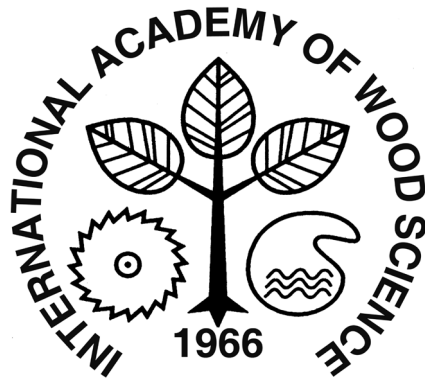


**INTERNATIONAL  
ACADEMY  
OF  
WOOD SCIENCE**

**BULLETIN  
2012-I**



[www.iaws-web.org/](http://www.iaws-web.org/)

**June 2012**

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## **ACADEMY BOARD**

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**S. Kelley (2012)**

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**U. Westermarck (2016)**

**S.Y. (Tony) Zhang (2012)**

**End of terms: 1 June**

**Please send correspondence to:**

**ROBERT EVANS**

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**AUSTRALIA**

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## **EDITORIAL COMMENT**

Many Fellows of the Academy are also members of, or hold senior positions in other societies interested in aspects of wood science. One such is Fellow Pieter Baas who has devoted a great deal of time to promoting and developing the International Association of Wood Anatomists (IAWA) and working as editor of its excellent journal. The Academy has, on several occasions, combined with IAWA in organizing our annual plenary meetings. I have therefore included in this Bulletin news items concerning IAWA submitted by Fellow Baas as I am sure these will be of interest to fellows of IAWS. Appropriately enough, his first item includes a vote of thanks to Regis Miller and Tomoyuki Fujii, who in addition to being important members of IAWA are Fellows of the Academy. Fellows who are members of other societies might like to consider whether they have news items which might also be of interest to IAWS fellows, and if so, submit them for inclusion in the Bulletin.

*J.R.Barnett*

## **MESSAGE FROM THE PRESIDENT**

A year of my time as President has nearly passed, a time with great economic turmoil and a general trend for changes within the industry. Activities within the Bio-refinery area seems to be more and more in focus and in wood science the emphasis is shifting towards the utilisation of wood both as an energy source in converted forms as well as a source for new materials. These are fast growing areas of science and I see it as particularly important that IAWS incorporate these areas into its domain as well as recognising key researchers of excellence in these areas. I would therefore urge fellows to look beyond the traditional fields of research and into these areas in the forthcoming nomination process.

In the 2012 elections we had 13 new fellows elected whom I especially congratulate on their achievement and welcome into the Academy. Many thanks are due to the nominators for providing an excellent list of candidates. I am very pleased with regard to the increased representation of China and Asia as a whole which has resulted. Of more concern is the decline in numbers or even total lack of representation in continents other than Europe and North-America. One could especially point to South-America where much research is ongoing, often in the new areas of wood science. I would also therefore urge fellows to consider nominating candidates from these areas for the next election.

I am especially pleased with regard to our PhD award program which last year received 13 applications. The evaluation process is well underway and the results will soon be announced and presented at the Annual meeting in Zvolen in September. I would appreciate your

continued support in this matter in also publicising the next round of competition for the PhD award and the need to submit applications from those who have completed their theses in the last year among your colleagues.

The impact factor of the IAWS journal Wood Science & Technology has in recent years been fairly good. However the number of publications by fellows is extremely low. The scope of the journal is now clearly broader and I would strongly appeal to fellows to consider supporting our journal with strong scientific publications.

Our website has been updated during the year and I hope it is now much more attractive and easy to work with. Fellows are here encouraged to personally update their contact information. Any comments regarding the web-site are welcome to Vice-President Uwe Schmitt [uwe.schmitt@vti.bund.de](mailto:uwe.schmitt@vti.bund.de).

The Bulletin is now solely published by e-mail and on the web-site which we hope may also give easier access to the Bulletin. However if there are problems or if you know of fellows having trouble in receiving the e-mail version please inform vice-President Uwe Schmitt [uwe.schmitt@vti.bund.de](mailto:uwe.schmitt@vti.bund.de) and we will try to solve matters.

We are now approaching our next annual meeting in Zvolen in September 26–28, 2012 <http://www.tuzvo.sk/iaws-2012/> which I am looking forward to with among other things an Academy lecture of Fellow Ruel. I hope to see as many as possible of you there for a highly interesting meeting.

*Lennart Salmén*

## **TREASURER'S REPORT FOR 2011**

The details of the 2011 Treasury Report are below. The dues have been broken down into categories and the E is for “extra” year’s payment. The net change for 2011 was \$4,994. At the end of 2011, 127 of the 147 (86%) Active and Retired fellows and 21 of the 23 supporting members were current in their dues. Our CD’s total \$57,324 and interest rates have dropped to nearly 1% for two-year CD’s. Again, more of our members are using PayPal to pay their dues; 84 of our fellows and 2 supporting members used this credit card method in 2011. We continue to pursue creative avenues for support from fellows and organizations. With expansion of the SWST Website, regular technical meetings, the PhD Thesis/Dissertation Award, and inflation, continued revenue is essential to preserve our quality programs.

So far in 2012, we have received payments from 16 of 23 supporting members, 36 of 51 Retired fellows, and 61 of 103 Active fellows.

I feel IAWS is fiscally sound and a big thank you to all those who support our programs.

*If you are able, please try PayPal—the process is simple and efficient.*

Howard Rosen, USA

Treasurer

May 12, 2012

### **IAWS Expenses and Revenues--Calendar Year 2011**

#### Revenues (E – extra years paid by a member)

|                         |                  |
|-------------------------|------------------|
| Retired dues (39 + 16E) | 1,100.00         |
| Active dues (77 + 4E)   | 4,020.00         |
| Lifetime dues (6)       | 3,600.00         |
| Supporting (21)         | 4,137.00         |
| Donations (1)           | 100.00           |
| <b>Total</b>            | <b>12,957.00</b> |

#### Expenses

|                                    |                 |
|------------------------------------|-----------------|
| Printing/mailing                   | 176.33          |
| Meetings                           | 4,974.53        |
| Scientific Review-Brazil           | 2,480.00        |
| PhD Award                          | 1,000.00        |
| Foreign bank/wire fees Capital One | 240.00          |
| PayPal IAWS Fees                   | 289.14          |
| <b>Total</b>                       | <b>9,160.00</b> |

Date 2/2/2012

**Income = \$12,957 - \$9,160 = \$3797**

#### Chevy Chase Account

Beginning balance January 1, 2010

16,665.42

|                      |           |
|----------------------|-----------|
| Deposits by H. Rosen | 2,960.00  |
| Incoming bank wires  | 2,527.00  |
| Transfer from PayPal | 4,600.00  |
| Withdrawal - Fees    | -250.00   |
| - Wires              | -3,474.53 |
| - Checks             | -5,152.00 |

**End Balance December 30, 2010**

**\$17,875.89**

## PayPal Account

|   |                         |
|---|-------------------------|
| Beginning balance January 1, 2011                   | 9.27                    |
| Deposits (56 active, 37 retired, 6 life, 2 Support) | 7,510.00                |
| Transfer to Chevy Chase                             | -4,600.00               |
| Fees  | -289.14                 |
| <b><i>End Balance December 30, 2010</i></b>         | <b><i>\$2630.13</i></b> |

## Total Assets

- CD Intervest National Bank **\$31,396.65**  
-renewed 10/16/11 at 1.14% for 2 years  
-interest is accumulated
- CD Discover **\$25,927.27**  
-opened 4/07/10 at 2.1% for 3 years  
-interest is accumulated

Checking + PayPal Accounts = **\$20,506.02**Total Assets = **\$77,829.94**Net change **2011 – 2010****\$4,993.72**

I have examined the books of the IAWS Treasury Account for 2011 and have found all the details in satisfactory order. *Robert L Youngs*, Fellow, IAWS,  
Professor Emeritus, Virginia Tech

**MEMBERSHIP REPORT 2011****The current membership status is as follows (April 2012)**

|                               |                   |
|-------------------------------|-------------------|
| <b>Regular:</b>               | <b>94</b>         |
| <b>Inactive:</b>              | <b>51</b>         |
| <b>Lifetime Contributors:</b> | <b>122</b>        |
| <b>Retired:</b>               | <b>49</b>         |
| <b><u>Exempt:</u></b>         | <b><u>39</u></b>  |
| <b><u>Total Fellows:</u></b>  | <b><u>355</u></b> |

**Supporting Members:** **23**

**Distribution by countries**

|                  |           |                      |           |                     |           |
|------------------|-----------|----------------------|-----------|---------------------|-----------|
| <b>Australia</b> | <b>10</b> | <b>Greece</b>        | <b>2</b>  | <b>Philippines</b>  | <b>2</b>  |
| <b>Austria</b>   | <b>6</b>  | <b>Hungary</b>       | <b>1</b>  | <b>Poland</b>       | <b>2</b>  |
| <b>Belgium</b>   | <b>1</b>  | <b>India</b>         | <b>2</b>  | <b>Portugal</b>     | <b>1</b>  |
| <b>Brazil</b>    | <b>2</b>  | <b>Israel</b>        | <b>2</b>  | <b>Romania</b>      | <b>2</b>  |
| <b>Canada</b>    | <b>33</b> | <b>Italy</b>         | <b>2</b>  | <b>Russia</b>       | <b>10</b> |
| <b>Chile</b>     | <b>3</b>  | <b>Japan</b>         | <b>44</b> | <b>Slovakia</b>     | <b>2</b>  |
| <b>China</b>     | <b>13</b> | <b>Korea (South)</b> | <b>3</b>  | <b>South Africa</b> | <b>1</b>  |
| <b>Denmark</b>   | <b>4</b>  | <b>Latvia</b>        | <b>2</b>  | <b>Spain</b>        | <b>1</b>  |
| <b>Egypt</b>     | <b>1</b>  | <b>Malaysia</b>      | <b>1</b>  | <b>Sweden</b>       | <b>19</b> |
| <b>Finland</b>   | <b>10</b> | <b>Mexico</b>        | <b>1</b>  | <b>Switzerland</b>  | <b>5</b>  |
| <b>France</b>    | <b>17</b> | <b>Netherlands</b>   | <b>1</b>  | <b>Taiwan</b>       | <b>4</b>  |
| <b>Georgia</b>   | <b>1</b>  | <b>New Zealand</b>   | <b>12</b> | <b>UK</b>           | <b>7</b>  |
| <b>Germany</b>   | <b>25</b> | <b>Norway</b>        | <b>1</b>  | <b>USA</b>          | <b>99</b> |

**Distribution by continents**

|                                    |            |
|------------------------------------|------------|
| <b>Africa &amp; Middle East</b>    | <b>4</b>   |
| <b>Asia</b>                        | <b>69</b>  |
| <b>Australia &amp; New Zealand</b> | <b>22</b>  |
| <b>Europe</b>                      | <b>122</b> |
| <b>Latin America</b>               | <b>6</b>   |
| <b>USA &amp; Canada</b>            | <b>132</b> |

*Robert Evans, Executive Secretary, Melbourne*



## NEWLY ELECTED FELLOWS 2012



**Fuxiang Chu** Professor and Vice President of the Chinese Academy of Forestry (CAF), Beijing, China.

Professor Chu's major areas of research are in environmentally friendly wood adhesives and polymers. Several have been formulated and put into commercial production, including UF, MUF, lignin-PF and lignin-MUF. He has also worked on the fundamental and practical development of polymer latexes with high solid content and low curing temperature, which have shown excellent performance for glued laminated timber and PVC/wood based panels bonding. Another area of interest is the chemical modification of lignin and cellulose and the development of biodegradable polymer materials as alternatives to petroleum based products. He has collaborated with many domestic and international scientists (USA, France, Japan) on the research in the field of wood chemistry and chemical processing of forest products.

**Barry Goodell.** Professor and Head, Wood Science and Forest Products Department. Virginia Polytechnic Institute and State University (Virginia Tech). Blacksburg, Virginia. USA.

Professor Goodall has carried out research into wood protection and an understanding of how fungi attack the wood cell wall, to improved processes for the production of wood-hybrid composites and the production of mesoporous carbon and carbon nanostructures from wood. He has served in and led several international organizations where he worked with others to help evolve future directions for the field of wood science and forest products. He has been active in promoting public awareness of the importance of wood science and forest products. In his role as Department Head at Virginia Tech he collaborates with faculty to raise the profile of the field of wood science regionally, nationally and internationally.





**Yusuf Sudo Hadi.** Head of Biocomposite Lab. & Head of Forestry Faculty Senate; Bogor Agricultural Univ. (BAU) – Indonesia

Dr Hadi's interests are in the area of chemical modification of wood, and the technology of bio-composites in terms of physical and mechanical properties and durability. This work focuses also on utilization of tropical wood species from plantation forest. He has carried out collaborative research with both national and international institutions. He is also Acting Rector Lambung Mangkurat University.

**Donatien Pascal Kamdem,** Professor, School of Packaging, Department of Forestry, School of Planning Design and Construction, Michigan State University, East Lansing Michigan, USA.

Professor Kamdem has interests in the areas of wood preservation and use of fast-growing wood species from short rotation plantation for paper manufacturing, wood composites manufacturing using modified/polymer grafted onto fibers to improve hydrophobicity and adhesion, ethanol production from lignocellulose and multilayered paperboard. He is collaborating with several African countries to document the durability of tropical species, screening some natural extractives as candidates for environmentally acceptable wood preservatives (essential oils and polyflavonoids); organizing workshops to expose African artisan and museum curators to wood seasoning and protection through heat treatment of wooden artifacts against bio deterioration.



**Bohumil Kasal.** Professor and Director, Fraunhofer Institute for Wood Research, Wilhelm-Klauditz-Institute, WKI, Braunschweig, Germany and Chair in Organic and Wood-based Construction Materials at the TU Braunschweig

Professor Kasal carried out one of the first full-scale fully instrumented tests of a light-frame wood building in the world (with Greg Foliente, CSIRO Australia). His interest lie in the areas of application of high-strength composites, wood analytical methods applied to wood structures with nonconservative connections, introduction of new semi-destructive methods to in-situ evaluation of wood and new testing methods for evaluation of mechanical properties of genetically altered wood.



**Stan Lebow.** Research Scientist, USDA, Forest Service, Forest Products Laboratory, Madison, WI, USA.

Dr. Lebow has worked on evaluation of leaching, environmental mobility and environmental impacts of treated wood used in wetlands. This research has been widely used in subsequent assessments of potential impacts from proposed treated wood construction projects. His team also developed a first of its kind predictive model for the rate of release of chromated copper arsenate from treated wood exposed in seawater and definitively demonstrated that seawater ions could greatly increase leaching of copper from treated wood. He also developed a field sampling procedure that could be used to assess fixation in a range of types of treated wood, and this procedure was subsequently incorporated as part of two AWP standards.

**Professor Jian Li**

College of Material Science and Engineering, Northeast Forestry University, 26 Hexing Road, Xiangfang District, Harbin, Heilongjiang 150040 China

Professor Jian Li was the president of Northeast Forestry University from 1996 to 2006. He is currently also professor of wood physics and chemistry, and wood preservation. His research is mainly oriented around the study of wood modification and performance, and functional wood-based composite and design.



**Yixing Liu,** Professor, College of Material Science and Engineering, Northeast Forestry University (NEFU), Harbin, Heilongjiang, China.



Dr. Liu's research work has focused on wood physics, wood environmentology, and functional improvements of wood. He was the lead professor for the development of the computational visual analysis of wood structure, measurement of micro-density of wood by soft x-ray, and nondestructive testing of wood strength by ultrasonic and FFT analysis. Dr. Liu also developed the procedure for the demarcation of juvenile wood and mature wood of plantation forests and associated applications for wood quality

prediction. He has also worked on the preparation of wood ceramic, developed a novel resin impregnation technique with pressure-rolling, and created a surface modification technique with organic-inorganic compounds by application of hybrid nanotechnology. Dr. Liu is currently working on the individualization of nano-cellulose fiber from wood using high-intensity ultrasonication in combination with chemical pretreatments for nano-composite applications.



**Klaus Richter**, Professor and Head of Wood Research Munich, Technical University Munich, Germany.

Dr Richter's research focuses on two areas: environmental science and material science. In the former he did pioneer work to develop and adapt a methodology and data base of comparative Life Cycle Assessment and its adaptation to wood based products (1989 – 2000). He also planned and supervised a comprehensive research study to dynamically model the effects of material and energy substitution by wood products on the national greenhouse gas emission, which clearly underlined the need to use timber products first and as long as possible in its material state before converting it to energy or chemical feedstock. In materials science he partly works on wood adhesion technology and was co-inventor of the HMR primer which significantly enhanced wet adhesion strength of solid wood bonds in structural applications.

**Victor G. Sanaev**, Professor and Head of the Department of Wood Science of Moscow State Forest University (MSFU), Rector of MSFU, Moscow, Russia.

Professor Sanaev's researches the wood surface and how it can be protected, in particular the development of apparatus for measuring wood microhardness, and an effective method for improving the durability of protective-decorative coatings. He has investigated the anisotropy of wood-surface properties and their effect on coating properties; the influence of microcracks on the adhesive and cohesive coating strength, and correlative links between microhardness, density and wood deformability indexes. The methods he has developed have been applied to inter-related problems such as, wood deterioration by insects and the role of anomalous structures improving wood decorative quality.





**Olaf Schmidt.** Professor, Department of Wood Biology, University of Hamburg, Germany.

Professor Schmidt's work deals with fungi and bacteria in wood and trees, including ecological, morphological, physiological and biochemical aspects of deteriorating organisms as well as the micromorphology of the attacked cell wall. The main topics include: degradation of woody cell walls by bacteria, significance of bacteria for forest decline, tree-pathogenic bacteria, cultivation of edible mushrooms on wood waste, morphological, physiological and molecular characterization of indoor wood decay fungi, fungal damage to bamboo. Current research aims at molecular techniques for identifying fungi and bacteria in wood and trees.

**Michael P. Wolcott.** Professor, Civil & Environmental Engr., Washington State University, Pullman, WA., USA.

Professor Wolcott's academic contributions have focused on materials engineering approaches to the design, processing, and performance of thermoplastic and thermoset wood composites and biopolymers. The fundamental thrust of this work is aimed at articulating and describing the polymer viscoelastic influences, material kinetic processes, and interfacial phenomena controlling structure-property relations in these systems. This effort has been applied towards developing advanced wood-based construction materials to improve durability, reduce manufacturing costs, minimize environmental pollution, and improve structural performance. Recently his interests have included sustainability in the built environment. He has led industrial projects for more than 45 companies including Weyerhaeuser Corp., Dow Building Products, and Honeywell Specialty Chemicals..



**Junyong (J.Y.) Zhu,** Adjunct Professor, Scientific Team Leader, USDA Forest Products Laboratory, Madison, WI, USA.

Professor Zhu works on the chemistry of pulping and the relationship between wood properties and pulp quality. He developed a TAPPI standard method (T282pm-07) for rapid HexA content analysis in wood pulps, proposed a flotation deinking selectivity concept and quantified minimum water flux in froth to drain wood fibers. His work has identified wood properties which could be controlled by healthy forest management to improve pulp quality and he developed the SPORL technology to

effectively remove the strong recalcitrance of woody biomass for robust enzymatic cellulose saccharification. He also developed lignin-metal complexation to eliminate cellulase inhibition by lignin.

## HONOURS AWARDED TO FELLOWS

### Graeme P. Berlyn

Professor Berlyn has received a Distinguished Service Award by the Yale School of Forestry and Environmental Studies. Graeme was elected a Fellow of the Academy in 1977. His citation includes recognition of his contributions to understanding reaction wood, the effects of radiation on plants and tissue culture and the understanding of ecophysiology and organic biostimulants. He is also the author of what is referred to in the citation as the bible on botanical micro-technique and cytochemistry. He has been on the Yale faculty for 51 years and still continues. He has authored or co-authored more than 125 publications.



(from left) Prof. Mark Ashton M.F. '85, Ph.D. '90, Graeme Berlyn, Alexander Brash M.F.S. '85 and Dean Peter Crane

#### Distinguished Service Award

#### Graeme P. Berlyn

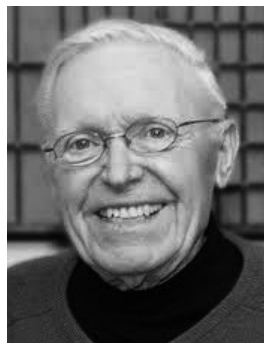
E. H. Harriman Professor of Forest Management and Physiology of Trees

### Richard Hemingway

Dr. Richard Hemingway, was recently recognized by The Phytochemical Society of North America with their Pioneer Scientist Award for his contributions to polyflavanoid chemistry. Dr Hemingway was elected Fellow of the Academy in 1987. During a long and distinguished career, he worked for the USDA Forest Service at the Southern Research Station in Pineville, Louisiana. During that time he visited and worked in laboratories in CSIRO, Melbourne, Australia, the Chemistry Division of DSIR, Wellington, New Zealand, University of the Free State, Bloemfontein South Africa. He retired in 1999 after 30 years service.



## OBITUARIES



### **Wilfred A. Côté Jr. (1924-2012)**

One of the Academy's longest-serving Fellows, elected to the Academy in 1968, Wilfred A. Côté Jr. died on March 8, 2012, in Syracuse.

He was born in Willimantic, Connecticut, on May 27, 1924, and lived there until 1950 with absences for the University of Maine (1942-43), World War II (1943-46) and the University of Maine (1946-49). He served in the Army Signal Corps as a cryptographic and signal center chief in the European Theater of Operations. During the summer of 1945, he attended the Sorbonne University in Paris, in French Language and Area Studies. In 1949 he obtained a B.S. with distinction at the University of Maine and in 1950 an M.S. in Wood Technology at Duke University. He was then appointed Instructor in the Department of Wood Technology at the State University College of Forestry at Syracuse University where he spent his entire subsequent career.

He obtained his PhD in 1958 from the College of Environmental Science and Forestry at Syracuse; the topic of his thesis being "Electron Microscopy of Wood", placing him among the pioneers of research into the ultrastructure of wood. He was then appointed Assistant Professor of Wood Technology, then Associate Professor in 1962 and Professor of Wood Technology in 1965. Professor Côté established the first electron microscopy laboratory in Central N.Y. and served as Director of the N.C. Brown Center for Ultrastructure Studies from 1970. From 1976-1980 he served as Dean of the School of Environmental and Resource Engineering and from 1980 as Director of the Renewable Materials Institute. He retired a Distinguished Services Professor in 1991.

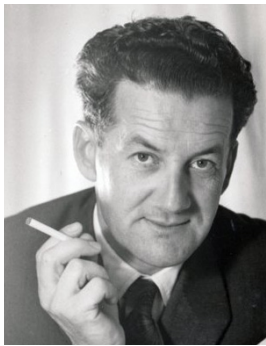
His scientific interests ranged from general forestry and wood technology to microtechnique involving transmission and scanning electron microscopy of wood, and the relationships between wood structure and physical properties, preservation treatments, coating and pulping.

His name will be associated by many in wood science with the conference he organised in September, 1964 at the Pinebrook Conference Center, Upper Saranac Lake, New York, which brought together leading researchers in the field. He edited the contributions to this meeting and produced the seminal text "Cellular Ultrastructure of Woody Plants" which became an essential reference for researchers for many years after.

In 1980 he was honored as Academy Lecturer at a meeting at Oxford University. He was author and co-author of 92 technical papers and books, and editor of the Wood Science Series of books published by Syracuse University Press.

In addition to a distinguished professional career, Professor Côté was also a leader in many community and church-related organizations in Syracuse. He is survived by his wife of 64 years, Irene Campbell Côté; five children, 13 grandchildren; and 16 great-grandchildren. Contributions in Dr. his memory may be made to the ESF Foundation, 214 Bray Hall, One Forestry Drive, Syracuse, NY 13210 for a scholarship fund to be established in his name or to the St. Thomas More Foundation, 110 Walnut Place, Syracuse, NY 13210. Please visit [taitfuneralhome.com](http://taitfuneralhome.com) to send the family condolences.

***Robert Hanna and John Barnett***



### **Abraham Fahn (1916 - 2012)**

Abraham Fahn passed away in February 2012. He was a recognized authority and one of the world's best specialists on the anatomy of plants. Dr. Fahn studied structure and ultrastructure of plant tissues in relation to function, focusing on secretory tissues, wood anatomy, and desert plant adaptations. He wrote four leading anatomy books: *Plant Anatomy* (translated into several languages); *Secretory Tissues in Plants*; *Xerophytes*; *Wood Anatomy and Identification of Trees and Shrubs from Israel and Adjacent Regions* (see references). For his remarkable scientific achievements, Dr. Fahn received the Israel Prize in 1963, which is the highest award of the State of Israel.

Abraham Fahn was born in 1916 in Vienna, Austria. He emigrated to the Mandate Palestine (now Israel) and studied at the Hebrew University of Jerusalem, receiving a PhD in 1948. In 1952, he joined the Department of Botany at the Hebrew University. He became a full professor in 1965. Dr. Fahn served as the Dean of the Faculty of Science (1964 to 1966) and the Pro-Rector of the Hebrew University (1969 to 1970). He also served for many years as Head of the Forestry Department at the Volcani Institute of Agricultural Research and also the Director of the Botanical Gardens of the Hebrew University. In 1985 Dr. Fahn became Professor Emeritus.

Abraham Fahn was honored by colleagues all over the world, choosing him as a Corresponding Member of the American Botanical Society, Foreign Member of the Linnenan Society of



London, and elected him Vice President of the International Society of Plant Morphologists (1995-1999). He was elected a Fellow of IAWS in 1972.

From 1952 to 1953, he was a Research Fellow in the Jodrell Lab in Kew and at the University of Cambridge, in 1956 a Bullard Research Fellow at Harvard University, from 1972 to 1973 a Visiting Brittingham Professor at the University of Wisconsin, Madison, and in 1981 a Visiting Professor in the ETH, Zurich.

Dr. Fahn was the mentor of many students, who were grateful for his encyclopedic knowledge, excellent advice and warm personality. He was always willing to help students. Abraham Fahn was devoted to his family and is survived by his wife, two daughters and six grandchildren. All those who knew him miss him. I feel I have lost both my knowledgeable mentor and a good friend.

### **Roni Aloni**

*The Department of Molecular Biology and Ecology of Plants, Tel Aviv University*

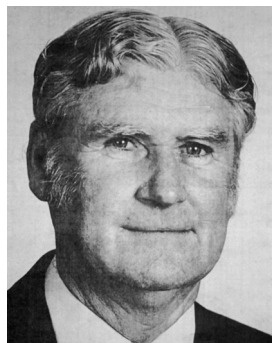
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### **Huntley Gordon Higgins (1917-2011)**

Huntley Gordon Higgins was born in Perth on the 8<sup>th</sup> January 1917 and died in Melbourne on the 16<sup>th</sup> December 2011. He had been a Fellow of the IAWS since 1979.

Huntley obtained a Science degree with Honours in Geology at the University of Western Australia in 1939. With the onset of World War II he joined the RAAF and trained as a meteorologist. There he quickly made himself useful by developing a model for predicting night-time coastal mountain-induced offshore winds

and a tool for forecasting storm fronts in the tropics. At the end of the war he decided to apply his physics to paper and accepted a position at the CSIR Division of Forest Products, becoming Head, Section of Paper Science and later, in 1979, Chief of the CSIRO Division of Chemical Technology.

When he arrived to begin work he was told that what the Division needed most urgently was a research leader in the plywood group. So he was introduced early in his career to the fundamentals of the glass transition phenomenon in the lignin component of wood which he was to later bring to bear in his groundbreaking studies of thermo- and chemithermo-mechanical pulping. He also studied the chemical and colloidal properties of casein, then the predominant reconstituted wood adhesive.

His studies in paper physics eventually began in 1951 and are recorded mainly in his long series of papers, many with colleagues, largely published by Appita and entitled “The structure and properties of paper.” The research sought evidence concerning the hydrophilic properties of cellulose, the main component of papermaking fibres, and of the ways in which they are modified by structural factors additional to the hydrogen bonding capability of particular chemical groups. This work had practical outcomes in matters such as the loss of strength of paper produced after the fibres had been dry lapped for transportation between mills. The work on chemimechanical pulping succeeded in producing improved quality high yield mechanical pulps. He also sought to improve the quality of pulps produced from low grade eucalypt pulpwoods by chip destructuring prior to chemical pulping.

Another major theme was the assessment of the technical and economic factors in the export of eucalypt wood chips. This work was of great assistance to the newly -growing woodchip export industry.

Huntly was regularly invited to present his group’s work to the symposia held alternately at Oxford and Cambridge every 4th year by the Fundamental Research Committee, of initially the British Paper and Board Industry Federation, and later, an International Committee in Paper Physics. He became the 4<sup>th</sup> President of the International Association of Scientific Papermakers.

Huntly served on the Technical Committee of Appita from its inception and was Chairman from 1969 to 1971. He was elected to the Executive Committee in 1964 and as President in 1967/8, and was awarded the 1977 Appita Benjamin Medal. He was the first recipient (1962) of the degree of D.App.Sci. from the University of Melbourne and became a Foundation Fellow of the Australian Institute of Physics and of the Australian Academy of Technological Sciences and Engineering(1976). He was also a Fellow of the Institute of Wood Science, the Institute of Physics, and the Royal Australian Chemical Institute.

Huntly thought deeply about moral issues and participated in the series of Pugwash conferences. He undertook FAO assignments in developing countries. He was well known for being extremely fair to his staff and encouraging their achievements

Following retirement in 1982 he became an Honorary Research Fellow at the CSIRO Division of Forestry and Forest Products, a position he held for about the next 15 years. He wrote a regular news column for the Tappi Journal on events in the pulp and paper industry in Australia and New Zealand. During his Fellowship he also published two monographs. The first in 1996 entitled “Paper Physics in Australia” covered Australian research in paper physics during the previous half century. The second, published in 2002 entitled ‘Infrared Spectroscopy in Australian Forest Products Research’, written with Tony Michell, covered the same period.

***Tony Michell and Adrian Wallis***



**Harold Tarkow (1912-2012)**

Harold Tarkow was a long-serving fellow of the Academy, being elected in 1968. He was born and raised in Milwaukee, WI USA and obtained his formal academic training at the University of Wisconsin Madison, completing his Ph.D. in Physical Chemistry in 1939.

He began his career as a Chemist with the Portland Cement Association in Chicago, IL. Prior to joining the staff at the Forest Products Laboratory (FPL), he taught at the Bradley Polytechnic Institute, Peoria, IL.

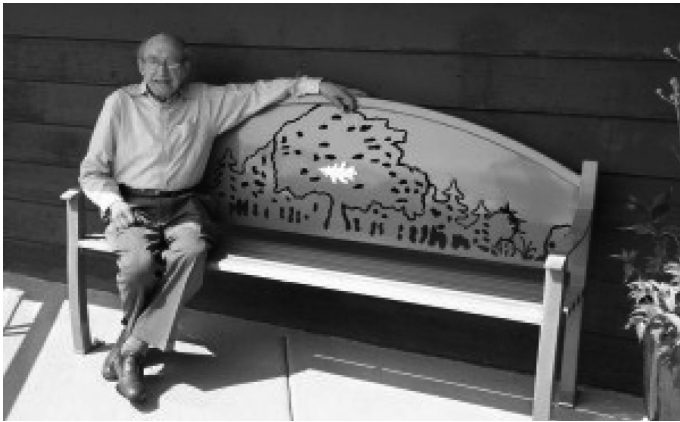
Dr. Tarkow began his career at FPL on February 2, 1943. Working as a Research Chemist under the supervision of Dr. A.J. Stamm, he worked on the use of polymer resins to chemically modify wood products. Their work was among the first to investigate polymer impregnation as a means of enhancing the properties of wood and wood-based products. While this effort was focused on the use of wood in military applications, it led to research and development efforts for the U.S. automotive industry. The Ford Motor Company, Dearborn, MI approached FPL to examine the potential of making mahogany wood more dimensionally stable and therefore more suitable for pattern stock. Tarkow and Stamm’s work on resin treatment of wood seemed the answer to the problem. It was indeed, and is still used in making the prototypes of many automobile lines.

He authored a seminal paper titled “Swelling and shrinking of wood paper and cotton textiles and their control”. It attracted international attention and firmly established Dr. Tarkow as a preeminent wood scientist. He continued conducting research on the interaction of wood and moisture until appointed Chief of the Division of Wood Chemistry at FPL in 1967. He was appointed Assistant Director of FPL in Charge of Fiber and Chemistry Research in 1972. As

Assistant Director, he oversaw FPL's research in the areas of high yield nonpolluting pulping; the protection of wood in use; fiber product design; improved chemical utilization of wood; submicroscopic structure of wood and its importance, and improved adhesive systems. Dr. Harold Tarkow retired from the Forest Products Laboratory on September 2, 1977 after thirty years of bench science and research administration.

### ***Bob Ross***

**The following article was published in the Wisconsin State Journal September 19, 2011 and is reproduced with kind permission of Doug Moe.**



This is a story that starts with a barn and ends with a bench, and it spans nearly 80 years. In the decades between, a jewel of Madison came into existence and prospered, while a man who was there by accident at the beginning grew to love it as much as anyone ever has. Their story begins on a hot June day in 1934, when a UW-Madison chemistry student named Harold Tarkow took a walk along Mills Street from campus to an area of farm and woodland south of Lake Wingra. The land was not particularly distinguished. Years later someone would refer to the parcel as it appeared in 1934 as “two square miles of derelict farmland.”

Walking that morning, Tarkow noticed a group of 50 or 60 people gathered near a large barn. It turned out he had stumbled onto the dedication ceremony of the University of Wisconsin Arboretum. Tarkow decided to listen in. He was graduating the next day, and had nothing better to do. Besides, there was a free breakfast buffet. One speaker in particular, talking about his hopes for the arboretum, got Tarkow's attention. “He spoke,” Tarkow was recalling last week, “of how he hoped it might become a specimen of what this area would have looked like before settlement.” It turns out Tarkow, who is a lively 98, and believed to be the last living witness of the arboretum's dedication, has a pretty good memory.

Here, in part, is what the speaker actually said: “Our idea, in nutshell, is to reconstruct, primarily for the use of the university, a sample of original Wisconsin — a sample of what Dane County looked like when our ancestors arrived here during the 1840s.” The speaker was Aldo Leopold, who went on to write “A Sand County Almanac” and become a legend among environmentalists. Harold Tarkow, who had never heard of Leopold until that morning, became a chemist, and, as the years went by, one of the arboretum’s greatest champions.

Last week, Harold, who lives with his wife of three decades, Ethel, in a Downtown apartment, invited me in for a chat. The intent was to talk about a new bench that’s been dedicated in Harold’s honor at the arboretum, but our talk proved wide-ranging. Harold, who turns 99 in December, subscribes to The New York Times and the New Yorker magazine, and he and Ethel are always walking over to the central branch of the public library. The other day Ethel checked out a novel by Henry James while Harold came back with “Game Change,” the best-seller about the 2008 presidential election.

“I chose my grandparents very well,” Harold said, when I inquired about his longevity. He has also, it is clear, kept his mind and body active. Originally from Milwaukee, Tarkow earned both undergraduate and graduate degrees from UW-Madison and then worked and taught for a time in Illinois before returning to Madison in 1943 to work for Forest Products Laboratory, where he stayed until retirement. He enjoyed long walks in the arboretum over the years, eventually joining the Friends of the Arboretum as a volunteer. Tarkow soon became a prolific contributor to the group’s newsletter. He profiled Ruth Schmidt, the woman who created Teal Pond, and John Curtis, for whom Curtis Prairie is named. Tarkow also produced a regular “trivial pursuit” quiz about the arboretum. “The deer is obviously the largest animal found in the arboretum,” he said the other day. “What’s the smallest?” “I give up.” “The masked shrew! You could fit four of them in the palm of your hand.”

The arboretum has a long-standing “commemorative bench program” that raises funds and two years ago Tarkow’s family approached with the idea of securing one for Harold. It turned out the arboretum was working with Madison artist Mike Burns on a new series of benches. Harold’s, first in the new line, was dedicated in July. It welcomes visitors at the entrance to the arboretum’s McKay Center. Harold and Ethel were there for the dedication. I asked Harold if he ever thought how his life might have been different if he hadn’t walked out Mills Street that day in 1934. He thought a moment and said, “These are the great uncertainties of life, aren’t they?” I asked if there was anything he wanted to do that he hadn’t already done. Harold grinned. “Oh, to be 95 again,” he said.

Read more: [http://host.madison.com/wsj/news/local/doug\\_moe/article\\_da8325a8-e2aa-11e0-9665-001cc4c002e0.html#ixzz1qExyWlJC](http://host.madison.com/wsj/news/local/doug_moe/article_da8325a8-e2aa-11e0-9665-001cc4c002e0.html#ixzz1qExyWlJC)

### **Wolfgang Knigge (1920-2012)**

Professor Dr. Wolfgang Knigge passed away peacefully on 28th April 2012 at the age of 92 years. He is survived by his wife Gabriele Knigge Freiin von Kapherr-Lockwitz after 63 years of marriage. They had three children.



Wolfgang Knigge will be remembered for his significant contributions to the area of Forest Exploitation, Forest Utilization and Wood Characteristics as well as by his impressive academic leadership in numerous positions. Above all, he was elected Fellow of the Academy in 1968 and was our President for the term 1981-1984. During his presidency he was responsible for a highly successful IAWS plenary meeting in Madison/Wisconsin (1983). After his presidency he served the Academy for three years as Past President under President W. A. Côté.

Born 27th February 1920 in the Bavarian part of Germany within a forest family, he wanted to become a forester, but had first to serve in the army. Being wounded twice he was able to start his forest education in the winter of 1941/2 at the Forstliche Hochschule in Eberswalde close to Berlin, and completed it in 1947 at the Forest Faculty in Hannoversch-Münden of the University of Göttingen. This has led to our life long collegial friendship.

After completion of his study, Knigge worked first from 1949-1954 at the State Ministry for Food, Agriculture and Forestry in Hannover and the corresponding Government Ministry in Bonn. Thereafter, he began his academic work in Hannoversch-Münden with Professor Hans Mayer-Wegelin; succeeding him 1959 as Professor for Forest Utilization and Forest Road Construction. With the relocation of the Forest Faculty from Hannoversch-Münden to Göttingen to a newly built institute, he finally moved to Göttingen in 1972. In addition to research and lecturing, the administrative ability of Wolfgang Knigge was soon demanded by the University as Pro-Rector, Rector and Interim-President of the Georg August University Göttingen in the years 1977-1980, continuing until his retirement in 1985.

The comprehensive scientific work of Professor Knigge included the wide area of Forest Exploitation, Utilization and Wood Characteristics. His extensive results are documented in around 150 scientific papers as well as in six books, partly published with his colleagues H. Schulz, M. Waldschmidt, P. Dietz and H. Löffler. In many fields his contributions are still the basis for ongoing research.

He was editor of the journal *Forstarchiv* together with C. Wiebecke from 1973-1987 and additionally served several other journals.

His scientific results were applied and extended by work in Berkeley/USA and Valdivia/Chile and he undertook numerous study tours including to Canada, China, Columbia, Brazil and South-Africa. He was involved in several national and international organizations, such as the Deutsche Gesellschaft für Holzforschung (DGfH) and the International Union of Forest Research Organisations (IUFRO), leading its Research Group on Wood Quality from 1964-1973.

Wolfgang Knigge was an inspiring lecturer and will be best remembered by all who had the privilege to get to know him as a loyal colleague or stimulating teacher.

*Walter Liese*

## **FORTHCOMING MEETINGS OF INTEREST TO FELLOWS**

### **2012 ANNUAL MEETING OF IAWS: WOOD AS THE BEST MATERIAL FOR MANKIND**

**September 26 - 28, 2012, Zvolen, Slovak Republic**

The conference will be held together with the conference “Interaction of Wood with Various forms of Energy” at the conference centre of the Technical University in Zvolen (TUZVO). The conference is aimed at gaining a better understanding of wood in the sense of the slogan: “We can use wood with intelligence only if we understand wood”.

Topics of interest will include:

- Interactions in the system wood – water – heat
- Wood’s response to mechanical loading
- Interactions on the wood surface
- Interactions between wood and various forms of radiation
- Wood quality parameters determining its final use
- Ecological and environmental properties of wood
- Properties of wood based materials

Zvolen is an historical town set in beautiful surroundings in the central part of Slovakia. Accommodation facilities in Zvolen are good and the vast majority of them are within walking distance of the conference venue. Air transport is possible from Vienna or Budapest. TUZVO derives its origin from the Mining Academy in Banská Štiavnica founded in 1762 and in 2012 celebrates the 60<sup>th</sup> anniversary of its foundation.

For further information about the conference and the venue see: [www.iaws-web.org](http://www.iaws-web.org) and [www.tuzvo.sk](http://www.tuzvo.sk)

## **Fossil IAWA Wood Symposium at IPC XIII / IOPC IX 2012**

**A joint meeting of the 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference, Tokyo, Japan, Campus of Chuo University, August 23–30, 2012.**

On behalf of IAWA, Kazuo Terada (Fukui Prefectural Dinosaur Museum, Japan), Kyungsik Kim (Chonbuk National University, Korea), and Elisabeth Wheeler (N. C. State University, USA) have organized a session on “Late Cretaceous and Tertiary Woods. Ecological, Systematic, and Biogeographic Insights from the Fossil Wood Record.” This symposium has broad geographic coverage, tentative speakers and presentation titles include: 1) Marion Bamford - Late Cretaceous and Tertiary woods from southern Africa; 2) Nareerat Boonchai - Diversity and palaeoenvironment of Eocene petrified woods from Parnell Draw, southwestern Wyoming, USA; 3) Emilio Estrada-Ruiz - Angiosperm wood floras from the southern Western Interior of North America: new data and interpretations; 4) Eun Kyoung Jeong and Kyungsik Kim: Miocene wood assemblages of Korea and Japan with special references to the East Sea (Japan Sea) opening; 5) Anumeha Shukla and R.C. Mehrotra - Fossil wood flora of western India and its bearing on palaeoecological and phytogeographical interpretations; 6) Kazuo Terada and Imogen Poole - Vegetational changes during Late Cretaceous–Tertiary interval from Antarctica to South America, based on fossil wood record; 7) Elisabeth Wheeler and Pieter Baas - Late Cretaceous woods and APG III. What orders and families are represented?

Other symposia with involvement of IAWA members include: Paleofloristic and palaeoenvironmental changes in Asia throughout the Mesozoic: Palynological and megafossil evidence. Organizers: Harufumi Nishida, Marc Philippe, Kazuo Terada & Julien Legrand, and Use and management of plant resources in prehistoric periods in East Asia. Organizers: Shuichi Noshiro & Yuichiro Kudo. There is also a general session to which abstracts can be submitted.

The IPC XIII / IOPC IX 2012 web site is now open for registration: <http://www.psj3.org/ipc-iopc2012/Welcome.html>. Presenting author abstracts are due March 31. Online early registration ends April 30, online registration closes May 31, 2012. There are five options for mid-conference field trips on August 26; and two pre- and five post-congress field trips.

**The 7<sup>th</sup> International conference on plant biomechanics (PBM 2012) will be held in Clermont-Ferrand, France, from 20 to 24 August 2012**

Plant biomechanics is an expanding interdisciplinary field, at the interfaces of biology, mechanics, physics and engineering. Despite its broad range of studies, it has long been felt



that the researchers dealing with biomechanics have a lot to share. The first Plant Biomechanics International Conference was organized in Montpellier (France) in 1994. The 2<sup>nd</sup> PBMIC was held in 1997 in Reading (UK), the 3<sup>rd</sup> in 2000, in Badenweiler (Germany), the 4<sup>th</sup> in 2003 was in Lansing (MI USA), the 5<sup>th</sup> in 2006 was in Stockholm (Sweden), the 6<sup>th</sup> in 2009 was in Cayenne (FG) in South America. Over the years, the Plant Biomechanics International Conference has become the central event of the Plant Biomechanics research community, as well as a unique place for interdisciplinary exchanges around the amazing features that Plants have evolved to sense, acclimate and adapt to the mechanical challenges they have been submitted to.

For further information go to <https://colloque4.inra.fr/pbm2012>

### **Computational micromechanics of wood and cellulose-fibre based materials**

September 10-14, 2012

This meeting will be a mini-symposium at the 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012, <http://eccomas2012.conf.tuwien.ac.at/>) which will take place in Vienna, Austria, on September 10-14, 2012.

This Mini-Symposium will provide a forum to present and debate recent applications of computational micromechanics to wood, paper, and board. It aims at bringing together researchers from various disciplines, such as wood and paper science, engineering, physics, and chemistry, working on the mechanical characterization and simulation of these composite materials. The symposium is intended to give an overview of our current understanding of wood and paper micromechanics from the molecular to the macroscopic scale and of the manifold approaches to link observations at different length scales. Contributions on combined computational and experimental approaches, reflecting the need for comprehensive microstructural information in microscale/multiscale modelling, are also welcome.

The Mini-Symposiums covers the thematic scope of WG3 of COST Action FP0802 on ‘Experimental and Computational Micro-Characterization Techniques in Wood Mechanics’ and extends it to other cellulose-fibre-based materials.

Topics of interest include (but are not limited to)

- multiscale and multiphysics modelling of wood, board, and paper;
- molecular dynamics simulations;
- structure-function relationships;
- wood and paper fibres;
- fibre networks and non-woven structures;
- fibre bonding and debonding;

- fracture, damage and large deformations;
- transport phenomena involving vapour, fluids and solids;
- interactions between microscaled components;
- influence of moisture, temperature, and time on the mechanical performance;
- micromechanical aspects of wood modification and innovative cellulose fibre-based composites.

Further information - conference website <http://abstracts.webges.com/eccomas2012>

### **The 4<sup>th</sup> Nordic Wood Biorefinery Conference (NWBC 2012)**

October 23-25, 2012

This will be held in Helsinki, Finland. For further information on the conference, call for papers, registration and other issues, please visit [www.vtt.fi/nwbc2012](http://www.vtt.fi/nwbc2012).

### **The 4<sup>th</sup> International Conference on Pulping, Papermaking and Biotechnology (ICPPB'12)**

November 7-9, 2012

This will be held at Nanjing Forestry University, Nanjing, China. The conference is organized by the Jiangsu Provincial Key Laboratory of Pulp and Paper Science and Technology, Nanjing Forestry University, Nanjing, China. The conference is co-sponsored by China Technical Association of Paper Industry (CTAPI), Technical Association of Pulp and Paper Industry (TAPPI, USA), Japan Technical Association of Pulp and Paper Industry (JTAPPI), North Carolina State University, University of Tokyo, National Natural Science Foundation of China (NSFC), and Jiangsu Technical Association of Paper Industry. Fellow Prof. Zhongzheng Li is the Conference Chairman and Fellows H-m. Chang and Y. Matsumoto serve as Chairman and co-chair of the Scientific Program Committee. In addition, 13 Fellows are involved as members of the Scientific Committee: P. Axegard (Sweden), P. S. Chang (Taiwan), F. Fukushima (Japan), A. Isogai (Japan), H. Jameel (USA), J. Kadla (Canada), T. Kondo, (Japan), D. Lachenal (France), M. Lindstrom (Sweden), T. Rosenau (Austria), T. Umezawa (Japan), L. Vikari (Finland) and H. Zhan (China). Also, Fellow S. Kelley (USA) is a member of the organizing committee. So, a total of 17 Fellows are involved in the organization of the conference. The Conference cordially invites Fellows to attend the conference. The detail of the conference can be found by visiting the conference website: Homepage: <http://icppb12.njfu.edu.cn>.

## **2012 IUFRO All Division V Conference**

July 8-13, 2012

Information online at:

[www.iufro2012.org](http://www.iufro2012.org)

The Research Group/Working Party 5.04.08, Sawing, milling, and machining of IUFRO has a technical session within the **2012 IUFRO All Division V Conference** to be held on **July 8-13, 2012** at Estoril Congress Centre, located in Lisbon, Portugal.

This session has the objective to offer scientists and engineers a platform for networking and exchanging knowledge on the latest advancements in the processing of wood and wood products.

Topics of interest include:

- Primary and secondary machining processes
- Cutting mechanisms
- Surface quality
- Tool materials
- Eco-friendly machining
- Enhanced performance
- Future applications

## **International Association of Wood Anatomists at IUFRO Division 5 Conference**

The programme of the IUFRO Division 5 Conference in Estoril, Portugal from 8–13 July this summer will feature an impressive selection of contributions on wood structure as related to wood quality, with special interest sessions on wood development, climate change, dendrochronology, and non-timber forest products such as cork. IAWA will host a short business meeting and a more extensive social hour on Monday 9 July. We look forward to seeing many IAWA members at this important forest products conference. For further details see the IUFRO website ([www.iufro.org](http://www.iufro.org)).

## **21st International Wood Machining Seminar (IWMS-21), Tsukuba, 4-7 August, 2013**

The 21<sup>st</sup> International Wood Machining Seminar (IWMS-21) will be held August 4-7, 2013 at EPOCHAL TSUKUBA, Tsukuba, Japan. This seminar is the 21<sup>st</sup> in a series that began in 1963 at California, USA to provide a forum for researchers and practicing engineers to present and discuss recent advances in wood machining.

The seminar will feature technical and scientific presentations and discussions on: Cutting process, Tool materials and tool wear, Advances in sawing technology, Planing, Molding, Routing, Sanding, and Novel wood products processing. An optional post-seminar tour will be organized. The conference language is English.

Tsukuba International Congress Center(EPOCHAL TSUKUBA)is an international conference center located in the heart of Tsukuba City, which is home to a large number of internationally renowned scientists.

Further information from: <http://www.ffpri.go.jp/en/symposium/iwms21/>

## **Society of Wood Science and Technology 55th International Convention Beijing, China August 27-31, 2012**

### **Program: Sustainable Development of Wood and Biomass in our New Global Economy**

#### **Global Trade**

Energy and Carbon Issues

Development and Research in Bamboo and other Agri-fibers

Sustainable Resources for the Future

Tour of ICBR Laboratories

Poster Session and Student Poster Competition

Advanced Wood Processing I

Advanced Wood Processing II

Wood Culture

Information: <http://www.swst.org/meetings/AM12/index.html>

## Pan American IAWA Meeting in Brazil 2012

**The 2012 IAWA Pan-American Meeting will be held from 1 to 5 October 2012 in Recife, Pernambuco.**

This meeting will be an international forum for the exchange of knowledge and experience in a wide variety of areas, including general wood anatomy and identification, wood formation and cambial activity, dendrochronology, ecological wood anatomy, paleobotany, ecophysiology, and research in wood quality with a focus on sustainable and adequate use of the wood. Ultrastructure, and the use of new technologies, including near-infrared spectroscopy and the recent advances in microscopy and molecular biology are leading to new challenges on the frontiers of wood anatomy. This meeting will be organized by the Faculdade de Ciências Agronômicas (FCA), UNESP/Botucatu, and the Fundação de Estudos e Pesquisas Agrícolas e Florestais (FEPAF).

The 2012 IAWA Pan-American Meeting will include two other important events: the Second SIMBRAMAD (II Brazilian Symposium on Wood Anatomy) organized by Dr. Gregorio Ceccantini, and the First IAWA Bark Symposium organized by Dr. Veronica Angyalossy. The Bark Symposium will be a special session to explore the need and feasibility of a future “List of terms used in bark anatomy.”

Participants will have the opportunity to discuss recent progress in their research and exchange knowledge with their colleagues. The IAWA Pan-American Meeting is co-sponsored by the International Association of Wood Anatomists (IAWA); Faculdade de Ciências Agronômicas, UNESP/Botucatu; Centro de Ciências Biológicas, UFPE/Recife; Centro de Ciências Exatas e da Natureza, UFPB/João Pessoa; and Instituto de Biociências, USP/São Paulo. In the five days of activities (1 to 5 October 2012) there will be lectures, panel discussions and symposia. The choice of Recife, in the state of Pernambuco, was based in part upon the infrastructure with an excellent selection of hotels and one of the most modern airports in Brazil, besides the support of the UFPE. Furthermore the region includes a wide variety of cultural attractions, beautiful landscapes and biomes such as mangroves, rainforest, and caatinga. Details about the meeting venue, registration, and submission of abstracts will be published soon on the IAWA website.

The Organizers: **President:** Carmen Regina Marcati – Faculdade de Ciências Agronômicas - UNESP - Botucatu/SP. — **Vice President:** Rivete Silva de Lima – Centro de Ciências Exatas e da Natureza - UFPB - João Pessoa/PB.

**Local Organizer:** Marccus Alves – Centro de Ciências Biológicas - UFPE - Recife/PE.

**Scientific Committee:** Veronica Angyalossy – Instituto de Biociências - USP - São Paulo/SP  
Gregorio Ceccantini – Instituto de Biociências - USP - São Paulo/SP.

Rivete Lima – Centro de Ciências Exatas e da Natureza - UFPB - João Pessoa/PB.

Patricia Soffiatti – Setor de Ciências Biológicas - UFPR - Curitiba/PR.

Lázaro Benedito da Silva – Instituto de Biologia - UFBA - Salvador/BA.

Claudia Luizon Dias-Leme – Instituto de Biologia - UFBA - Salvador/BA.

Cláudio Sérgio Lisi – Centro de Ciências Biológicas e da Saúde - UFS - São Cristóvão/SE.

Carmen Regina Marcati – Faculdade de Ciências Agrônômicas - UNESP - Botucatu/SP.

Silvia Rodrigues Machado – Instituto de Biociências - UNESP - Botucatu/SP.

Marccus Alves – Centro de Ciências Biológicas - UFPE - Recife/PE.

**Executive Coordinator:** Edison Baptista – Fundação de Estudos e Pesquisas Agrícolas e Florestais, FEPAF - Botucatu/SP.

### **First workshop of the NECLIME working group on fossil wood in Brno, Czech Republic, 2013**

NECLIME is a project which tries to reconstruct the Neogene climate and vegetation of Eurasia and has several working groups. In September 2011 in Bucharest a special fossil wood working group was proposed. Its first workshop is planned for June 2013 at the Faculty of Forestry and Wood Technology of Mendel University in Brno (Czech Republic). The emphasis will be on Cenozoic fossil angiosperm wood with two main objectives: 1) to reconsider the nearest living relatives of fossil taxa, 2) to revise “taxon complexes” by adding fossil wood morphogenera and 3) to summarize the fossil wood localities suitable for Wiemann *et al.*’s statistical approach of paleoclimate reconstruction. A well equipped room with a projector directly connected with a teaching microscope and 25 good-quality microscopes as well as numerous reference slides of modern Central European and some tropical wood will be at our disposal. The workshop is primarily for people who would be interested to become a NECLIME member and to cooperate with the fossil wood working group. However, IAWA members and others interested are also most welcome! The city of Brno where the workshop will take place is a nice and historical metropolis of Moravia, easily accessible by car or public transport. Moravian wine tasting and visits to historical sites and the beautiful Moravian Karst landscape are further incentives to come. We look forward to welcome you in Brno in 2013!

Vladimir Gryc (Mendel University in Brno) & Jakub Sakala (Charles University in Prague), organizers (e-mail contact: [rade@natur.cuni.cz](mailto:rade@natur.cuni.cz)).

### **8<sup>th</sup> PRWAC in Nanjing China, 2013**

The 8th Pacific Regional Wood Anatomy Conference (PRWAC 2013) will be held in the second half of October, 2013 in Nanjing, China. Local host and chairman of the conference will be Professor Qisheng Zhang from Nanjing Forestry University. The conference is co-organized by the Wood Science Branch of the Chinese Society of Forestry and is co-sponsored by the International Association of Wood Anatomists (IAWA). Please look out for the further announcements on the IAWA Website or in the forthcoming issues of the IAWA Journal. The contact address for the conference: Professor Pan Biao, School of Wood Science and Technology, Nanjing Forestry University (e-mail: [pan.biao@163.com](mailto:pan.biao@163.com)).

**The fourth International Symposium of the Indonesian Wood research Society (IWoRS)  
Greening the Earth to continue the wonderful use of wood for secure life  
November 7-8, 2012, Makassar, South Celebes, Indonesia**

**For further information go to <http://www.mapeki.org/iwors2012>**

**International Conference--Centenary of Education in Chemical Engineering  
Iasi, Romania 28-30 November 2012.**

For further information contact [acblaga@tuiasi.ro](mailto:acblaga@tuiasi.ro)

## **NEWS FROM OTHER SOCIETIES**

### **IAWA/International Association of Wood Anatomists**

#### **A vote of thanks to Regis Miller and Tomoyuki Fujii**

Following the transfer of the IAWA Office from Madison to Leiden last year as announced in IAWA J. 32(4): 536, we would like to express our gratitude for the long-time service of Regis Miller and Tomoyuki Fujii as Executive Secretary and Deputy Executive Secretary, respectively. From 1997 until 2011 Regis and Tomoyuki have served our association extremely well. Regis moreover served as Deputy Executive Secretary from 1990 to 1997, and it is very gratifying that he is prepared to remain in charge of the American account of IAWA, and continues to be active in the collection of membership dues in the Americas. Tomoyuki Fujii has been a driving force for many years in the highly active Pacific Regional Group of IAWA. We wish both Regis and Tomo the very best for their personal and professional future and look forward to an opportunity to thank Regis and Tomoyuki in public at one of the future IAWA meetings.

*Frederic Lens and the IAWA Council*

### **Regional IAWA Groups**

Jointly with numerous other organizations IAWA Members are active all over the world in organizing scientific meetings in which the study of wood structure and function plays a major part. Whenever the IAWA is a leading partner in these meetings, the regional IAWA Committees play an active part in their organization. Over the last decade the composition of regional committees has undergone minor or major changes. Below is the current composition, as we are aware of them. Some of the forthcoming meetings these groups are organizing are added (see also the Wood Anatomy News pages in this issue)

*Pan American regional group:* Carmen Marcati, Fidel Roig, Barbara Lachenbruch, Veronica Angyalossy, Teresa Terrazas (Recife, Brazil, October 2012).

*Pacific regional group:* Tomoyuki Fujii, Hisashi Abe, Lloyd Donaldson, Y.S. Kim, Keiko Kuroda, M. Hamami bin Sahri, Takao Itoh (Nanjing, China, October 2013).

*Afro-European regional group:* Pieter Baas, Steven Jansen, Veronica de Micco, Imogen Poole, Rupert Wimmer (Hamburg, Germany 2014).

## PUBLICATIONS BY OR OF INTEREST TO FELLOWS

### Wood Machining News

*An International, Bimonthly Newsletter*

[www.woodmachining.com](http://www.woodmachining.com)

**Wood Machining News is published by the Wood Machining Institute and edited by Dr. Ryszard Szymani, Director of the Institute.** The newsletter is designed to bring you the information you need about sawing technology, planing and sanding operations, production of veneer and chips, and equipment associated with these operations. Wood Machining News also reports on new machining processes and software, cutting tools and machines, and worker safety. The newsletter is in its twenty-eighth year of publication and has a list of readers in North America, Europe, Japan, Australia, New Zealand and South Africa.

**Since 1989, subscribers to Wood Machining News have also received the Scanning Technology Update,** a regular supplement to the newsletter. The Scanning Technology Update provides readers with in-depth coverage of technical developments and current research in the areas of scanning technology and process optimization in the wood industry.

**As a subscriber to Wood Machining News, you will be provided with abstracts of relevant articles** from the most influential journals worldwide, reviews of important new publications and patents, and announcements of exhibitions and industry-related courses and seminars. In addition, you will benefit from our on-the-spot coverage of important international trade shows and conferences.

**Wood Machining News provides an independent perspective on new products.** There are no advertisements in the newsletter -- just important information about new developments in the wood industry, carefully selected and condensed. We don't simply promote new trends; we assess them for our readers.



**A subscription to Wood Machining News costs only \$78 per year in the U.S. and Canada, and \$84 overseas.** In other words, WMN costs substantially less than most technical newsletters with international subscription, yet provides valuable information that would be rather difficult for subscribers to gather independently.

**Wood Machining News is a unique and indispensable source of the latest information** in the wood machining field, and will keep you and your company on the cutting edge of technology.

### **Geneva Timber and Forest Study Paper 29**

#### **The North American Forest Sector Outlook Study 2006-2030**

Projections for the United States and Canada to 2030 have been made with a global model to account for concurrent changes in other countries. Three future scenarios were investigated: two IPCC-based scenarios assuming the rapid growth of wood-based energy, and one IPCC-based scenario without this assumption. The model, under the IPCC scenarios, accounted for trends in population, income and land use along with emerging technology and predicted changes to consumption patterns for wood products and bioenergy. Markets for wood products, which mainly are destined for the construction sector in North America, are projected to recover by 2015 under all three scenarios examined. Projections suggest that, in spite of declining use of paper for media, other paper and paperboard for packaging and miscellaneous uses will continue to enjoy strong global demand.

This document was prepared by Joseph Buongiorno and Shushuai Zhu, University of Wisconsin-Madison, Jeff Prestemon, USDA Forest Service, Southern Research Station, in collaboration with Forestry Canada and UNECE.

Full article available at: <http://www.unece.org/forests/outlook/outputs/mop1.html>

**Outlook to 2060 for world forests and forest industries: a technical document supporting the Forest Service 2010 RPA assessment****Author:** Buongiorno, Joseph; Zhu, Shushuai; Raunika, Ronald; Prestemon, Jeffrey P. **Date:** 2012 **Source:** Gen. Tech. Rep. SRS-151. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 119 p.

**Summary:** Four RPA scenarios corresponding with scenarios from the Third and Fourth Assessments of the Intergovernmental Panel on Climate Change were simulated with the Global Forest Products Model to project forest area, volume, products demand and supply, international trade, prices, and value added up to 2060 for Africa, Asia, Europe, North America, Oceania, South America, and selected countries. Scenario A1B presents a 5.5-

fold increase in world fuelwood use that leads to high prices of fuelwood and industrial roundwood, driven by especially strong demand in Asia for large imports from South America and Europe. World roundwood consumption reaches 11.2 billion m<sup>3</sup> in 2060, exceeding the increment of forests, particularly in Asia. Even under scenarios A2 and B2, the harvest in Asia is unsustainable. However, scenario A1B and a low fuelwood demand lead to a global harvest of 3.6 billion m<sup>3</sup> only and to a sustainable forest volume. The world consumption of manufactured wood products grows modestly under most scenarios, with slight changes in prices. Consumption and value added in industries increases more rapidly in Asia, due to the fast economic growth of China and India in all scenarios. As a result, Asia is a large importer of industrial roundwood from South America and Europe and of paper and paperboard from Europe and North America.

## HIGHLIGHTS

### **Confocal Raman System at the Institute of Biomass Chemistry and Technology, Beijing Forestry University (BFU)**

*Communicated by Professor Feng Xu and Fellow Adya Singh*

Lignocellulosic biomass from agricultural plants and forest trees serve as a valuable natural resource for fuels and chemicals, that is renewable and can be utilized sustainably. However, presence of lignin and complex macromolecular organization of lignified biomass cell walls pose a challenge in developing processes that can enable this recalcitrant substrate to be efficiently and economically utilized, particularly for producing biofuels. Understanding the composition of the lignocellulosic biomass from different plant sources and the distribution of lignin and other polymers across the cell wall can be useful in developing technologies targeted at efficient utilization of the biomass and production of products that are tailored to specific requirements and that can add high value.

The Institute of Biomass Chemistry and Technology at Beijing Forestry University, Beijing, China is undertaking extensive research into fractional isolation, structural characterization, and chemical modification of biomass components using a range of chemical and microscopic techniques. In 2010, BFU established a division primarily focusing on the ultrastructure and topochemistry of lignocellulosic materials (non-woody and fast-growing woody plants). The confocal Raman microscope (LabRam Xplora, Horiba Jobin Yvon) which the Biomass Chemistry and Technology Institute purchased in 2009, is the latest acquisition among the microscopic facilities that is proving invaluable as a research tool in topochemical characterization of the lignocellulosic biomass prior to, during and post-modification of the substrate, and particularly in in-situ mapping and analysis of lignin and other components

at the cell wall level. The system is equipped with a confocal microscope (Olympus BX51) and three linear-polarized lasers (532nm, 633nm, 785nm). The Raman light is detected by an air-cooled, front-illuminated spectroscopic charge-coupled device (CCD) behind a grating (1200 grooves  $\text{mm}^{-1}$ ) spectrometer with a spectral resolution of  $2 \text{ cm}^{-1}$ .

Following are some examples of the areas the division has already investigated, and the work of the division and its research capabilities, particularly the Raman Confocal system, a powerful chemical imaging tool, is attracting international attention, with overseas enquiries coming in from reputed wood science research centers for developing collaboration.

- 1 Ultrastructural investigation of lignocellulosic biomass tissues (Figure 1);
- 2 Topochemical investigation of normal and reaction wood tissues (Figure 2);
- 3 Comparison of cellulose microfibril orientation among morphologically distinct regions in wood tissues (Figure 3).

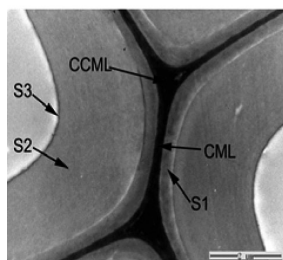


Fig. 1 TEM image showing the ultrastructure of *Cornus alba* L. fiber walls

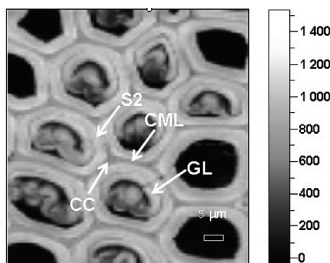


Fig. 2 Raman image showing the overall structure of *Populus nigra* tension wood fibers

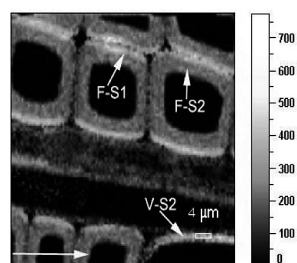


Fig. 3 Raman image showing the higher microfibril angle in *Cornus alba* L. fiber S1 and vessel S2

For more information, please contact institute Vice Director Prof. Feng Xu  
(Email: xfx315@bjfu.edu.cn)

## **GUIDELINE FOR HIGHLIGHTS**

The purpose of the Highlights, published in the Bulletin, is to promote the integration of the fields of wood science. Fellows are encouraged to submit Highlights to any of the Officers!

Highlights should:

- be free of jargon and highly technical language and (unexplained) acronyms, and be readily understood by wood scientists in other fields
- be no more than 1000 words (roughly 4 pages in the Bulletin)
- begin by providing a brief background or framework to put the report in perspective
- give due credit to the work of others in the field, not just summarize the author's work
- contain important references to the literature for further reading
- finish with a statement of future directions in the area

## NOMINATION PROCEDURE FOR ELECTION OF FELLOWS

The nomination process is relatively simple; all you need to do is fill in the Nomination form and send it to me. For those to be considered in the next election, the deadline for receipt of nominations is **30 September**.

I then contact the nominee, confirm their willingness to stand for election, and then have them complete the more detailed application form. The Executive Committee reviews the nominees to determine if their applications are complete, and then, in early November, submits the completed applications to the membership for ballot.

Typically, scientists who are nominated are either mid-career, showing great promise and accomplishments, or near the end of their career, when their peers feel that they have made major continuing contributions over their professional life.

There are two areas of Fellowship that are under-represented in IAWS. One is Fellows from developing countries, where the number of refereed scientific contributions, as viewed by the developing world, may be somewhat lacking because of the past or current inability to publish in the leading journals, and/or difficulty with the English language. The other area relates to the few numbers in certain scientific disciplines; if you are in one of those, you are aware of that. The Executive Committee is also interested in election of wood science managers who have had a major impact through their oversight of research activities, without necessarily having the expected number of refereed publications.

Please spend some time thinking about potential nominees, perhaps looking through the Directory and the listing of Fellows by countries. Since we do not “promote” ourselves to gain members, it is up to the Fellows in the Academy to provide the basis for this recognition.

*Lennart Salmén*

## **Nomination for Fellowship of the International Academy of Wood Science**

**Name of Candidate:**

**Position of Candidate:**

**Candidate Mailing Address:**

**Candidate email address (required!):**

**Candidate's Background (maximum 100 words):**

**Reasons for the candidate's nomination (outstanding in his/her field; substantial contributions to wood science; major results in management of research; etc):**

**Date:**

**Nominator name:**

**Email address:**

**Telephone:**

**Please return to:** [lennart.salmen@innventia.com](mailto:lennart.salmen@innventia.com)



# IAWS



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