

## WMEL Alumni & Friends Newsletter

Tom Maloney, Editor  
Judy Edmister, Associate Editor

### Comments from the Editor



As is obvious, this is issue 3 of the WMEL Alumni & Friends Newsletter. As requested in the first two Newsletters, if you have not sent us your E-mail address, please do. It saves time and money (send to [edmister@wsu.edu](mailto:edmister@wsu.edu)). And while you are at it, send us information about yourself and family. Your friends and I like to know how you are doing. Some of the news reported in this Newsletter is information I gathered from Christmas cards sent to Donna and me.

#### Tom Maloney

And speaking of Donna, she has had successful cataract eye surgery. She has astigmatism and the new technology has developed lenses that replace the lens you are born with, eliminating the cataract but also correcting the astigmatism. All of our family is worried that now that Donna can see what we really look like, she will up and leave us.

In this Newsletter WMEL Director Don Bender will bring you up to date on the Laboratory's economic situation. Everyone is suffering and everything possible is being done to keep the WMEL and its important work moving forward. The big news is covered in the Faculty Focus report on Mike Wolcott and the founding of the Institute for Sustainable Design.

All of us have had friends, teachers, colleagues, and university professors who have significant impact upon our lives. One of those for me was my Department Chairman at WSU, William (Bill) Bakamis along with his wife Liz. After retirement they settled in Palm Desert, California. Recently, Liz surprised us by showing up on the Public Broadcasting Systems' Antiques Road Show program. For those of you unfamiliar with this program, a team of antique experts visits various parts of the country and invites people to bring in their "antiques" for evaluation. Hundreds of people flock to these shows.

Liz had a painting by Clifford Still (a long ago professor at WSU) that was given to them in the early 1950's as a house-warming gift by the Department Chairman at the time and his wife, Mr. & Mrs. U.G. Whiffen (he was also an influence on me). Liz told me that she and Bill stood in line all day to have this painting evaluated. The expert said that this made his day, as he had not had such a painting brought in to him at any previous show. He told them that another painting of Stills was recently sold for about two million dollars. He estimated that the Bakamis painting could be valued for at least \$500,000. The actual price would have to be set by a certified expert, but at any rate, it proved to be a great house-warming gift.

### Alumni Spotlight

**Jonathan Martin, Division Chief**  
Materials and Construction Research Division  
Building and Fire Research Laboratory  
National Institute of Standards and Technology



#### Jon Martin

This is a continuation of our reports on the careers and life of our Alumni. For this issue we are focusing on Dr. Jon Martin, who graduated in 1979 with a Ph.D. degree in Materials Science and Engineering. Before we present Jon's career, the Editor would like to make a few comments. When Jon finished his degree he came into my office to discuss career opportunities. He said that it looked pretty bleak in the field of wood materials and engineering, as the current staff had pretty well done everything. With my usual calm way I burst out laughing. I told Jon that we had barely scratched the surface in the field and that basically we did not know very much yet. I offered to sit with him for twenty minutes or so to sketch out the rest of his career exploring new frontiers. As you will see below, Jon not only took this message to heart, he became one of the leading researchers at the National Institute of Standards and Technology (NIST).

Jon and his wife Jan were great members of the community during their time in Pullman and have continued their community involvement in Gaithersburg, Maryland. Time flies and their family has now grown. Their son Sam is a mechanical engineer working in Miami, Florida. This entails parental visits during the cold winter days to make sure he is doing well in warm Miami. Sam's wife, Donna, is a dermatologist. Their daughter Eva is a high school math teacher in Maryland and youngest son, Steven, just graduated from UMBC with degrees in math and computer science. Jan is still a speech language pathologist. She is working with the Infant Toddler Program in Montgomery County and is now a certified Hanen trained speech therapist. Jan reports she still envies anyone who calls the Palouse home. Now on to Jon's work. The following summary is from the NIST website.

Dr. Martin is currently the Chief of the Materials and Construction Research Division of the Building and Fire Research Laboratory (BFRL). This division includes four research groups which he oversees: Structures, Construction Metrology and Automation, Polymeric Materials, and Inorganic Materials. He also administers the activities of the Construction Materials

## Alumni Spotlight, cont'd

Research Laboratory.

In 1978, Dr. Martin joined the Polymeric Materials Group in the BFRL at NIST, as a materials research engineer. In 1994, he became the Leader for the Polymeric Materials Group. He was responsible for the research of 35 staff members, and has directed the Coatings Service Life Prediction Consortium from 1994 to the present. Dr. Martin has over 140 publications, 2 patents, and has co-edited three proceedings books.

Dr. Martin's research interests include the implementation of a reliability-based methodology for predicting the weathering service life of polymeric materials. Implementation of this methodology has many aspects, including the development of novel metrologies for characterizing coatings, the derivation and validation of mathematical models for characterizing coatings, the derivation and validation of mathematical models for characterizing degradation and linking field and laboratory exposure results, implementation of a high-throughput and informatics systems capable of improving measurement and data analysis efficiency. Recent progress toward this goal includes the validation of both the reciprocity and additivity laws for polymer degradation, deriving models for linking field and laboratory exposure results, designing and building a novel laboratory exposure device call the NIST SPHERE (Simulated Photodegradation by High Energy Radiant Exposure), and finally, establishing an experimental and mathematical linkage between field and laboratory exposure results for a study polymer.

Dr. Martin has received numerous awards for his research. He has earned an R&D 100 award for his research on the roughness of metallic surfaces using infrared thermography. From the Federation of Societies for Coatings Technology, Dr. Martin won the 1990 Best Corrosion paper award, the 1995 Technical Focus Speaker Award, the 2003 second place Roon Award, the 2004 first place Roon Award, the 2004 John Gordon Best Paper Award, and the 2006 Mattiello Lecture Award. From the U.S. Department of Commerce, he received a Bronze Medal Award in 1996 and the William P. Slichter Award in 2004. The American Chemical Society awarded him the 2006 American Chemical Society Tess Award and the Federation of Societies for Coatings Technology 2006 Mattiello Award.

Since 1997, Dr. Martin has co-chaired four international symposia on the service life prediction of polymeric materials. These were held in 1997, 1999, 2003, and 2006. The proceedings book for the fourth international symposium was published in 2008.

All one can say from WMEL is congratulations to Jon and his family. We are proud to say you are one of us.

## Graduate Student Spotlight

Melissa was born in Long Island, New York but grew up in Columbia, Maryland. Her mother still lives in Columbia but her sister is now living in Houston, Texas. Her father and stepmother are in Dubai, United Arab Emirates (she visited there this past summer). Upon graduation from high school she attended the University of Maryland and earned a B.S. degree in Architecture. In doing so she put in a lot of hard work accompanied by many sleepless nights. From here on is where Melissa's career gets very interesting.



Melissa King

Knowing she did not want to be a "standard" architect, she moved to Seattle with some college friends to explore another part of the country. She worked at some odd jobs and then traveled to Southeast Asia and Southern Australia where she spent a year exploring other cultures and architecture. She then returned to the U.S. and worked in construction in Seattle and Southern California. This gave her knowledge of actual construction practices.

Next, she traveled around the U.S. working at various construction jobs in places such as Santa Fe, New Mexico, New York, New Jersey, Pennsylvania, and Maryland. Her last stop before Pullman was in Nevada to learn furniture making, a venture that did not work out very well. Now it was time to get serious about a profession, so she decided to go back to school and get a degree in Civil Engineering.

She worked nights and attended community college to "catch up" on her studies so she could apply to graduate school. She considered different universities; however, friends, professionals, and professors urged her to consider WSU. Don Bender was a key influence in her deciding on WSU. He made personal contacts with her and discussed all of the excellent advantages of attending WSU.

She has earned her M.S. degree in Civil Engineering. In addition, she has taught some classes and has served on search committees. Recently, the new **Washington State University Institute for Sustainable Design** came into being. Melissa felt that with her experiences and background, earning a doctorate in this field was perfect for her professional career. Her degrees in architecture and civil engineering are a perfect fit for the research in this new field. She hopes to move on into academia when she finishes her doctorate.

At my request, Melissa made some comments about the field of sustainable design (a final research project will be developed in concert with the Institute team). Her comments follow:

Sustainable design is a new, multi-discipline method for building design and construction that aims to minimize the buildings' environmental and social impact. (The new

## Graduate Student Spotlight: Melissa King, cont'd

Institute's Director, Mike Wolcott, comments that sustainability itself refers to society's ability to move forward in a manner that can be perpetuated. In order for society to function, we have to consider many factors but they are best summed in what is termed the "triple bottom line: economics, environment, social. If any of these legs of the stool are ignored, the system will fail.")

A variety of green rating programs have been developed in the U.S. through which a building can be certified as a green building. There are a variety of parameters which these green rating programs use to determine if a building is green, and there are different rating programs for different types of buildings. The term "green" is more narrowly defined than the broader term "sustainability".

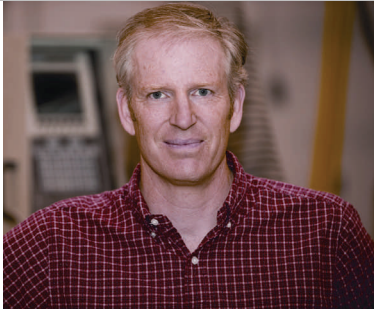
Since sustainable design requires a designer to balance a variety of often conflicting sustainability goals, each of these rating programs may emphasize different parameters. As Mike Wolcott further notes, "We are trying to determine to what level these green building codes address "sustainability" and to what level do they focus on the environment. I think that society must keep its eye on the bigger ball of sustainability. This allows us to consider people and society as part of the environment and aligns better with what our profession strives for: providing solutions for society that foster our natural environment."

Melissa's research began by examining and comparing various residential green rating systems or building codes that operate at a national level. A point audit was conducted in order to compare the distribution of points for each parameter between the residential green rating programs.

One of the parameters emphasized in these green rating programs is energy efficiency, which can be achieved through the use of energy efficient mechanical equipment, appliances and lighting, and also through the use of passive solar design techniques. The next step is to begin to do energy modeling on single-family residential homes which have been designed in a traditional manner compared with those designed to be certified as a green building under these green-rating programs. The problem is that buildings are being designed for the current climate even though they have a 70-100 year life cycle. So, once the energy modeling for current climate conditions has been completed, energy modeling can be done using climate data from climate change models. Then, a study can be conducted to determine if our current building techniques, and also those which are being encouraged in these green-rating programs, will be appropriate throughout the life cycle of the building.

It appears to me that Melissa is well on her way in this badly needed new arena of research. Her background blends perfectly into her mature understanding of what can and should be done.

## Faculty Focus: Mike Wolcott



Mike Wolcott

Dr. Michael P. Wolcott joined the Laboratory in 1996. He is Professor of Civil & Environmental Engineering. He came to the Laboratory from West Virginia University where he was Assistant Professor of Wood Science. Mike earned his Ph.D in Materials Engineering Science from Virginia Polytechnic Institute & State University in 1989.

He took my position in the composites engineering area and quickly expanded his professional standing to international status. He has also been recognized as an outstanding teacher within the College. Those of you who have followed his career know full well his great achievements. You can find a full presentation of his record on the WMEL website. When I retired, Mike was the one we wanted to join the Laboratory and fortunately for us, he agreed to come to Pullman. He is an outstanding researcher and also has terrific verbal abilities that present the information well and inspire audiences.

His research covers composite material development, extrusion processing, viscoelasticity and rheology, adhesion, and anisotropic elasticity. One of Mike's monster projects has been with the Office of Naval Research. He was principal investigator and

project manager for five research contracts aimed at producing sustainable infrastructure materials with improved environmental and structural performance. In aggregate, the contracts comprised 37 researchers representing 7 universities, 3 federal laboratories, and 5 companies. Mike was responsible for developing the technical research direction, selecting research team members, managing over \$13 million in research funding, and organizing meetings, reports and deliverables. He was also the lead researcher on the composite development component of this research. Tangible outputs of the work include (1) test methods used in military performance specifications, proposed ASTM standards, and ICBO testing; (2) development of composite formulations currently used by over one-third of the commercial wood-plastic products; (3) development and deployment of structural prototypes in naval facilities; (4) six invention disclosures and patent applications; (5) thirty-one presentations at national and international meetings; (6) twenty peer-reviewed journal manuscripts; and (7) thirteen Masters theses and two PhD dissertations.

Mike and his colleagues' work in the world of composites and the U.S. Navy work led to the development of the new **Washington State University Institute for Sustainable Design**. His many years of research and development logically lead to the new institute of which Mike is one of the founding members and now the founding Director. He notes that one of the largest sustainability challenges is in the area of building design. Buildings consume

## Faculty Focus, cont'd

about three-quarters of the electricity. The statement of purpose for the Institute is:

The institute will pioneer changes in design and construction through an interdisciplinary approach involving an array of WSU specialists focusing on quality, affordability, durability, aesthetics, and environmental sustainability. To make a significant reduction in the resources required to build and operate homes requires an integrated approach that considers novel building materials, design, structure, and neighborhood-level planning, while adhering to codes and standards, and appealing aesthetic sensibilities.

Mike further states that the new institute will serve as a global technical and design resource for sustainable architecture and construction and will form strategic alliances with industry to advance research and education about resource efficiency and affordability. It builds on existing strengths in renewable building materials and sustainable design, particularly through the work of the Wood Materials and Engineering Laboratory.

The institute will be a virtual structure. Faculty will work in their disciplines and partner in the institute. The core group involves architects, landscape architects, interior designers, civil and material engineers, and construction management. There is also great student interest. Under the leadership of faculty member Dr. Liv Haselbach, a student chapter for the U.S. Green Building Council has been formed at the university, and 150 or so students showed up the first night. The class size limits for the sustainability courses have had to be greatly increased because of the interest.

Mike spent much of his recent sabbatical developing the groundwork for the institute and speaking to companies about this development. Recently the Weyerhaeuser Company Foundation contributed \$500,000 to assist in moving it forward. Other firms and government agencies will be asked to also partner in this new institute. As he stated, "This generous commitment from the Weyerhaeuser Company Foundation will allow the Institute for Sustainable Design to begin to address this critical need. It is a step that truly means the betterment of our future and our children's future."

Mike and his wife, Lisa, have two energetic young sons, George and Warren. They are being raised the same way as their parents were, spending much time in the great outdoors. They have a place in British Columbia for winter sports and much hiking and fishing in the summer months. The interesting thing about their place is that it is in town, not in the country as one would expect for a family that truly likes the outdoors. They are city folk in B.C. and according to Mike are now considered as part of the downtown community.

For those of you who do not know Mike personally, he is a tall gregarious person who loves life, his family, his work, and all of those around him. Most of you probably do not know that he stayed out of college in his undergraduate days trying to make the U.S. Olympic ski team. I understand he missed the final team ending up as an alternate. This skiing desire seems to run in the family. Mike's nephew, Michael

Wolcott Andkeny, was named to the US Ski Team last spring (he was only 17 years old—easily besting old Uncle Michael).



Mike during a recent Alaska ski-climb

## Alumni, Staff and Friends News

**Bob & Nancy Ross**—Endured a icy, snowy winter like many of us in the northern climes. Madison, Wisconsin had another ice age. But the two of them ventured out into the weather taking time off to ski, snowshoe, and ice fishing. Also took another trip out into the wilds to hunt and fish.

**Steve & Shirley Sauter**—Steve's company, Hexion, transferred him from North Carolina to The Netherlands. His new job is to look after the laminating (Formica type laminates) and the additive business for the company in Europe. Already his travels have taken him to Ireland, the UK, Sweden, Finland, Poland, Russia, the Czech Republic, Italy, Austria, Switzerland, Lichtenstein, Germany, France, and Belgium. Steve has now joined so many of our Alumni who have become world travelers.



Steve & Shirley Sauter

**Ernest Hsu**—Ernie in his retirement hasn't really retired. About half of his time is spent consulting at the University of British Columbia and PFIInnovations, both located in Vancouver, British Columbia. He is polishing the manuscript for his book on Oriented Strand Board. He and his outstanding daughter, Irena, have taken several trips recently to visit family in Taiwan plus a trip to Russia. For those who know Irena, she works for American Express as a marketing manager.

**Denis Cullity**—Long time friend and laboratory supporter, Denis Cullity, has retired again. He is like my sister who retired about 13 years ago as a registered nurse but has worked ever since. Denis, after "retirement" several years ago, started a new venture for manufacturing LVL. He reports that this plant has now settled down and is working smoothly so for him, as he promised wife Ann, no more retirement ventures. They have moved back into the 110 year old family ancestral home and are doing well.

**Bob Tichy and Joe Fyie**—These two long time friends and alumni took another one of their summertime motorcycle trips. This one was to Alaska all the way to the Arctic Circle. There were rumors that the Laboratory staff had a pool going, betting on whether the the travelers or the grizzly bears would win out on the trip.

**Fred Fields**—Fred received the 2008 Bronson J. Lewis Award from APA—The Engineered Wood Association for his outstanding career in the forest products industry. Fred was the head and owner of the Coe Manufacturing Co. before he retired and sold the company. Fred was a long time supporter, financially and personally (serving on the Laboratory’s Advisory Board). He is also a member of the Wood Composites Hall of Fame.

**Earl McCarthy**—We have received word that long time friend and supporter Earl McCarthy has passed away. I first met Earl in 1956 when he visited the Laboratory representing American Marietta Co. (early day resin manufacturer). Earl is also a member of the Wood Composites Hall of Fame. There is an excellent interview article on Earl by Ward Williams in the recent (December 2008) issue of the *Specialty Wood Journal*.

**Ole Sorensen**—President and Founder of Flamex Inc., Ole passed away in January 2009. He was a major player in the wood based panel industry for many years. Ole was a loyal friend of WMEL and supporter of the International Wood Composites Symposium.

## Where are they now?

The Laboratory owes much of its success to the many dedicated faculty, staff, and students who worked with great dedication on the many projects conducted over the years. Some of these individuals were with the Laboratory for many years. One of them was Marty Lentz who has now been retired for eight years. I could easily call him “Old Reliable.” Whether the work was easy or hard, or called for duties far beyond the regular work hours, Marty was there. Marty came from South Bend, Washington and graduated from Central Washington State University. South Bend was two miles from where I grew up and I knew his father, Truman, long before Marty joined our crew. I was in the seventh grade and Truman was coaching the South Bend basketball team. For some reason I still remember that game as an opposing player –I believe because Truman was such an outstanding coach and teacher.

Late in my career, when cancer struck, Marty took over much of the research running projects from the start on through the final report. What more could one ask of one of his colleagues. I asked Marty to write up what has been going on since retirement and this follows. I must mention that his wife, Barbara, also a Central Washington University graduate, was a valuable part of WSU during her long career in Administration. She mostly served as an academic advisor at WSU. At first she coordinated the Peer Advising program as well as serving as an academic advisor at the Curriculum Advisory Program from about 1978 to 1984. Then she became the Coordinator of General Studies from 1984 to 2001 at which time she retired. As Coordinator she assisted with the development of the General Studies degree, which was the first degree offered in both the Vancouver and Tri-Cities branch campuses. Later she assisted in the Distance Degree Program. She also served on the Palouse School Board and was active in Palouse city affairs.

## Where are they now? (cont’d)

Marty Lentz retired from Washington State’s Wood Materials and Engineering Laboratory in 2000 after 34 years of service which he describes as “the opportunity to play with all those cool machines in a laboratory designed to develop new and better wood products”. Marty and his wife, Barbara, continue to use their home near Palouse which he designed and built using some off these new wood products as a base of operations so they can stay close to their two sons and young granddaughters and enjoy their passion for gardening.

Marty has continued to serve the Palouse community as an EMT and Volunteer Fire Fighter (the only Palouse firefighter on Medicare). In addition, he and Barbara also serve as park hosts at Palouse Falls and Field’s Spring which are two small, remote Eastern Washington State Parks. He also aids his neighboring farmers by driving a grain truck during harvest.

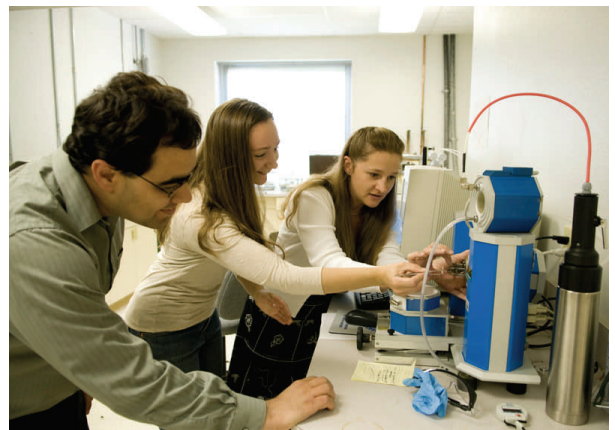


**Marty and Barb Lentz**

They have traveled extensively in Central and South America where they have pursued their interest in the Inca and Maya cultures, the South Pacific and Europe. And in recent years they have enjoyed several winter months in Zihuatanejo and Patzcuaro, Mexico where they are able to participate in and learn more about the local culture of this region.

Marty highly recommends retirement.

## Lab View Analytical Lab, Suite B



## Closing Comments by Don Bender



**Don Bender**  
Director, WMEL

In a speech in Cape Town, South Africa, on 7 June, 1966, Robert F. Kennedy said: *"There is a Chinese curse which says, 'May he live in interesting times'. Like it or not, we live in interesting times..."*

Life at WSU is indeed "interesting" these days. Like you, we are faced with economic challenges – and how we respond will profoundly shape our future. At this writing, budgetary decisions at WSU have not been finalized, but thanks to our program alignment with the university strategic initiatives in sustainable design and clean technology, we should fare well. While this is creating some short-term pain, I am confident WSU will emerge as a stronger, more focused institution.

I know travel budgets are tight, but in difficult financial times it is important to stay informed on technology innovations and to keep professional networks fresh. Here are two opportunities that I hope you will consider.

Our 43<sup>rd</sup> International Wood Composites Symposium will be held on March 30-April 1, 2009 in Seattle. Once again Vikram

Yadama and Bob Tichy organized a great program with keynote speaker Wolf-Gerd Dieffenbacher, President and CEO of Dieffenbacher a world leader in manufacturing equipment and process technology. A one-day technical workshop on "Natural Fibers: Their Role in the Carbon Economy" will take place on Monday, March 30, before the symposium. The workshop keynote speaker will be James Holbery, president of Energy Mobility Inc. and formerly a scientist at the Pacific Northwest National Laboratory. For more details and registration information, check out [www.woodsymposium.wsu.edu](http://www.woodsymposium.wsu.edu).

We also invite you to the Forest Products Society's 63<sup>rd</sup> International Convention being held June 21-23, 2009 in Boise, Idaho. The keynote session will feature leading architecture firms on innovative uses of forest products and sustainable design. They will highlight some of their creative projects, and then challenge the audience to develop forest products with new attributes, forms, assembly methods, aesthetics, and sustainability metrics. Boise is a beautiful city and our host hotel is conveniently located alongside the Boise River. Tom Gorman and I are sharing duties as conference co-chairs with lots of help from other planning committee members Fran Wagner, Doug Stokke, Bill Boehner and Daryle Layton. We will have lots of participation from our students and hope you can fit the FPS conference into your summer plans. The link is [www.forestprod.org/confic09.html](http://www.forestprod.org/confic09.html).

## Do you know where these people are??

If so, please contact Judy Edmister at [edmister@wsu.edu](mailto:edmister@wsu.edu)

Zachary Davidson  
Lee French  
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