and processes.

His brilliant daughter, Irena, graduated last June with her MBA from the Kellogg School of Management at Northwestern University outside of Chicago. She is now in Seattle where she is a product manager for Kindle at Amazon.com. She helped to launch the new Kindle Fire, Kindle e-reader, and Kindle Touch e-reader last September. ■

Robert Ross

Following is an update by **Bob Ross** on the distribution of the *Wood Handbook* of which Bob is Editor. This update is general in form but it shows the wide-spread use of the *Wood Handbook* (most of this information is as of January 3, 2012).

*Thanks, Tom, for the nice write-up on the latest edition of the Wood Handbook. Here is some additional information that you may find useful/interesting. WSU graduates—Authors: **Bob Falk** (Chapter one); **Bob Ross** (Editor, chapter on properties of composite materials with Z.Cai), **Sam Williams** (paints and coatings chapter); Reviewers: **Tom Maloney** (composites), **Rick Rammon** (adhesives/adhesion), **Kevin Cheung** (several), (**Roy Pellerin** may have looked some of it over too), **Brian Brashaw** (several), **Don Bender** (entire Handbook); **Ferenc Divos** (he was a visiting scientist at WSU). These folks may have asked others to provide input to their reviews.*

We (FPL) chose to focus on an electronic format for publishing the 2010 Edition, and produce it in color. Some statistics--- for the first year after release: 1. There were 179,000+ downloads on the 2010 Edition (all or individual chapters) from FPL's website (I have been told that it is one of the most widely used USDA publications--I haven't spent the time to verify this though!); 2. 38% of the down-loads were from individuals outside of North America (175 countries); 3. 1,500+ CD copies have been distributed by FPL in response to requests for them; 4. The Forest Products Society (FPS) recently released a hard copy, soft cover version (with a FPL CD copy)--in eight weeks, FPS has sold/delivered 500 copies of the soft cover version (as of Oct. 2011). ■

Alumni, Staff and Friends News

Joe Fyie

Joe recently sent a letter to me after reading the last Newsletter. To me, it was so good I wanted to share it with all our readers.

Tom,

After reading the most recent newsletter today, I felt compelled to write you and once again, thank you for the lasting experience we had at WSU.

*The news of **Dee (Stricker)** and **R.V. (Subramanian)** passing away is sad to me, but I think they can rest in peace knowing they left legacies behind for society to enjoy. The same with **Dr. Stillinger**, he was a huge contributor as well.*

Events like these make us look around at our own world and realize that we all progress along this pathway, so enjoy the time and “don’t sweat the small stuff.” A good example of this was a few days ago, I took my Border collie (or maybe the other way around) on our afternoon walk. We often stop at this one location where he can lay in the thick grass and I can sit on a couple of lava rocks looking at the mountains and contemplating the world around us when my cell phone rings.

I see it is my father, now 88, so I answer “Dad? Dad?” No answer but I could hear the phone moving around. You may have gotten a few of those “butt calls” (calls from someone’s cell phone activated by a button being pushed while residing in your back pocket?), but in this case I could now make out a conversation between my Dad and someone else. It turned out he was at ATT trying to exchange the Blackberry phone I helped him get on my last visit for a new iPhone.

The conversation went like this. “Well sir, we can’t do that.” “Well, I just thought you could exchange my phone for me.” “Well, we can’t do that unless it is within the 30 days when you bought it. Do you know when you bought it?” “I can’t remember when, my son got it for me.” “Tell me your number and I’ll check.” Dad looks at the phone, I again say “Dad? Dad?” No response, then he rattles of his number. The ATT agent says, “Well,

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Alumni, Staff and Friends News

(Continued from page 16)

you have four days before the 30 days is up, just package it up with the box, instructions and charger and bring it back by Friday.” “Well, I’ll think about it, but I live in New Harmony about 40 miles away.” Agent, “Well, if you bring it back, we’ll exchange it for a \$35 restocking fee and set you up.” Dad, leaving store, “Okay.” Agent, “Don’t get wet out there.” I continued to ask for Dad and gave up, hanging up.

I called my sister and told her about this and she said, “He got one,” I said, “really?” She said, “Yes, after going back to the dentist, he returned and got it.” I laughed, my father is still at it dealing at 88 for high tech gear although, he struggles making a call sometimes. But you know what? It was still a precious moment, especially when I called him and told him. He just shrugged it off. Now that is living the day.

*Long story, but wanted to wish you all well. We are fine here. Our oldest son is still in Calgary working on a Masters in Community Health to combine with his Masters in Econ. We will see where this leads, but he may just stay there and enjoy Canada. Good for him. Our youngest, **Nick**, just graduated from Marine Basic Training. We attended the event in San Diego and really got a new internal view of the military world. It comes with renewed respect for what or troops sacrifice daily. He has been assigned to Aviation Air Frame Mechanics which he is now learning at Pensacola, Florida. Neither Les or I would have predicted that for him. We sure are proud of him and his effort. He has about six years of college without a degree and has a library of his own that impresses most. Very diverse reader.*

Well, I better sign off. Good health to all and thanks for the Newsletters. Joe ■



Composite Materials and Engineering Center

PO Box 641806
Pullman WA 99164-1806

Phone: 509.335.2262
Fax: 509.335.5077
Email: cmech@wsu.edu