ISSUE

01

# IAWS Bulletin



April 2023

Board

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### Executive

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Please send correspondence by email to the editor,

Lloyd Donaldson

## Message from the President



As we turn a corner on the recent challenging years, it seems the most difficult times are behind us. Nonetheless, we have experienced a shift in our daily lives, embracing new norms such as web-based networking and virtual conferences. It appears unlikely that we will return to the ways of the past, but we remain grateful for the safety and health of all our fellows.

We are delighted to welcome five new fellows from four countries: Ukraine (Prof. Pavlo Bekhta), New Zealand (Dr. Rowland Burdon), USA (Prof. Laurent M. Matuana and Dr. Nicole Stark), and China (Prof. Yan Xiao). Details about our new members can be found in this Bulletin. The Academy is extremely proud to have such a diverse group of individuals, spanning different geographies, genders, and disciplines. Their exceptional academic achievements

and ongoing dedication to research bring immense honor to the Academy.

As mentioned in the previous Bulletin, we held an election for a new Vice President. I am pleased to announce that Prof. Ingo Burgert (ETH, Zurich) was elected. We saw encouraging results, with active participation from our fellows in the voting process. Prof. Burgert is expected to work closely with Prof. Stavros Avramidis, who will assume the role of President on June 2nd, to advance the activities of the IAWS. There will be changes in the Executive Members starting in the second half of this year. Dr. Lloyd Donaldson is resigning as Secretary, coinciding with his retirement from SCION, New Zealand. We greatly appreciate his six years of service to the Academy, particularly his efforts to enhance the visibility and accessibility of our website. We remain indebted to his passion and enthusiasm in improving the Academy's operations, exposure and image. Prof. Rupert Wimmer will take over the role of secretary from June 2nd.

This year, the Academy co-hosted the World Wood Day Online Symposium with the International Wood Culture Society, IUFRO, and numerous other esteemed research organizations. In the IAWS Special Session of the symposium, five fellows made presentations on intriguing topics, with Stavros serving as the session chair. Additionally, three IAWS Ph.D. awardees (A. Alade, South Africa; L. Yu, USA; and O. Dvoracek, Austria) presented their doctoral work. We believe the presentations of PhD awardees can help create platforms for their further development, even in a virtual environment. The Academy will continue to provide young scientists with opportunities to engage with the international intellectual community and broaden their horizons. In this context, we highly appreciate Fellow Yafang Yin's program, the "International Youth Forum for Wood Anatomy", which aims at nurturing young scientific talents. We are confident that events of this nature will stimulate and inspire the next generation of researchers through the active participation of Academy fellows.

Lastly, we are deeply saddened by the recent loss of fellow Walter Liese (Hamburg, Germany). His pioneering work in the ultrastructure of wood and bamboo catalyzed the development of wood science at the nanoscale. His devotion and leadership in growing the Academy will always be remembered with gratitude. May his soul rest in eternal peace.

Yoon Soo KIM

Five new fellows were elected from the 2022 election. We welcome to the academy the following new fellows:

**Prof. Pavlo Bekhta** - Head of Department of Wood-Based Composites, Cellulose & Paper, Ukrainian National Forestry University, Ukraine.

Dr Rowland Burdon - Emeritus Scientist, Scion, New Zealand.

**Prof. Laurent Matuana** - Professor and Associate Director, School of Packaging, Michigan State University, East Lansing. Michigan, USA.

**Dr Nicole Stark** - Supervisory Research Chemical Engineer, USDA Forest Service, Forest Products Laboratory, Madison, WI, USA.

**Prof. Yan Xiao** - Distinguished Chair Professor, Program Director for Energy, Environment and Sustainable Systems Sciences, Zhejiang University, ZJU-University of Illinois Joint Institute (ZJUI), China.

**Prof. Pavlo Bekhta** - Head of Department of Wood-Based Composites, Cellulose & Paper, Ukrainian National Forestry University, Ukraine.



#### **Curriculum Vitae :**

1977 - 1982 Engineer in wood technology (diploma with honors), Ukrainian National Forestry University (former Lviv Forest Technical Institute), Lviv, Ukraine

1982 - 1983 Engineer, Wood recovery plant, Dymer, Ukraine 1984 - 1987 Candidate of technical sciences (CSc.) in wood science and technology specialization, Ukrainian Research Institute of Mechanical Technology of Wood, Kyjiv, Ukraine

1988 - 1989 Engineer, Lviv Design-Technological Institute of Forestry Industry Board, Ukraine

1989 - 1997 Lecturer, Senior Lecturer, Associate Professor, Department of Wood Products, Ukrainian National Forestry University, Lviv, Ukraine 1996 - Doctor of technical sciences (DrSc.) in wood science and technology specialization, Ukrainian National Forestry University, Lviv, Ukraine 1997 - present Professor, Head of Department of Wood-Based Composites, Cellulose and Paper, Ukrainian National Forestry University, Lviv, Ukraine.

### Major awards and honors, leading positions, visiting positions, significant memberships, editorial boards and consultancies:

Honor Diploma of Ministry of Education and Science of Ukraine (2008). Awards of the Ministry of Education and Science of Ukraine - "Excellence in Education of Ukraine" (2010) and "For Scientific and Educational Achievements" (2015). Visiting Professor: at Warsaw University of Life Sciences, Poland (1998), Swiss Federal Institute of Technology, ETH-Zürich, Switzerland (1999, 2001-2002), Poznan University of Life Sciences, Poland (2001, 2021-2022), Technical University in Zvolen, Slovakia (2007, 2013, 2015-2016, 2019-2020); Transilvania University of Brasov, Romania (2018); DAAD Guest Professor at Dresden University of Technology, Germany (1998) and Fraunhofer Wilhelm-Klauditz Institute für Holzforschung (WKI), Germany (2001, 2005); NATO Science Fellowship - Warsaw University of Life Sciences, Poland (2000-2001). National representative for COST Actions: FP0904, FP1006, FP1303, FP1407 and CA15216. Member of the Editorial Boards "Acta Facultatis Xylologiae Zvolen" and "Research papers of the Forestry Academy of Sciences of Ukraine". Fellow of the Forestry Academy of Sciences of Ukraine since 2000.

#### Principal Wood Science Achievements (maximum 250 words):

My career research has focused on the development of new and improvement of existing technologies for the processing of wood and wood-based composites including: 1. Carrying out pioneering works in the field of thermal treatment of wood. It was found that there is a potential to evaluate the mechanical strength of thermally modified wood by its color changes. 2. Research on the thermo-mechanical densification of wood veneer surface prior the adhesive application by developing technology, which has proven to be very effective to improve the bonding strength of veneer-based products by reducing adhesive and varnish consumption. 3. The preparation and modification of wood resin adhesives and developed various techniques for hot pressing of plywood panels at low temperatures by contribution of significant low emissions. 4. Technologies from the perspective of environmentally friendly wood-based composites by using thermoplastic films instead of conventional liquid adhesives, and modification of adhesives using bark, lignosulfonates and pulp, paper and fibrous sludge were developed. 5. Three dissertations for the degree of Doctor of Technical Sciences and 15 dissertations for the degree of Candidate of Technical Sciences were conducted under my supervision and studies were defended. I have also advised numerous bachelor and master students during my tenure.

Dr Rowland Burdon - Emeritus Scientist, Scion, New Zealand.



#### **Curriculum Vitae :**

Degrees: BSc Botany (NZ); BA Forestry (Oxford); PhD Plant genetics (Wales) Employment:

2012-; Emeritus Scientist, Scion

2000-12; Senior Scientist (retired), Scion

1964-2000; Scientist, New Zealand Forest Research Institute (latterly Scion) 1962-1964; Forester, New Zealand Forest Service

1956-1962; Trainee, then Study Award Bursar, New Zealand Forest Service

Major awards and honors, leading positions, visiting positions, significant memberships, editorial boards and consultancies:

Honours: Fellow, Royal Society of New Zealand 1992- (Academy Councillor 1996-2000);

Major positions: Chair, IUFRO Working Party "Breeding Pinus radiata" 1982-1995; Co-chair1977-1982

Visiting position: Visiting Scholar, North Carolina State University 1981-1982 Significant memberships: New Zealand Genetical Society, President 1989-1990 New Zealand Institute of Forestry 1960-, Fellow 2006-

Journal Associate editorships: Forest Science, 1992-1995, New Zealand Journal of Forestry Science, 2005-2018, Tree Genetics & Genomes, 2008-2017, Genetics Editor, Encyclopedia of Forest Sciences, Publ. Academic Press 2004 Key consultancies: Chile (FAO/CONAF) 1978, British Columbia Ministry of Forestry 1995.

#### Principal Wood Science Achievements (maximum 250 words):

Burdon's contributions to wood science stem from his work as a geneticist-breeder, studying the inheritance of wood properties along with other traits together with patterns of environmental and within-tree variation. Following on are strategic issues of including wood properties in breeding programmes. The context was mainly but not exclusively radiata pine. Beyond the routine aspects he has contributed major, creative insights into underlying biological relationships. Most importantly, he has set a new conceptual framework for addressing patterns of within -tree variation in wood properties (Publication 1), clearing up the longstanding scientific problem that the historical concept of juvenile versus mature wood (actually corewood versus outerwood) was in serious conflict with the wellestablished botanical concept of maturation. Another important insight was in the relationship between wood density and growth rate. Published relationships between density and individual growth variables often gave a confusing and inconsistent picture. However, he statistically uncovered what is often a much clearer picture, with positive relationships of density with height for constant diameter and negative relationships with diameter for constant height (Publications 2 and 3). This pattern, which represents mechanical common sense, is implicit in many reported studies confined to bivariate data analysis. An early study (Publication 4), involving inheritance of compression wood, working with a limited database, was seminal in pointing to how forming compression wood can be an active righting process rather than just a passive response to lean. Scientific contributions other than publications include much formal and informal peer review, and some major internal reports.

**Prof. Laurent Matuana** - Professor and Associate Director, School of Packaging, Michigan State University, East Lansing. Michigan, USA.



#### Curriculum Vitae :

2018 - present: Associate Director, School of Packaging, Michigan State University

2014 - present: Professor, School of Packaging, Michigan State University 2010 – 2014: Associate Professor, School of Packaging, Michigan State University 2005 - 2010: Associate Professor, Dept. of Forestry, Michigan State University 2002 - 2005: Assistant Professor, Dept. of Forestry, Michigan State University 1998 - 2001: Assistant Professor, School of Forestry & Wood Products, Michigan Technol. Univ.

1997 – 1998: Associate Scientist, Wood Composites, Norbord, Pointe-Claire, Quebec, Canada

### Major awards and honors, leading positions, visiting positions, significant memberships, editorial boards and consultancies:

- Fellow of the Society of Plastics Engineers (SPE) (January 2014).
- Repeatedly elected since 2002 to the Board of Directors (BOD) and the Technical Program Committee (TPC) for the Vinyl Plastics Division of SPE (served as Secretary and Chair several times).
- Awarded the 2010 Scientific and Technical Contribution to the Vinyl Industry. Award sponsored by SPE.

• Awarded the Vinyl Plastics Division's best conference technical papers (2007, 1997) and Advisor recognition awards for the best student technical papers (2009, 2005, 2004, 2001, 2000) on "Wood Plastic Composites" at the Annual Technical Conference (ANTEC) of the SPE.

• Recognition award for significant contributions made to the society and the plastic industry, Thermoplastic Materials and Foams Division, Society of Plastics Engineers, (2003).

• Distinguished Wood Science Teaching Award (2000), School of Forestry and Wood Products (Michigan Tech. University).

Active member of 4 professional organizations: (1) Forest Product Society (FPS, 1993-), (2) Society of Wood Science and Technology (SWST, 1993-); (3) Society of Plastics Engineers (SPE, 1995-), (4) American Society of Mechanical Engineers (ASME, 1995-).

Associate Editor (1 journal) & member of the Editorial Review Board for 4 peer-reviewed journals.

#### Principal Wood Science Achievements (maximum 250 words):

I am internationally recognized for my work on wood-plastic composites (WPCs). My scientific efforts to add value to underutilized wood species and waste wood fibers have contributed to the development of WPCs, an entirely new class of materials that have become widely used in the construction and automotive industries. My work provided a basic understanding of the interfacial adhesion between wood and plastic, which is critical for the performance of WPCs. I developed microcellular foamed structures into WPCs to reduce their weight while enhancing their ductility. My pioneering work on the effects of UV light, cyclic freeze-thaw, mold/fungi exposures on WPC performance has paved the way for a better understanding of their durability and has had great impact on academia and industry. I hold three U.S. patents for WPC technologies and has contributed to more than 80 studies on the subject due to an over \$10 million in extramural grant funding received as a PI or co-PI. I have graduated 10 Ph.D. and 15 M.S. thesis students, most of whom have earned best paper awards and honors from various professional organizations. Additionally, I have served on over 50 other graduate student committees and external reviewer (opponent) on 8 Ph.D. dissertations overseas. Due to my accomplishments in WPCs, my peers and industrial scientists honored me with the 2010 Scientific and Technical Contribution to the Vinyl Industry Award, one of the most prestigious awards sponsored by the Society of Plastics Engineers (SPE) and was elected to Fellow of the SPE in 2014.

**Dr Nicole Stark** - Supervisory Research Chemical Engineer, USDA Forest Service, Forest Products Laboratory, Madison, WI, USA.



#### Curriculum Vitae :

Education: Ph.D., Forest Science, Michigan Technological University, 2003 Master of Science, Chemical Engineering, University of Wisconsin-Madison, 2001, Bachelor of Science, Chemical Engineering, University of Wisconsin-Madison, 1995

Experience: Oct 2021-present: Supervisory Research Chemical Engineer, USDA Forest Service, Forest Products Laboratory, Biopolymer Science and Engineering 2003-2021: Research Chemical Engineer, USDA Forest Service, Forest Products Laboratory, Engineering Composites Science 2019-present: Adjunct Professor Michigan State University, School of Packaging

### Major awards and honors, leading positions, visiting positions, significant memberships, editorial boards and consultancies:

2018-2022: Executive Board Member, Forest Products Society, President 2020-2021
2020: USDA FS, FPL/NRS Directors Award for Distinguished Science in 2020
2020: Chair of the 74th International Convention of the Forest Products Society
2019: Technical program Chair of the 73rd International Convention of the Forest Products Society
2018: USDA-FS Inspiring Women Award for Outstanding Scientific Achievement
2018: Co-Chair of the 72nd International Convention of the Forest Products Society
2013-2018: Midwest Regional Board Member, Forest Products Society
2009, 2011, 2013, 2017: Chair, International Conference on Natural Fiber-Polymer Composites
2004: George Marra Honorable Mention Award from the Society of Wood Science and Technology

#### Principal Wood Science Achievements (maximum 250 words):

Although Dr. Stark has been active in many areas of wood product research, her two largest contributions are in wood-plastic composites (WPCs) and cellulose nanocomposites. The commercialization of WPC decking material led Dr. Stark to recognize that properties and aesthetics were changing during use. Her relationships with commercial producers, materials suppliers, and other researchers allowed her to define the problem and develop a program to fundamentally understand changes in chemistry and mechanical performance of composite surfaces during weathering and develop novel ways to mitigate the changes. Aspects of this research are still heavily cited today, and Dr. Stark remains one of the leading experts in the weathering of wood-plastic composites. She continues to investigate WPC durability issues related to weathering, decay, and fire performance.

Dr. Stark has transferred this expertise to develop methods to incorporate wood-derived cellulose nanomaterials (CNs) into plastics for sustainable packaging applications. In this effort she leads a research team evaluating bioplastics containing CNs for the Forest Service. Dr. Stark has focused on producing cellulose nanocomposites using commercially relevant techniques, modification of the CNs to improve composite properties, and a fundamental understanding of how the CNs impact composite properties such as barrier properties. Technology transfer activities to promote the use of CNs include chairing conference sessions covering cellulose nanocomposites, over 25 publications on the subject, and hosting visiting scholars. Dr. Stark continues to work on forest-based renewable packaging as Project Leader of the Forest Biopolymer Science and Engineer research group.

**Prof. Yan Xiao** - Distinguished Chair Professor, Program Director for Energy, Environment and Sustainable Systems Sciences, Zhejiang University, ZJU-University of Illinois Joint Institute (ZJUI), China.



#### **Curriculum Vitae :**

Education:

1978.10-1982.09, Tianjin University, Civil engineering and construction, Bachelor 1983.10-1986.03, Kyushu University, Architecture engineering, Master 1986.04-1989.03, Kyushu University, Structural engineering, Doctor Professional Experiences: 1989.03-1990.03, Research Institute of Aoki Construction Co., LTD., Tokyo, Research Engineer 1990.03-1992.03, University of California San Diego, Civil engineering, Postdoctoral researcher 1992.03-1994.05, University of California San Diego, Civil engineering, Asst. Research Scientist, Lecturer 1994.06-2011.10, University of Southern California, Department of Civil and Environmental Engineering, Asst., Assoc. and tenured full Professor

2011.10- University of Southern California, Department of Civil and Environmental Engineering, Research Professor 2006.05-2015.04, Hunan University, Chair Professor, Dean of the School of Civil Engineering 2015.05-2018.05, Nanjing Tech University, Chair Prof., Dean of the School of Civil Engineering 2018.06- , Zhejiang University – University of Illinois at Urbana Champaign Joint Institute (ZJUI), Zhejiang University, Distinguished chair Professor, Director for Energy, Environment and Sustainable Systems Sciences

#### Major awards and honors, leading positions, visiting positions, significant memberships, editorial boards and consultancies:

- 1. Chun Hui scholar lecturer sponsored by the Ministry of Education of China, Tongji University, December 1995 to January 1996.
- 2. Fellowship of Japan Society for the Promotion of Science (JSPS), 1996.
- 3. Chun Hui Scholar, Ministry of Education of China, Tianjin University, June to December 2001.
- 4. Cheung Kong (Changjiang) Scholar, Ministry of Education of China, October 2001.
- 5. Jieqing Scholar (B), NSF China, 2001.
- 6. George V. Chillingar Medal of Honor, Russian Academy of Natural Sciences, US Section, October 2005.

7. Popular Science Magazine, Best of What's New Award, 2008, for innovation of GluBam(R), named as one of four Popular Science Innovators in 2008.

- 8. Hunan Provincial Award for International Cooperation, Nov. 24, 2009
- 9. Elected Fellow of the American Concrete Institute (ACI), 2009
- 10. Ministry of Education of China, Honorable Expert, 201011. Awarded as Hunan Provincial Expert, China, 2010
- 12. Elected Fellow of the American Society of Civil Engineers (ASCE), 2014.

#### Principal Wood Science Achievements (maximum 250 words):

As a structural engineering professor, Xiao was first to experimentally study the earthquake effects on wood truss supported concrete and clay tile roofs and hill-side wood frame buildings, resulting in improved understanding and design methods for timber buildings in California and other seismic regions. Xiao was one of the earlier pioneers to research bamboo-based materials with the goal for construction usage. He extended the design and manufacturing methodology of wood structures into engineered bamboo and developed so called Glubam, a bamboo-based glulam. He led a team carried out systematic research and demonstration practices in different developing countries. In many of his academic publications including the first book on Engineered Bamboo, the timber design method, specifications and standards are shown to be valid and useful even for bamboo based glubam. In order to take advantages of rich resources of bamboo and low quality wood materials, Xiao conceived the concept of cross laminated bamboo and timber, or CLBT, and through experimental and analytical studies, showed promising merits as building material, similar to CLT. He is the founding chair of the American Society of Civil Engineering (ASCE) Engineered Bamboo Structures task force, under the Wood Structure committee. The work of Xiao pushes the boundary of wood science and engineering, both academically and practically.



# **New IAWS Vice President**

Following the recent election, Prof. Ingo Burgert was elected as the new vice-president of IAWS to replace Prof. Stavros Avramidis who becomes president in June this year.

### Prof. Dr. Ingo Burgert Personal information

Place of birth Bad Harzburg, Germany, Nationality German, Marital status Married, two children

#### **Education and employment** Since 2011 Chair of Wood Materials Science, Institute for Building

Materials, D-BAUG, ETH Zurich; Research group at ETH and Empa, WoodTec, Cellulose and Wood Materials Laboratory, Dübendorf, Switzerland

2003 – 2011 Max Planck Institute of Colloids and Interfaces, Department of Biomaterials - Research group leader "Plant Biomechanics and Biomimetics", Potsdam, Germany; 2007 - Habilitation in Botany, Humboldt University, Berlin, Germany

2000 – 2003 Institute of Physics and Materials Science, BOKU – University of Natural Resources and Life Sciences – Postdoc, Vienna, Austria

1996 – 2000 Doctoral thesis at the University of Hamburg, Germany

1990 – 1995 Wood Science and Technology studies, University of Hamburg, Germany

### Approved research projects (summary information)

Ongoing and finalized projects funded by SNF, ERA-net Forestvalue, Innosuisse/CTI, EIT Climate-KIC, DFG, EU FP7, FWF, BMBF, ETHZ Foundation Seed projects, MPG-Project

**Teaching activities (summary information)** Courses in the fields of wood science, engineering materials, bio -inspired materials, plant biomechanics. Currently: Bachelor: two shared courses; Master: seven shared courses

### Memberships in panels, boards

- Advisory board member: Freiburger Zentrum für interaktive Werkstoffe und bio-inspirierte Technologien (FIT), University of Freiburg, Germany
- Advisory board member: Wallenberg Wood Science Centre, WWSC, Sweden
- Advisory board member: Excellence Cluster livMatS Freiburg, University of Freiburg, Germany
- Advisory board member: INRAE Nantes, Nantes, France
- Steering committee member of ETH Competence Centre for Materials and Processes (MaP)
- Executive board member of ETH ALIVE Engineering with Living Materials

### Individual scientific reviewing activities

*Refereeing: Journals (selection):* Science, Nature Sustainability, Nature Communications, Nature Plants, The Plant Cell, Advanced Materials, ACS Journals, Holzforschung, Wood Science and Technology, Cellulose, Trees, Biomacromolecules, Europhysics Letters, Applied Physical Letters, The Plant Journal Refereeing: Project proposals to Science Foundations (selection): ERC Advanced, Consolidator, Starting Grants, DFG, NSF, FORMAS

#### Active memberships in scientific societies, fellowships in renowned academies

- Fellow and academy board member of the International Academy of Wood Science (IAWS)
- Member of the Japan Wood Research Society
- Member of the Deutsche Botanische Gesellschaft (DBG)

#### **Research focus**

Wood materials, Wood cell walls, Bio-inspired materials, Wood functionalisation and modification, Plant (micro)mechanics

Homepage – Wood Materials Science | ETH Zurich

Spin out Activity and Intellectual Property

Co-founder of Swiss Wood Solutions (SWS)

Co-inventor on eight patent applications

#### Prizes, awards, fellowships

SDG Award 2020 of the Swiss Green Economy Symposium for the WoodTec Team at Empa Heinzel-Mondi-Sappi Award 2018 for the research article: Frey M, Widner D, Segmehl JS, Casdorff K, Keplinger T, Burgert I (2018) Delignified and Densified Cellulose Bulk Materials with Excellent Tensile Properties for Sustainable Engineering. ACS Appl Mater Interfaces 10 (5):5030-5037. doi:10.1021/ acsami.7b18646 in der Kategorie «Cascaded Use of Wood»

TOP 5 Finalist of the ETH Spark Award: Mineralization of wood in a liquid exchange process – Vivian Merk, Munish Chanana, Ingo Burgert (2015)

BMBF Preisträger des BMBF-Ideenwettbewerbs "Bionik - Innovationen aus der Natur" Konsortium zum Projekt: Von pflanzlichen Gradientenmaterialien zu optimierten Faserverbundwerkstoffen (2007) Monbusho Research Fellowship, University of Nagoya, Japan 07-08/2000 Two years doctorate stipend by the University of Hamburg

#### Publications in journals with peer-review process: 165 – Selection of recent articles

Schubert M, Panzarasa G, Burgert I (2023) Sustainability in Wood Products: A New Perspective for Handling Natural Diversity. Chem. Rev.: DOI10.1021/acs.chemrev.2c00360

Ding Y, Dreimol CH, Zboray R, Tu KK, Stucki S, Keplinger T, Panzarasa G, Burgert I (2022) Passive climate regulation with transpiring wood for buildings with increased energy efficiency. Materials Horizons 10: 257-267

Dreimol CH, Guo H, Ritter M, Keplinger T, Ding Y, Günther R, Poloni E, Burgert I, Panzarasa G (2022) Sustainable Wood Electronics by Iron-Catalyzed Laser-Induced Graphitization for Large-Scale Applications. Nature Communications 13, 3680, doi.org/10.1038/s41467-022-31283-7

Panzarasa G, Burgert I (2022) Designing functional wood materials for novel engineering applications. Holzforschung 76: 211-222

Ding Y, Tu K, Burgert I, Keplinger T (2020) Janus wood membranes for autonomous water transport and fog collection. Journal of Materials Chemistry A 8: 22001-22008, DOI: 10.1039/d0ta07544b

Keplinger T, Wittel FK, Ruggeberg M, Burgert I (2020) Wood Derived Cellulose Scaffolds-Processing and Mechanics. Advanced Materials, Article Number: 2001375

Chen CJ, Kuang YD, Zhu SZ, Burgert I, Keplinger T, Gong A, Li T, Berglund L, Eichhorn SJ, Hu LB (2020) Structure-property-function relationships of natural and engineered wood. Nature Review Materials, DOI: 10.1038/s41578-020-0195-z

Berglund LA, Burgert I (2018) Bioinspired wood nanotechnology for functional materials. Advanced Materials 1704285, DOI: 10.1002/adma.201704285

Frey M, Widner D, Segmehl JS, Casdorff K, Keplinger T, Burgert I (2018) Delignified and densified cellulose bulk materials with excellent tensile properties for sustainable engineering. ACS Applied Materials & Interfaces 10, DOI:10.1021/acsami.7b18646

Rüggeberg M, Burgert I (2015) Bio-inspired wooden actuators for large scale applications. PLoS One 10, Article No: e0120718

# **New IAWS Secretary**



Prof. Rupert Wimmer will take over as secretary of IAWS from Dr Lloyd Donaldson in June this year. Rupert will serve as secretary for a term of 6 years. He is Professor in Natural Materials Technology at BOKU University, Austria. His research interests are Natural materials technology, wood science; circular and resource-efficient materials, Cradle-to-Cradle design, and materials for buildings. Other scientific activities include Associate Editor for "Wood and Fiber Science" (till 2020), editorial board member of several other journals and evaluator of many national and international programs.

#### **Experience Summary**

Professor positions in Natural Materials Technology at BOKU Austria (2018 – current); earlier full-professor positions: Fibre-based Materials (2003-2008) at BOKU; Wood Technology and Wood-based Composites (2009-2012) at Göttingen University, Germany; Bio-based Materials

(2013-2016) at Mendel University, Czech Republic.

Negotiated professor appointments, but declined: University of Georgia, USA, for "Wood Quality" (2002); Linnaeus University, Sweden, for "Forest Products with special competence in Wood and Adhesive Chemistry" (2015).

Guest Professor at University Göttingen, Germany (2019)

Leader of the Natural Materials Technology Group, a basic-science & applied research group developing new bio-based materials & processes, with a strong focus on resource efficiency, cradle-to-cradle product design, bio-based materials for buildings, entrepreneurship initiatives.

Head of the BioResources and Technologies (BiRT) initiative, at BOKU Vienna, Tulln

Management experience in both academic and professional organizations (IUFRO, Forest Products Society, Society of Wood Science and Technology)

Several years of management experience in industry as a R&D leader: bio-based product and process development; adhesives and polymers, process analysis and process control.

Multiyear experience of conducting research with industry

Patenting experience: 8 granted patents , intellectual property and patenting issues

Faculty member of the Doctoral School: Build like nature: Resilient Buildings, Materials and Society (BUILD.NATURE), at BOKU

Extensive grant and contract experience with successful funding support, obtained from EU, Austrian Science Fund (FWF), German Science Foundation (DFG), The Austrian Research Promotion Agency (FFG), United States Department of Agriculture

Broad teaching experience at different Universities, in German and English language (single teaching, team teaching; blended learning; online courses)

Elected Fellow of the International Academy of Wood Science

Collaborative research funding exceeds 7.5 Million € over the past 10 years

Over 125 peer-reviewed scientific and engineering publications, focused on polymer science, wood science, wood biology, and wood processing and technology. Numerous non-reviewed journal papers, industry focused publications, conference abstracts and reports, including wood science articles for the public, citizen science; h-index = 45; scholar.google.com)

Strong International experience as a post-doctoral scientist, guest-scientist and visiting Professor in Europe, USA (Oak Ridge National Laboratory; 2 years), Australia (CSIRO; 1.5 years), Czech Republic, Germany

Public talks and appearances, about 30 invited papers and keynotes at national and international conferences; many wood-related articles (about 60) for a public readership.

## Fellow awarded the Wake Memorial Medal

Fellow Prof. Antony Pizzi has been awarded the prestigious Wake Memorial Medal in Glasgow on the 30th September 2022 at the triennial conference of the British Society for Adhesion and Adhesives. He is the 11th recipient.

" The prestigious Wake Memorial Medal is awarded triennially to a worker in the field of either adhesion or adhesives. The award of this medal is open to all – including workers in academia, industry and research institutes – and is made in recognition of outstanding contributions for an individual over a substantial period. The medal is solely conferred by the management Board of the Society for Adhesion and Adhesives (UK)"



# Fellow awarded the 2022 Carola & Carl-Olof Ternryd Award

Fellow/Vice President Prof Stavros Avramidis has been awarded the prestigious Carola and Carl-Olof Ternryd Award.



Prof. Avramidis, Head of the Department of Wood Science, is acknowledged for his extensive work in the fields of wood physics and wood drying. A leading researcher in radio frequency vacuum drying and, in his field, Prof. Avramidis' research has advanced wood sciences through the study of woodwater relationships, water sorption and diffusion, processes for non-destructive timber evaluation, and various wood drying methods. On top of his role as professor, Prof. Avramidis has authored close to 300 publications, held the role of reviewer for numerous scientific journals, publishers, research foundations, faculty, and departments, and is the elected President of the International Academy of Wood Science (IAWS) effective June 2023.

Linnaeus Academy Research Foundation will be presenting the award to Prof. Avramidis in an Oct. 20, 2022 award ceremony in Växjö, Sweden.

Research groups at Linnaeus University are looking forward to long-term collaboration and advancements in the forestry and wood science fields alongside Prof. Avramidis.

# Obituary Prof. Walter Liese 1926–2023

After short illness Prof. Dr. Dr. h.c. mult. Walter Liese peacefully passed away on 24 February 2023 at the age of 97 years in his home in Reinbek close to Hamburg. The worldwide wood science community lost an extraordinary researcher, university teacher, networker, colleague, and friend.



Born on 31 January 1926 in Berlin, Walter Liese grew up in the nearby city of Eberswalde, where his father Johannes Liese was professor at one of the worldwide oldest forestry universities. Already as a pupil he therefore came into close touch with forestry and wood science through his father's work. After finishing school, in 1944 Walter Liese had to serve in the German army until the end of the war, fortunately without any injuries. Starting in 1946, he successfully studied forest science in Freiburg with his diploma in 1950. In 1951, he finalized his doctoral thesis at the Forest Botanical Institute in Hannoversch-Münden of the University of Goettingen at the age of 25. Contacts to Ernst and Helmut Ruska (1986 Nobel Prize for Ernst Ruska for his pathbreaking work in the construction of the electron microscope) enabled him to use one of the worldwide first electron microscopes for studies on the fine structure of wood, soon publishing the first electron micrograph of a softwood bordered pit membrane with torus and margo. Walter Liese was a pioneer in electron microscopy also developing proper preparation techniques, especially the replica technique to overcome desiccation artefacts during analyses in the vacuum of an electron microscope.

Several cooperation's, e.g., with Hiroshi Harada in Japan, Eric Dadswell and Alan Wardrop in Australia, Vladimir Necesany in Slovakia, resulted in a number of new findings on the fine structural details of cell walls in woody tissue, among them the discovery of the warty layer as the innermost layer in tracheids of many softwoods. Occurrence, forms, and systematic significance were later investigated for about 120 softand hardwood species.

In 1959, Walter Liese took over a position at Munich University, and in 1963 he was appointed professor for wood biology and wood protection at Hamburg University. Through the contract cooperation to the Federal Research Centre for Forestry and Forest Products he became at the same time director of the Federal Institute of Wood Biology and Wood Protection, both institutions in the same buildings, first in the Reinbek castle, later in the newly built laboratories in Hamburg-Bergedorf. During the iron curtain period in Europe, he was quite successful in establishing and maintaining contacts to wood scientists in eastern Europe, which was highly and thankfully acknowledged by honorary doctor ships dedicated from the universities in Zvolen (Slovakia), Warsaw (Poland), Poznan (Poland), and Ljubljana (Slovenia). Not only in Europe but worldwide he was diplomat, motivator and bridge builder in all aspects of wood and forestry science. As a consequence, he was elected IUFRO president for the period 1977-1981.

Walter Liese was an expert in wood science, but also an enthusiastic researcher in the anatomy of bamboo and rattan. Over 500 publications and several books are well documenting his enormous scientific work. Even after his retirement in 1991 he continued with his research and published numerous papers in national and international journals as well as some books on bamboo anatomy and utilization. In 1966 he was involved in the foundation of the International Academy of Wood Science and was one of the first elected fellows. Walter Liese was elected Vice-President of the Academy for the period 1978-1981,

# Obituary Prof. Walter Liese 1926–2023

but could not accept office due to his election as IUFRO president. He served as editor of the Academy's journal "Wood Science and Technology" from the first issue in 1966 until 1995.

Walter Liese's scientific contributions live on in his many publications which will have a lasting impact in wood science. His pathbreaking achievements in the fields of wood fine structure, wood protection, the use of bamboo and rattan as a raw material, his fundamental work of wound reactions and tree care have attracted worldwide attention. After a long life for science, Walter Liese will be greatly missed.

Uwe Schmitt and Gerald Koch, Hamburg

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Teischinger Sandberg Editors

1st ed., 2022, ca. 1800 p., 1000 illus.

**Printed book** 

359,99€|£289.99|\$399.99 eBook 277,13€|£223.50|\$309.00

#### Peter Niemz, Alfred Teischinger, Dick Sandberg (Eds.)

# Springer Handbook of Wood Science and Technology

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This handbook provides an overview on wood science and technology of unparalleled comprehensiveness and international validity.

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Written and edited by a truly international team of experts from academia, research institutes and industry, thoroughly reviewed by external colleagues, this handbook is well-attuned to educational demands, as well as providing a summary of state-of-the-art research trends and industrial requirements. It is an invaluable resource for all professionals in research and development, and engineers in practise in the field of wood science and technology.

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# Part of **SPRINGER NATURE**

### **Financial Report**

### Treasurer's Report (as of April 4, 2023)

Following is the audited Treasurer's Report for the calendar year 2022, dated February 13, 2023. The net change for 2022 was a loss of \$3,461. At the end of 2022, 78 of the 108 (72%) Active and Retired fellows and 21 out of 31 of the Affiliate Members were current in their dues. Our CD and mutual fund total \$144,874 and continue to improve. Our loss in 2022 was due to a significant decrease in our indexed mutual fund. Our costs continue to be low because of no Executive Board meeting costs.

So far as of April of 2023, we have approximately \$73,700 in Capital One Bank and \$4,000 in our PayPal accounts. Added to our \$148,000 in investments, we have a total of approximately \$226,000 in assets. So far, 20 of our 31 Affiliate Members have paid 2023 dues and only 40% of our Active and Retired members have paid this year. We continually need funds to support our website, the PhD Thesis/Dissertation Award, the Distinguished Service Award, and technical conferences. Our finances continue to look very good.

If you have not done so, please send in your dues for 2023!!

Howard Rosen



# **Financial Report**

#### Treasurer's Report (as of April 4, 2023)

#### IAWS Expenses and Revenues--Calendar Year 2022

#### Revenues

Expenses

	Total	11,019.00	US Forest Products Laboratory
	Donations (3)	141.00	Robert J. Ross , Fellow, IAWS
	Affiliate member dues (18)	3.568.00	Robert Ross
	Lifetime dues (7)	4.200.00	all the details in satisfactory order.
found			
	Active dues (55)	2,750.00	Treasury Account for 2022 and have
	Retired dues (18)	360.00	I have examined the books of the IAWS

### Date <u>2/13/23</u>

Supplies	10.00
Web Site Revision/Managing	509.74
Awards	1,000.00
Medals	1,073.99
Wire fees Capital One	0.00
PayPal Fees	436.40
Total	\$3,020.13

#### *Income* = \$11,019 - \$3,020 = \$7999

56,910.80
410.00
1,918.00
0.00
28.62
-30.00
-1,000.00
-2,073.99
-509.74
\$56,653.69

### **Financial Report**

#### Treasurer's Report (as of April 4, 2023)

#### IAWS Expenses and Revenues--Calendar Year 2022

PayPal Account	
Beginning balance January 1, 2022	5,879.61
Deposits (31 active, 13 retired, 6 life, 17 affiliate)	8,610.00
Donation	141.00
Transfers	0.00
Payments	-0.00
Fees	-436.40
End Balance December 31, 2022	\$14,194.21

#### **Total Assets**

CD Bank Sandy Spring Bank \$37,347.15

-renewed 10/21/22 at 2.75% for 7 months

-interest is accumulated

#### Vanguard Dividend Appreciations Index Fund 107,527.15

-opened 5/23/13

-dividends are reinvested

Checking + PayPal Accounts = **\$70,847.90** Total Assets = **\$215,772 (2022)** 

\$219,183 (2021)

Net change 2022 – 2021

-\$3,461 (loss)

### **General News**

### **Employment Opportunities**

The Technical University of Munich (TUM) invites applications for the position of

#### Assistant Professor

#### in » Wood Formation and Diversity «

to begin as soon as possible. The position is a W2 fixed-term (6 year) tenure-track professorship with the possibility of promotion to a tenured W3.

#### Scientific environment

The professorship will be assigned to the Department of Life Science Engineering at the TUM School of Life Sciences. The interdisciplinary campus Freising-Weihenstephan provides shared services and core facilities such as the Plant Technology Center with stateof-the art climate chambers, the Center of Advanced Light Microscopy (CALM), the BayBioMS mass spectrometry facility, the NGS@TUM sequencing facility and the Xylotheque, a unique collection of wood specimens. The TUM School of Life Sciences supports participation in interdisciplinary collaborations such as TUM.wood as well as planned initiatives for Collaborative Research Centers.

#### Responsibilities

The responsibilities include research and teaching as well as the promotion of early-career scientists. We seek to appoint an expert in the research area of xylogenesis with a focus on the molecular processes that determine the diversity of wood, as it is present today, in function and properties, and that mediate the influence of environmental factors such as climate change or silvicultural management on xylogenesis. Teaching responsibilities include courses in the university's bachelor and master programs, especially in the fields of dendrology, wood anatomy, wood quality and technology as well as utilization lines of wood.

#### Qualifications

We are looking for candidates who have demonstrated initial scientific achievements and the capacity for independent research at the highest international level. A university degree and an outstanding doctoral degree or equivalent scientific qualification, as well as pedagogical aptitude, are prerequisites. Substantial research experience abroad is expected (please see www.tum.de/en/faculty-recruiting-faq/ for further information). We are looking for a candidate who is willing to work on traditional as well as novel model systems and who will apply cutting-edge methods in molecular biology, biochemistry and related fields.

#### Our Offer

Based on the best international standards and transparent performance criteria, TUM offers a merit-based academic career path for tenure track faculty from Assistant Professor through a permanent position as Associate Professor, and on to Full Professor. The regulations of the TUM Faculty Recruitment and Career System apply.

TUM provides excellent working conditions in a lively scientific community, embedded in the vibrant research environment of the Greater Munich Area. The TUM environment is multicultural, with English serving as a common interface for scientific interaction. TUM offers attractive and performance-based salary conditions and social benefits.

The TUM Munich Dual Career Office (MDCO) provides tailored career consulting to the partners of newly appointed professors. The MDCO assists the relocation and integration of new professors, their partners and accompanying family members.

#### Your Application

TUM is an equal opportunity employer and explicitly encourages applications from women. The position is suitable for disabled persons. Disabled candidates with essentially the same qualifications and scientific performance as other candidates will be given preference. Application documents should be submitted in accordance with TUM's application guidelines for professors. These guidelines and detailed information about the TUM Faculty Recruitment and Career System are available at www.tum.de/faculty-recruiting. Here you will also find TUM's information on collecting and processing personal data as part of the application process.

Please send your application no later than April 16th, 2023 to the Dean of the TUM School of Life Sciences, Prof. Ingrid Kögel-Knabner via our recruitment portal: www.recruit.tum.de.

#### World Wood Day IAWS Symposium 2023

I am happy to report that we had a successful session sponsored by the Academy as part of the 2023 Online World Wood Day Symposium and The Fifth IUFRO Forest Products Culture Colloquium (http://www.worldwoodday.org/2023/regions\_event/39). This event takes place on World Wood Day annually and is sponsored by the Wood World Day Foundation and the International Wood Culture Society.

The Academy's special session was "Wood Products and Wood Biotechnology," run from 08:00 until 11:00 Pacific Standard Time. We had eight presenters from New Zealand, Korea, China, Italy, Germany, and the USA that covered an exciting variety of topics that ranged from the nano-carbon level to CLT manufacturing for building construction. Amongst the eight presenters, the three winners of the 2022 IAWS Ph.D. Award (https://www.iaws-web.org/news/winners-iaws-phd-award -2022/) also presented their winning research.

We hope to be able to repeat this next March, and we invite more Fellows to join us then by presenting their exciting adventures in wood & fiber science and technology research.

Stavros Avramidis

#### IAWS Symposium 2024

We are hoping to hold an IAWS symposium in conjunction with the SWST meeting in Slovenia There may also be another opportunity for fellows to meet during the Pacific Wood Anatomy conference in Hokkaido also in 2024. We look forward to returning to in-person meetings next year.

2024 Annual Convention, Portoroz, Slovenia - Society of Wood Science and Technology (swst.org)

#### **Other Upcoming Meetings**

https://www.irg-wp.com/IRG54.html

https://www.fpsconference.org/

https://www.swst.org/wp/meeting/2023-annual-convention-asheville-nc-usa/

https://www.agr.nagoya-u.ac.jp/~mechbio/IWMS-25/index.html

FOR FOREST TREASURE CHEST Delivering Outcomes for Everyone

4-8 June 2023 Cairns, Australia

#### The Forest Treasure Chest

#### Delivering Outcomes 4 - 8 June, 2023

Cairns Convention Centre Cairns, Queensland Australia

#### WELCOME

The Local Organising Committee and the Conference Committee of the International Union of Forest Research Organisations (IUFRO) All Division 5 Conference would like to invite you to Cairns, Australia in June 2023.

Cairns is the gateway to the rest of the Tropical North Queensland region, fly directly to Cairns Airport (domestically or internationally) to discover one of Queensland's most adventurous cities. The weather in June is mild with maximum temperatures averaging 24 degrees Celsius and minimum temperatures averaging 14 degrees Celsius.

https://www.iufro-div5-2023.com/

Prof. Phil Evans, UBC, Canada will present the Academy Lecture during this meeting entitled "Advances in the biomimicry of wood for development of novel additively manufactured materials"



The International Symposium on Wood, Fiber and Pulping Chemistry is the leading international scientific research event in the areas of wood, fiber and pulping chemistry, wood components, lignocellulosic materials, forest biotechnology and biorefinery. It gathers several hundreds of scientists, technologists, and experts from all over the world with the aim to exchange and disseminate new ideas and discoveries, and to promote collaborations. ISWFPC 2023 is the 21 <sup>st</sup> of the series, the first after the event organized in Japan in 2019 (20 <sup>th</sup> |SWFPC) and the stop imposed by the pandemic.

### Topics

- Analytical Methods related to wood, fiber, and pulp
- Biochemistry and biotechnology of wood and wood components
- Chemistry and technology of pulping and bleaching
- Paper science and technology
- Chemistry of wood and wood components: Cellulose, Hemicellulose, Lignin, Wood extractives
- Emerging Biorefineries and wood fractionation technologies
- Materials, Nanomaterials and products from lignocellulosics

https://www.iswfpc2023.org/





ASHEVILLE,

NORTH CAROLINA

# SWST 66TH INTERNATIONAL CONVENTION CROWNE PLAZA RESORT ASHEVILLE ASHEVILLE, NORTH CAROLINA, USA

#### WOOD SCIENCES IN THE CARBON ECONOMY- RETURN TO THE BIRTHPLACE OF U.S. FORESTRY

#### WWW.SWST.ORG/WP/MEETING/2023-ANNUAL-CONVENTION-ASHEVILLE-NC-USA

#### SCHEDULE

Sunday, June 25 - Young Researcher/Mentor Activity, Welcome Reception, Highlight of Women Ambassadors Creating the Future of Wood Science Display Monday, June 26 - Keynote, Early Stage Researcher Session, Technical Sessions, Student Trivia Night Tuesday, June 27 - Technical Sessions, Poster Session

Wednesday, June 28 - Free day to explore Asheville, Smoky Mountains National Park, and more

Thursday, June 29 - Technical Sessions, Banquet

Friday, June 30 – Technical Sessions, SWST Business Meeting and Awards, Closing Ceremony

#### 

- · Biomass/Bioenergy Meet the need while protecting the environment?
- · Plantation Resources Meet the global need in the future?
- · Native Forests Will they remain a usable resource?
- · Certification Expanding the global network and ensuring compliance
- Mass Timber New materials, engineering properties, connections
- · Hybrid Building Systems Playing well together
- Circular Economy Challenge for timber, design for recycling,
- regulatory aspects
- Supply Chain, Operations and Marketing of Wood Products
   Timber Durability/Wood Protection
- Composites New opportunities
- Design for Durability
- Design for Darabilit
- Wood Properties
- Education Issues/Recruiting





- Biltmore House
- Great Smoky Mountains National Park
- Grandfather Mountain State Park
- Nantahala Outdoor Center
- Asheville Zipline Canopy Adventures
- Great Smoky Mountains Railroad
- Blue Ridge Parkway
- Chimnoy Dook Dark
- 0 1 0
- New Deleter Desides Oren
- F-LANG
- ordare or rolesti

### CONTACT

Executive Director execdir@swst.org 1-608-577-1342



WOOD SCIENCE & TECHNOLOGY

# Journal Rankings

### Journal Ranking—Wood Science & Technology (Google Scholar)

		h5-index	h5-mediar
1.	Cellulose	65	80
2.	BioResources	39	54
3.	Journal of Bioresources and Bioproducts	30	69
4.	Wood Science and Technology	28	35
5.	European Journal of Wood and Wood Products	27	32
6.	Holzforschung	26	31
7.	Journal of Wood Science	23	41
8.	Journal of Renewable Materials	23	30
9.	Wood Material Science & Engineering	21	25
10.	Maderas. Ciencia y Tecnología	19	28
11.	Journal of Wood Chemistry and Technology	19	27
12.	International Association of Wood Anatomists Journal	17	22
13.	Wood and Fiber Science	16	23
14.	Cellulose Chemistry and Technology	16	20
15.	Floresta e Ambiente	16	18
16.	Nordic Pulp & Paper Research Journal	14	20
17.	Wood Research (Bratislava)	14	19
18.	Forest Products Journal	14	18
19.	Journal of Forestry Engineering	14	18
20.	International Wood Products Journal	11	17

# Wood Science & Technology

The editiorial board is composed of the following colleagues most of whom are IAWS fellows:

### Editor

Klaus Richter Jan-Willem van de Kuilen both: Holzforschung München, Technische Universität München, München, Germany

### **Editorial Office**

Holzforschung München Technische Universität München, München, Germany e-mail: springer@hfm.tum.de

### **Editorial Board**

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- H. Yamamoto, Nagoya, Japan
- Y. Yin, Beijing, China
- S. Zelinka, Madison, WI, USA

### Journal Impact Factor (JIF)

Impact factor 2.898 (2021)

Five year impact factor 2.986 (2021)

Submission to first decision (Median) 17 days

### **IAWA Journal**

### Editors-in-Chief: Lloyd A. Donaldson (New Zealand) and Marcelo R. Pace (Mexico)

The IAWA Journal is an international quarterly periodical publishing original papers and review articles on any subject related to the microscopic structure of wood and bark of stems and roots of woody plants (including palms and bamboo). Apart from anatomy per se, subjects at the interface of microstructure and developmental genetics, systematics, paleobotany, archaeology, tree biology, ecology, forestry, structure property relations of timber, biomechanics, and wood identification, are welcomed.

#### **Associate Editors**

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#### **Journal Impact Factor**

Impact Factor 2021: 2.987 5 Year Impact Factor: 3.583

### Fellows Report Distribution of Fellows by Country

Country	Fellows	Females
Australia	17	1
Austria	15	2
Bangladesh	1	0
Belgium	2	0
Brazil	5	1
Canada	44	5
Chile	4	0
China	32	5
Costa Rica	1	0
Czechia	2	0
Denmark	5	0
Egypt	1	0
Finland	18	3
France	36	7
Georgia	1	0
Germany	42	1
Greece	3	0
Hungary	1	0
India	9	0
Indonesia	1	0
Ireland	1	0
Israel	4	0
Italy	4	2
Japan	58	1
Kenya	1	1
Korea, South	8	0
Latvia	3	0
Malaysia	2	1
Mexico	2	1
Netherlands	2	1
New Zealand	14	1
Norway	4	0
Philippines	3	0
Poland	7	0
Portugal	1	0
Romania	4	0
Russia	16	2

Slovakia	3	0
Slovenia	3	3
South Africa	5	1
Spain	2	2
Sweden	32	2
Switzerland	13	2
Taiwan	5	1
Turkey	1	0
United Kingdom	9	0
USA	147	5
Total	594	51
Active fellows	126	
Lifetime fellows	145	
Retired fellows	271	
Deceased fellows	172	

### Fellows Report Distribution of Fellows by Country



#### Affiliated Members elected in 2021

BioProducts Institute, UBC Zhejiang Agricultural & Forestry University

#### Affiliated Members elected in 2020

International Association of Wood Anatomists Korean Society of Wood Science & Technology, Korea South West Forestry University, China National Institute of Forest Science, Korea

#### Affiliated Members elected in 2017

International Wood Culture Society, USA Department of Wood Science – UBC, Canada

#### Fellows elected in 2022

Pavlo BEKHTA, Ukraine Rowland BURDON, New Zealand Laurent MATUANA, USA Nicole STARK, USA Yan XIAO, China

#### Fellows elected in 2021

Menandro ACDA Philippines Henri BAILLERES, Australia Mikhail BALAKSHIN, Finland Warren GRIGSBY, New Zealand Minjuan HE, China George MANTANIS, Greece Aji MATHEW, Sweden Frédéric PICHELIN, Switzerland Dick SANDBERG, Sweden Rubin SHMULSKY, USA Taraneh SOWLATI, Canada Yuki TOBIMATSU, Japan Aleksander VASILYEV, Russia Ning YAN, Canada

#### Fellows elected in 2020

Benhua FEI, China Aster GEBREKIRSTOS, Kenya Mark IRLE, France Andreja KUTNAR, Slovenia Lu LIN, China Chantong MEI, China Veronica de MICCO, Italy Rozi MOHAMED, Malaysia Antje POTTHAST, Austria Scott RENNECKAR, Canada Jinquan WAN, China Shuangfei WANG, China Zhihui WU, China

#### Fellows deceased in 2023 Walter LIESE Germany

#### Fellows deceased in 2022

Frank BEALL, USA Günter SCHULTZE-DEWITZ, Germany

#### Fellows deceased in 2021

Edmone ROFFAEL, Germany David GORING, Canada Dieter ECKSTEIN, Germany Chung-Yun HSE, USA Dietrich FENGEL, Germany

#### Fellows deceased in 2020

Fritz SCHWEINGRUBER, (Switzerland) Robert YOUNGS, (USA)

# Affiliate Members

Affiliate Members shall be educational, research, industrial, or governmental organizations and individuals, who are actively engaged in carrying out or promoting research in wood science or the enhanced utilization of wood on the basis of scientific or technological principles and practices. The importance of Affiliates to the Academy is two-fold:

• The Academy derives direct contact with organizations and individuals actively engaged in the utilization of wood and wood products.

• The Academy receives financial support for its activities from these members.

Contact details are available on the IAWS website.

#### AFFILIATE MEMBERS LIST

- BAUMAN MOSCOW STATE TECHNICAL UNIVERSITY/MYTISHCHI BRANCH , Russia, www.bmstu.ru/en
- BIOPRODUCTS INSTITUTE, UBC, Canada, https://bpi.ubc.ca/
- CHINESE ACADEMY of FORESTRY (CAF), China, www.caf.ac.cn
- CIRAD FORETS (French Agricultural Research Center for International Development), France, www.ur-bois-tropicaux.cirad.fr
- DEPARTMENT OF WOOD SCIENCE UBC, Canada, www.wood.ubc.ca/
- ESB- ECOLE SUPÉRIEURE DU BOIS, France, www.ecoledubois.com
- FORESTRY & FOREST PRODUCTS RESEARCH INSTITUTE, Japan, www.ffpri.affrc.go.jp
- FRAUNHOFER-INSTITUTE OF WOOD RESEARCH, Germany, www.wki.fraunhofer.de
- HOLZFORSCHUNG MÜNCHEN, Germany, www.holz.wzw.tum.de
- INTERNATIONAL ASSOCIATION OF WOOD ANATOMISTS, www.iawa-website.org
- INTERNATIONAL CENTRE OF BAMBOO AND RATTAN, China, www.icbr.ac.cn/en
- INTERNATIONAL WOOD CULTURE SOCIETY, USA, www.iwcs.com
- KOREAN SOCIETY OF WOOD SCIENCE & TECHNOLOGY, Korea
- KYOTO UNIVERSITY, Japan, www.rish.kyoto-u.ac.jp
- MISSISSIPPI STATE UNIVERSITY, USA, www.cfr.msstate.edu/forestp
- NATIONAL INSTITUTE OF FOREST SCIENCE, Korea,
- OREGON STATE UNIVERSITY, USA, www.woodscience.oregonstate.edu
- RISE RESEARCH INSTITUTES OF SWEDEN, Sweden, www.ri.se/en
- SCION, New Zealand, www.scionresearch.com
- SEOUL NATIONAL UNIVERSITY, Republic of Korea www.adhesion.org
- SOUTHWEST FORESTRY UNIVERSITY, China
- STATE UNIVERSITY OF NEW YORK, USA, www.fla.esf.edu
- TECHNICAL UNIVERSITY in ZVOLEN, Slovakia, www.tuzvo.sk/en
- THÜNEN INSTITUTE, Germany, https://www.thuenen.de/new/
- UNIVERSITE LAVAL, Canada, www.xylo.sbf.ulaval.ca
- UNIVERSITY OF GÖTTINGEN, Germany, www.holz.uni-goettingen.de
- UNIVERSITY OF MINNESOTA, USA, www.bbe.umn.edu
- US FOREST PRODUCTS LABORATORY, USA, www.fpl.fs.fed.us
- VIETNAM NATIONAL UNIVERSITY OF FORESTRY, HANOI, VIETNAM, Vietnam, www.vnuf.edu.vn
- WOOD TECHNOLOGY INSTITUTE, Poland, www.itd.poznan.pl
- ZHEJIANG AGRICULTURAL and FORESTRY UNIVERSITY , China, https://en.zafu.edu.cn/

## **Guidelines 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
- Contain important references to the literature for further reading
- Give due credit to the work of others in the field, not just summarize the author's work
- Finish with a statement of future direction in the area

### Nominations for IAWS PhD Award

The International Academy of Wood Science (IAWS) wishes to provide recognition to outstanding thesis/dissertation research at the PhD level by students throughout the world. The IAWS PhD Dissertation Award for 2023 is open to receive nominations and/or applications. The deadline is **August 15, 2023**. Please consider to nominate your students. Nomination can be made by anyone and is not limited to IAWS Fellows.

Here are the detailed rules:

- The competition is limited to students receiving their degrees in other than their native country.
- The purpose is to foster and recognize cross-national interaction.
- The submission shall be no more than 2 pages of an extended abstract (in English) of the dissertation, a one-page CV of the student, and a recommendation letter from the student's advisor
- The submission can be by the student and/or the student's advisor.
- The thesis/dissertation must have been completed within one year prior to the yearly announcement.
- The documentation shall be sent by email to the Academy Board Chair Katarina Čufar, Katarina.Cufar@bf.uni-lj.si

### Nomination 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 **15 August 2023**.

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 September 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 several 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. The academy is also under represented by female researchers so we encourage nomination of female colleagues.

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.

Yoon Soo Kim

NOMINATION FORM [You can download this form from the "New Fellows" page on the website]

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: Yoon Soo Kim and Lloyd Donaldson before 15th August 2023



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