Proceedings of the 2020 Society of Wood Science and Technology International Convention

"Renewable Resources for a Sustainable and Healthy Future"

Edited by Susan LeVan-Green

***Overall General Chair*:** *Andreja Kutnar,*
InnoRenew CoE and University of Primorska, Slovenia

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2020 INTERNATIONAL CONVENTION, VIRTUAL CONFERENCE – (FORMERLY HOTEL BERNARDIN), PORTOROŽ, SLOVENIA

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WEDNESDAY, JULY 15TH

POSTERS SESSION

STUDENT POSTERS:

REGULAR POSTERS:

Monitoring Mass Timber Buildings: A Case Study of the InnoRenew CoE Building

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Abstract

The increased demand for mass timber and the increased use of timber in facades has led to new innovative solutions and applications in architecture. The new InnoRenew CoE building applies some of these innovations. To verify how timber structures and exposed timber surfaces behave in the long term, it is necessary to collect long-term data in-situ. The institute's buildings (8,200 m_2) that are currently under construction in Izola, Slovenia, will consist of a hybrid of timber, concrete, and steel structure. The upper part of the complex (1_{st}-3_{rd} floors) will be completely made of mass timber, mainly Cross Laminated Timber (CLT). The building will be equipped with an expansive monitoring system during and after construction. The main goal of monitoring is to provide insight into timber performance and ageing in the long term. This will allow comparing the actual behaviour to mathematical models and will facilitate improved construction with wood in the future.

The building is designed with different materials on each façade (stone, plaster, wooden ventilated façade, wooden lamellas), and with various separated volumes and architectural shapes (arcades, covered balconies, small atriums) that will create diverse microclimatic conditions. The diversity of architecture makes it possible to assess a wide range of parameters that influence the long-term appearance and performance of the measured façades. These parameters are temperature, relative humidity, illumination, wind speed, and dust (particulate matter). Additional monitored parameters include the hygrothermal attributes of several façade layers (stone and wooden façade) on mass timber walls and of roof layers (balconies, green roof) on mass timber roof structures.

A prototype sensor for determining the ageing dynamics of a building's exterior elements and its facade will be installed in various locations. The sensor allows detailed monitoring microclimate affecting materials in different positions on and in the building, including all exposure sides and different shading configurations. The collected data will be used to improve dose-response models for

the determination of appearance changes along the building's service-life. The same data will be used to validate Finite Element (FE) simulation tools used for the building's design. The appearance of the building will be continuously monitored by high-resolution colour and thermal vision cameras installed in selected spots around the building.

Structural monitoring of the building will be performed with accelerometers at the roof level, in the middle of the largest plate spans, with LVDTs at the corner and middle of selected CLT walls and at selected support points. Global and local vibrations of the building will be evaluated in terms of seismic safety and the wind serviceability evaluation of mass timber buildings.

Keywords: sustainable architecture, mass timber buildings, CLT, structural monitoring, hygrothermal monitoring, timber façade, microclimate

Acknowledgements

The authors acknowledge the European Commission for funding InnoRenew CoE (grant agreement #739574), under the H2020 Widespread-Teaming programme and Republic of Slovenia (investment funding of the Republic of Slovenia and the European Union's European Regional Development Fund).

Biography

Ajayi, Babatunde

Expertise: Wood Products, Wood Science and Bio-resources Technology

Biography:

Professor Babatunde Ajayi was born on 25th August, 1955 in Ijan Ekiti, Nigeria. He obtained his HND in General Forestry at the Federal College of Forestry, Ibadan, PGD in Timber and Material Technology at High-Wycombe, UK in 1986, MSc in Forest Industries Technology at the University College of North Wales Bangor, UK in 1990 and PhD in Wood Science and Bio-Composites Technology from the Federal University of Technology, Akure, Nigeria, in 2000. He assumed the status of a Professor in 2010 and has served as the HOD of Forestry and Wood Technology Dept., FUTA, Nigeria between 2012 and 2015. He has also supervised many students at PhD, M.Agric.Tech, and B.Agric.Tech, as well as co-supervised postgraduate students from other Departments in the University.

Prof. Ajayi has served as external examiner to undergraduate and postgraduate students in some universities. He has published more than 70 papers in reputable local and international journals and presented papers at more than 33 conferences and professional meetings in North America, South America, Europe, Asia, Australia, Africa etc. His research focus is on the use of conventional biomaterials (Wood) and non-conventional bio-materials from agricultural wastes, common weeds, waste paper and other wastes prevalent in Nigeria and world environment to produce value-added panel products using Portland cement, pozzolan, virgin plastic (HPDE), recycled plastic (LPDE), and car battery case (CBC) as binders, by the application of simple, innovative and adaptable technologies in the manufacturing processes. In 2011, he received a Merit Award as the best innovative researcher for Local Raw Materials Content, R&D from the Raw Materials Research and Development Council of the Federal Ministry of Science and Technology at the TECHNO-EXPO 2011 in Abuja, Nigeria.

Prof Ajayi, has presented his research findings at various places globally including: Vancouver, Canada in 2004; Grand Rapids, Michigan USA, 2004; Brisbane, Australia 2005; Brazil, Sao Paulo, 2006, Pirassununga and Lavras 2007; Taipei, Taiwan 2007; Madrid, Spain 2008; St LOUIS, Missouri, 2008; Aalborg Denmark in 2010; Brazil, Pirassununga 2010; Madison, Wisconsin 2010; Seoul, Korea, 2010; Cairo, Egypt 2010; Portland, Oregon 2011; Washington, DC 2012; Canberra, Australia in 2012; Austin, Texas 2013; Portugal, 2014; Atlanta, Georgia 2015; Jackson, Wyoming 2015; Vietnam in 2015; Portugal 2016; Cape Town, South Africa, 2018. He is a senior expert on Climate Change and Environment to CTA and is currently serving as chairman or member of various committees in the university. He is the chairman of the Anti-Corruption and Transparency Unit (ACTU) under the Independent Corrupt Practices and Other Related Offences Commission (ICPC).

Akinyele, Adejoke

Expertise:Tree Improvement and Silviculture

Biography - Adejoke Akinyele

Dr Adejoke Olukemi Akinyele is a Senior Lecturer in the Department of Forest Production and Products, University of Ibadan, Nigeria. She served as the Sub-Dean Undergraduate (Forestry) in the old Faculty of Agriculture and Forestry, University of Ibadan from 2012- 2016. She is currently the Sub-Dean Postgraduate for the Faculty of Renewable Natural Resources, University of Ibadan.

She became a Commonwealth Academic fellow in School of Environment, Natural Resources and Geography, Bangor University, Wales, United Kingdom in 2016. She is a CIPSEM fellow under the UNEP/UNESCO/BMU fellowship at Technische Universitat, Germany in 2013. She is a recipient of the Netherlands Fellowship Programme, Wageningen International, The Netherlands in 2012 and 2010. She is an alumnus of BioVision, The World life Sciences Forum, Scientific Foundation of Lyon and French Academy of Sciences. She is also a member of the United States Alumni group through the Norman E. Borlaug International Agricultural Science and Technology Fellowship Program. She was a visiting scientist in the School of Forestry and Conservation, University of Florida, Gainesville, USA in 2009. She won the Federal Government of Nigeria Postgraduate Award as well as Basorun M.K.O. Abiola Research Fellowship for Postgraduate students in 2002. She also won the African Network for Agroforestry Education (ANAFE), Kenya, part fellowship award for Master's Degree Students in 2000. Dr Akinyele is a member Nigerian Young Academy, Forestry Association of Nigeria, full Member of the Organization for Women in Science for the Developing World (OWSD) and an associate member of Competence Platform for Bioenergy in Arid and Semi-Arid Ecosystems of Africa (COMPETE). She is also a member of Society for Conservation Biology (SCB), International Union of Forestry Research Organisations (IUFRO), African Forest Forum (AFF), Society for American Foresters as well as Commonwealth Forestry Association.

She has successfully supervised students at both undergraduate and postgraduate levels. She has several peer reviewed journal articles, chapters of books and conference proceedings to her credit.

Alpar, Tibor

Expertise: Cement-bonded wood products, recycling of wood based products, liquefaction of wood, WPC, reducing formaldehyde emission, bio-composites

Name: Alpár Tibor L., PhD.

Date and place of birth: 1969. 10. 31.

Knowledge of languages: English, German

Education: MSc. of wood sciences, 1994

BSc. of information technology engineer, 2004

Scientific degrees: PhD. 2000

Affiliation: Institute of Wood-based Products and Technologies, Simonyi Károly Faculty of Engineering, Wood Sciences and Applied Arts, University of West Hungary

Present status: associate professor

Work experience:

1997-2000 University of Sopron, Faculty of Wood Sciences, Department of Wood Composites, researcher

1998-2001 independent advisor of Falco Rt.

2000-2003 University of West Hungary, Faculty of Wood Sciences, Department of Wood Composites, senior researcher

2001-2003 STA (Science and Technology Agency) fellowship of Japanese government at Forestry and Forest Products Research Institute (Tsukuba), Wood Composites Laboratory

2003- University of West Hungary, Faculty of Wood Sciences, Department of Wood Composites, associate professor

2003-2004 head of Center of Higher Education at University of West Hungary, Faculty of Wood Sciences

2004- head of FAIMEI Material and Product Testing Laboratory

2004- MC member of COST E31 – Management of recovered wood

2008-2010 vice dean at Faculty of Wood Sciences, University of West Hungary

2011-2013 director of NRRC Natural Resources Research Center, University of West Hungary

2013-2017 dean of Simonyi Károly Facultiy of Engineering, Wood Sciences and Applied Art

2018- Vice Rector for Research and International Relations, University of Sopron

Major research fields were/are:

cement-bonded wood products, recycling of wood based products, liquefaction of wood, WPC, reducing formaldehyde emission, bio-composites.

Armando de Barros, Julio

Expertise: Physical properties of wood and its components, energy dissipation dependence on wood anatomy, molecular dynamics view of cellulose-ions interactions for green energetic devices

Biography - Júlio Amando de Barros

I am a Master's student on Physics at the University of São Paulo - Brazil. Interested on the many applications of cellulose for nanotechnologies, I am now working on a theoretical approach for understanding the interactions between ions and modified cellulose for green energy purposes. Our methodology is based on computational simulations, from ab initio calculations to molecular dynamics systems. For more information please look for me!

Antwi, Kwaku

Expertise: Wood Science and Technology

Biography - Kwaku Antwi

Dr Kwaku Antwi is a Ghanaian based lecturer and researcher. He holds Bachelors, Masters and PhD in Wood Science and Technology

Appiah-Kubi, Emmanuel

Expertise: Civil engineering with expertise in Wood and Structural Engineering Efficient processing of wood, the design and supervision of construction of timber structures, concrete and reinforced concrete and steel structures Efficient processing and utilization of wood, bamboo and other bio-materials

Biography - Emmanuel Appiah-Kubi

Emmanuel Appiah-Kubi is a Senior Lecturer at the Department of Construction and Wood Technology Education (University of Education, Winneba), Kumasi Campus, Kumasi, Ghana. I was a Research Scientist at CSIR-Forestry Research Institute of Ghana (CSIR-FORIG), Kumasi, between 2010 and 2018. I was a Demonstrator/Teaching and Research Assistant at the Civil Engineering Department, KNUST after BSc study between 2005 and 2009.

I had my BSC, MPhil and PhD Degrees in Civil Engineering from the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, and has had a lot of international internships and research stays in European institutions. I had an internship at the School of Architecture, Wood and Civil Engineering, Bern University of Applied Sciences (BFH), Biel, Switzerland during my MPhil study where I worked with colleague Swiss students for my project work. I also had a 6-month research stay at the Georg-August University of Goettingen, Germany as a doctoral research student with sponsorship from the German Academic Exchange Services (DAAD), where I conducted part of my PhD research. I am a member of the Ghana Institution of Engineering (GhIE) i.e. a registered Professional Civil Engineer, with expertise in Structural Engineering. I have also had a lot of experience in the wood industry in Ghana through processing of wood and bamboo and the construction of wooden and bamboo structures. I conduct research into the technological properties of wood, bamboo and other wood-based materials for efficient utilization. My research work has helped to promote and enhanced the use of lesser-used wood species in Ghana through efficient processing methods and techniques. I have helped to establish and also manages the Wood and Furniture Testing Laboratory at CSIR-FORIG. I am currently a member of the International Bamboo and Rattan Organization (INBAR) Task Force for Structural uses of Bamboo, and also a member of the International Standardization Organization (ISO) Technical Committee ISO/TC 165 -Timber Structures.

Areo, Olusola Samuel
Expertise: Forest Products, Wood and Fiber Science

Biography - Olusola Samuel Areo

I am a Principal Research Scientist and Head of the Wood Processing Section in the Institute responsible to, Formulate and execute research and collaborate with other scientists both within and outside the Institute in developing appropriate technologies for value addition of wood species. I also engage in capacity building of subordinate staff and students from tertiary Institutions through departmental and Institution seminar series. I disseminate research findings through the extension service unit of the Institute and publications in academic Journals and Conference Proceedings.

Participation at this congress will subject my presentation to constructive criticism, comments and suggestions that would assist me to make improvement on the work and by extension to other projects. I will also listen and learn from participants' presentation on related subject and interest in the area of wood science and sustainable forest product utilisation, which will further equip me with new methodologies that I can adapt and apply to my research activities. It will assist to broaden my horizon, improve on my research skill and effectively improve my productivity in my Institute, Nigeria and Africa.

Arnič, Domen

Expertise: Wood properties, Forest-based bioeconomy, Wood anatomy

Biography - Domen Arnič

After a master's degree in “Forestry and Renewable Forest Resources” at the Biotechnical Faculty, University of Ljubljana (Slovenia), I am now continuing with postgraduate education at the same university at the field of Economics of natural resources. The topic of my Ph.D. is related to the impact of climate change on productivity and properties of beech (*Fagus sylvatica*) and Norway spruce (*Picea abies*) wood and availability of wood (wood biomass) for Slovenian forest-based bioeconomy. Currently, I am employed as a young researcher at the Slovenian Forest institute.

Asafu-Adjaye, Osei

Expertise: Wood Composite and Adhesive Development

Biography - Osei Asafu-Adjaye

Osei is a PhD candidate interested in wood based adhesives, wood composites, Mass timber and CLT. He holds a MSc in Polymer and Fiber Engineering, MPhil in Wood Technology and BSc in Wood Science and Technology.

Aslam, Sidra

Expertise: Security and Privacy in Blockchain chain technology

Biography - Sidra Aslam

Sidra Aslam has completed a Master of Science in Computer Science (MSCS) from COMSATS Institute of Information Technology Islamabad, Pakistan in January 2017. She was awarded the best research paper shield from National Software Engineering Conference (NSEC), IEEE in December 2015. She is pursuing her Ph.D. at the University of Primorska Slovenia. She is associated with a research team; working on the wood supply chain, Ontology-based Semantics, and privacy at the ICT group. Her research interest includes Information security and privacy, Knowledge-Based Systems, and Semantic web Technologies.

Azadfar, Mohammadali

Expertise: Mechanics and chemistry of wood and wood composites; conversion of lignocellulosic biomass into value-added products; industrial extension/outreach in forest products

Biography - Mohammadali Azadfar

Mohammadali Azadfar is an assistant professor of environmental & renewable resources in the SUNY Morrisville School of Agriculture, Business & Technology. Prior to joining Morrisville in 2019, he was a postdoctoral research associate in the Composite Materials and Engineering Center at Washington State University (Pullman, Wash.). He received his Ph.D. in bioenergy and bioproducts engineering from the Department of Biological Systems Engineering at Washington State University in 2016 and completed his M.S. and B.S. in natural resources engineering - wood science and technology in Tehran, Iran.

Technical Interests Mechanics and chemistry of wood and wood composites; conversion of lignocellulosic biomass into value-added products; industrial extension/outreach in forest products.

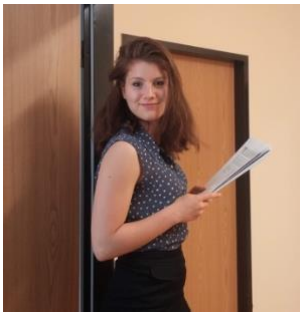
Teaching Interests Engineered wood composites; wood chemistry; secondary wood processing; wood drying and preservation; wood glues, laminating and finishes; lumber manufacturing and grading; furniture design construction.

Baar, Jan

Expertise: Wood degradation, weathering, wood structure

Biography - Jan Baar

Jan Baar is assistant professor of Wood science at Mendel University in Brno, he joined the department in 2012. His research interest includes wood preservation, wood extractives influence on wood properties and wood discoloration.



Balasso, Michelle

Expertise: Forestry, wood sciences

Biography - Michelle Balasso

Michelle is a PhD candidate and researcher at the University of Tasmania, Australia, within the Australian Research Council funded Centre for Forest Value, working across the wood production chain of plantation timber. She holds a BSc in Forest and Environmental Technologies and an MSc in Forest Science and has been a Research Assistant at the Forest Ecology and Remote Sensing Department at the University of Goettinghen, in Germany. She is a passionate researcher with a soft spot for forestry, while being very involved in the wood production industry and collaborating with the major forestry companies in Tasmania. Originally from the Dolomites in Italy, she is a trail runner, nature-lover with a strong bond with wild and alpine environments. She's been traveling to several countries, developing a strong network in the forest, ecology, and wood production sectors, presenting her research at remarkable international conferences. She is involved with several projects and is frequently busy in public speaking events bringing her traveling and woman-in forestry experience, as well as forestry and wood quality expertise.

Baranova, Olha

Expertise: Wood-based materials, non-destructive testing of wood-based materials, powder coating

Biography - Olha Baranova

Senior Lecturer of Department of Technology and Design of Wood Products University of Life and Environmental Sciences of Ukraine.

Scientific interests- technology of protective and decorative coatings, and non-destructive testing of wood.

Barbero-Lpez, Aitor

Expertise: Wood Preservation

Biography - Aitor Barbero-López

Aitor is an Early Stage Researcher in the University of Eastern Finland. His aim is to identify bio-based antifungal chemicals in forestry side-streams, which can be used for wood preservation.

Before starting his DSc, Aitor worked in the Finnish Forest Research institute of Finland, and he studied an MSc in Wood Materials Science. His research interests are wood preservation, wood modification and wood decay. Due to his background, he also has interest in plant and tree ecophysiology and mycorrhizae.

Barcic, Andreja Pirc

Expertise: Business Innovation, marketing and trade in wood based industry, business planning and calculations

Biography: Non available

Bartuska, Birger

Expertise: Wood technology, manufacturing and digitalization in the wood industry

Biography - Birger Bartuska

Birger Bartuska is a junior researcher at the competence center Wood K plus area wood materials technologies. After finishing his masters in wood technology and mangaement at the university of applied life sciences in Vienna on the topic of hemp fiber reinforced thermoplastic composites he is doing his phd in the field of digitalisation and new production technologies in the wood industry.

Beranič, Tina

Expertise: Digitalization, software engineering

Biography - Tina Beranič

Tina Beranič received a PhD degree in computer science and informatics from the University of Maribor in 2018. She is a Teaching Assistant and a Researcher at the Faculty of Electrical Engineering and Computer Science, University of Maribor. Her research interests are in the area of software quality, especially the domain of software metrics and software metrics thresholds. She is also working in the digitalization domain, researching the application of digital tools and digital transformation.

Böger, Thomas

Expertise: Adhesives and Laboratory Managment

Biography - Thomas Böger

Since 2018 Thomas Böger is a researcher at the Technical University of Munich in the research group of wood based materials. His field of research is adhesives for solid wood applications. He studied Wood Engineering (B.Eng.) and Timber Technology (M.Sc.) in Germany and Switzerland. After his studies he worked several years as a test and application engineer for adhesive producers with applications in the wood- and microelectronic-industry.

Brabec, Martin

Expertise: Wood mechanics, Digital Image Correlation, Material characterization

Biography - Martin Brabec

An investigation of mechanical behaviour of wood and live trees by menas of full-field optical technique based on digital image correlation (DIC).

Brémaud, Iris

Expertise: Wood physics in the scope of diverse connections: between artisanal and scientific knowledge on wood; between the complexity of physical behaviour and the botanical diversity of wood; between biological and cultural diversity; the relationship between humans and wood in instrument making and in traditional crafts

Biography - Iris Brémaud

Iris Brémaud is researcher at CNRS - French National Centre of Scientific Research - in the "Wood Team" of Laboratory of Mechanics and Civil Engineering in Montpellier. She followed an initial University training in plant biology, while starting to learn guitar and lute making. From 2000 she specialised her work on wood material (with a focus on wood for instrument making) through her MSc in Wood Science and PhD in Mechanics. Her doctoral thesis (2006) was on "Diversity of woods used or usable in musical instruments making". She subsequently continued research on wood diversity and wood physics, focusing on cross-cultural views of wooden instruments and on the structure-chemistry-properties relationships in wood mechanics, as a Post-Doc researcher in Japan, then in Nancy (France), then in Switzerland. In 2013 she was recruited as permanent CNRS research fellow. In 2014 she founded the International Symposium "Wood Science and Craftsmanship". In 2016 she obtained the degree of Habilitation to Supervise Research with a thesis entitled "Towards and ethno-bio-mechanical vision of wood".

Her current research in CNRS Montpellier aims at a systemic approach to wood behaviour, diversity and cultural uses, by relating fundamental wood physics/mechanics to botanical origin and to "hand knowledge" of wood craftsmen. There is still a focus on musical instruments making but the research now extends to several woodworking trade specialities. Recent works, often in collaboration with artisans, involve early stage researchers and national or international collaborations.

Bruno, Maria Roberta

Expertise: Analysis from chemical-biological point of view agricultural waste in order to create new eco-sustainable industrial products

Biography - Maria roberta Bruno

Maria Roberta Bruno graduated in 2012 and continues to carry out activities related to the world of agriculture and environmental protection, initially as a field technician in companies organic following both the technical and the administrative part. Subsequently plays activities in the field of experimental research in the CREA research center in Metaponto (MT), where it analyzes various eco-sustainable agricultural systems. She currently carries out research at the University of Basilicata analyzing from a chemical-biological point of view agricultural waste in order to create new eco-sustainable industrial products.

Burnard, Michael

Expertise: Human health in the built environment; Sustainability of wood construction; Wood composites, wood quality, wood value chains; Data Science

Biography - Michael Burnard

Dr. Michael (Mike) Burnard was born in the United States of America but moved to Slovenia in 2013 to complete his PhD. Mike is now an assistant professor at the University of Primorska where he is the coordinator of the Data Science Masters programme and, performs research, teaches, and mentors students. He is also the deputy director of the InnoRenew CoE, a research organisation founded in 2017 following successful funding from the H2020 Widespread-Teaming programme. His research interests are focused on enhancing human health and using wood in the built environment as well as advancing sustainability through intelligent use of renewable resources, particularly in buildings. Mike also works in many other areas including business management, innovation, data science, and ICT.

Burns, Candra

Expertise: International Social Media Consultant in the Forest and Wood sector

Biography - Candra Burns

Candra Burns built her foundation by volunteering in her local community as a child. She started applying for scholarships and grants in high school to go to college because she was raised low-income and first generation. Candra took advantage of the support programs on both of her college campuses. Within five years, she earned 25 scholarships and grants claiming her a debt-free education.

Since 2015, she has been the social media communications chair for Washington State Society of American Foresters and holds that chair while she lives in Germany with her Air Force husband. She realized her passion for media marketing through these efforts which gave her the ideas to start Talking Forests, a social media based communication business in 2016.

Candra's business wishes to help others have a voice and build an online presence. Her inspiration comes from the people who gave her hope and the people who give her hope for the future. These are the generous people who work every day to grow and help each other equally.

In 2018, she gave a refreshing social media speech at the International Forest Business Conference in Poland, documented the #forestproud conference in Atlanta, and taught military spouses how to use social media at a regional conference with her "Building the Future with Social Media" speech at the American's Working Around the Globe Conference at Ramstein Air Base.

In 2019, she taught social media seminar classes in Edelweiss Resort at the American’s Working Around the Globe Annual Conference to inspire spouses with "A Future with Social Media” and “LinkedIn 101" to show them how to leverage social media to achieve any goal they have.

She was a speaker in the fall of 2019 at the Society of Wood Science and Technology’s International Convention in Yosemite National Park and to the Society of American Forester's National Conference in Kentucky. She holds two associates degrees from Grays Harbor College and a Bachelor of Science from The Evergreen State College. She is a proud military spouse with the ability to work from anywhere in the world.

Cahyono, Tekat Dwi

Expertise: Wood bio-composites; Wood modification;Wood preservation

Biography - Tekat Dwi Cahyono

I was born in Malang, Indonesia, 1st July 1975. I graduate from Bogor Agricultural University (Doctoral Program) at 2015. I am a lecturer at University of Darussalam Ambon, one of the private college in Ambon, Indonesia. I have research team and our research interest are basic properties and wood modified.

Carrero, Tulio

Expertise: Civil Engineering

Biography - Tulio Carrero

Tulio E. Carrero R. BIODATA.

Tulio Enrique Carrero Roa received his BS in Venezuela from the Universidad de Los Andes in 2015 and MS degree from the Universidad Católica Andrés Bello in 2018. Nowadays, he is Ph.D. Candidate from the Pontificia Universidad Católica de Chile "PUC" in 2017-2021. His tutors are Pablo Guindos and Hernan Santa Maria. He won the Conicyt Scholarship in 2017. He is a Civil Engineer Professional with proven capabilities and knowledge in technical areas of civil engineering such as structural engineering, geotechnical, soil, sanitation, hydrology, hydraulics, roads, surveying, pavements as well as personnel management, control and project management. He had work in VEPICA Company, included in the 100 best tops of engineering companies of the world. He specializes in the design and construction of Timber Structures. He is working on a Fondecyt Program about Cross-Laminated "CLT" Wood structures.

Next, I will indicate the different works in which I have worked:

- Conference Korea-2018: Carrero T, Ureta-Céspedes F, Cabrera T, Cárcamo S, Santa María H, Guindos P. (2018). "Global analysis of light-framed timber construction detailing and its performance during major contemporary earthquakes," 2018 World Conference on Earthquake Engineering, Seoul, Corea, August 20-23 2018.

- Patent: Aprobado el concurso DTD-UC, revisión del documento final de patente con el nombre: Muro Estructural compuesto del Tipo Marco-Plataforma de CLT.

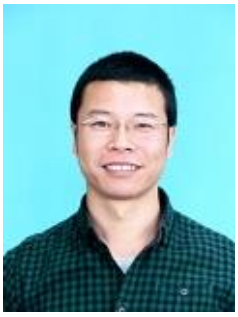
- Conference CLEM-2019: . Carrero T, Montaño J, Santa María H, Guindos P (2019) "Comportamiento cíclico de conexiones híbridas de lsl, hormigón y acero con clt". 2019 4to congreso Latinoamericano de Estructuras de Madera, Montevideo, Uruguay, Noviembre 18-20 2019.

Cermak, Petr

Expertise: Wood Modification, Thermal Modification, Wood Charring, Process Development

Biography - Petr Cermak

Petr Čermák is academic staff - researcher at Department of Wood Science and Technology (Faculty of Forestry and Wood Technology, Mendel University in Brno). He got his Ph.D. at Mendel University in Brno. Since 2014 was as a postdoctoral researcher granted at the same university. He is focused on material engeneering of natural lignocellulose materials with special focus on wood. His scientific interests lie mainly in area of wood modification, hygro-thermo mechanical treatment of wood, wood-water interaction, wood welding and material properties testing. His expertise was gained not only at MEDELU, but also during short/long term visits at foreign institutions in Finland (Aalto University), Germany (Eberswalde University of Sustainable Development, Gottingen University), Hungary (University of Sopron) and others. He is as a project leader/member active in participation in the national and international research projects (GAČR, TAČR, OPVK, IraSME, CZ/DE bilateral project(s), etc.) and publishing of his research in high-quality peer-review journals and presenting at international conferences.



Chen, Nairong

Expertise: Wood adhesives

Biography - Nairong Chen

My research interests in green materials, particularly in bio-based resins, wood based composites, and bio-based porous materials. Recent projects have examined the properties of soy-based adhesives developed for interior wood composites. Other studies have investigated the room temperature curing formaldehyde-free adhesives for construction engineering, and those for protecting environment and human beings. In my research field of bio-based adhesives and wood products, I have a good profile with 37 peer review journal publications and 14 patents, and was awarded “2016 Excellent Youth Science of Fujian Province, China ”. I have been the project manager and collaborator of several NSFC projects on my research areas.

Fujian Agriculture and Forestry University (FAFU) is jointly sponsored by the Ministry of Agriculture, State Forestry Administration, and Fujian Provincial Government. The university has been rated “A” in terms of undergraduate teaching by the Ministry of Education. FAFU currently owns 75 provincial and national innovative platforms, and ranks second among the country’s provincial agricultural and forestry universities with its high-quality faculty, social services, and researches. FAFU altogether some 672 research findings have received provincial or national scientific and technological awards, 28 of which are entitled to China’s top three research awards.

Class, Seung Hyun

Expertise: Wood science and engineering, CLT, Fire test

Biography - Seung Hyun Claas

na

Couceiro, José

Expertise: Wood drying and computed tomography

Biography - José Couceiro

José Couceiro finished his Forestry Engineering bachelor in the University of Vigo, Spain, in 2009 and moved to Sweden to enrole on a master progam in Wood Technology in Luleå University of Technology in Skellefteå. He later became a PhD student and defended his thesis on september 2019, focusing on the use of computed tomography to study moisture distribution in wood. Now he is Associate Senior Lecturer in the division of wood science and engineering.

Cristini, Valentino

Expertise: Biodegradation of wood, wood decay fungi, arboriculture, tree biomechanics

Biography - Valentino Cristini

Born and grown up in northern Italy, in 2012 moved to the Czech Republic and attended university study of arboriculture and forestry at Mendel University in Brno. From 2012 to 2019 worked as an arborist within the fields of tree assessment, biomechanics, and phytopathology. Since 2019 I'm a Ph.D. student at the Department of Wood Science and Technology of Mendel University in Brno. My main field is the biological deterioration of wood in standing trees and its material properties.

Dahle, Sebastian

Expertise: Physics, Surface Science, Plasma Technology, Wood Science and Technology

Biography - Sebastian Dahle

PERSONAL INFORMATION

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WORK EXPERIENCE

01/09/2018–Present
Marie Curie fellowship
University of Ljubljana, Slovenia

01/07/2013–31/08/2018
Postdoctoral research fellow
Clausthal University of Technology, Germany
- Conducting research
- Leading research projects
- Supervising a team of up to 8 co-workers

01/03/2010–30/06/2013
Research fellow
Clausthal University of Technology, Clausthal-Zellerfeld (Germany)

EDUCATION AND TRAINING

01/10/2017–26/03/2018
Assist. Prof. (Slovenian: docent)
University of Ljubljana, Slovenia
Habilitation in Wood Science and Technology

01/03/2010–22/03/2013
Dr. rer. nat. (doctor of natural sciences) EQF level 8
Clausthal University of Technology, Germany

01/10/2005–22/02/2010
Dipl.-Phys (diploma in physics) EQF level 7

Clausthal University of Technology Germany
Physics and Physical Technology

Darmawan, Wayan

Expertise: Wood Science and Technology, Wood Machining, Wood Surface Coating, Wood Modification

Biography - Wayan Darmawan

Wayan Darmawan is a full professor at the Department of Forest Products, Faculty of Forestry, Bogor Agricultural University (IPB) since 2012. He received his doctorate at the University of Shimane, Japan in 2000. He continued his post-doctoral study at the Ecole Nasionale Superior de Art et Metier, France in 2002–2003. He was an Erasmus Mundus visiting professor fellow at Dresden University, Germany in 2009. He had been serving as Director of the Forest Products Department in 2010–2014. He concentrates his research work in the domains of wood machining, wood quality improvement by surface coating. He has been a member of the SWST since 2012.

De Arana-Fernández, Marina

Expertise: Architecture, forestry, construction, cultural heritage

Biography - Marina de Arana-Fernández

2010 - 2016. Degree in Architecture by Universidad Politécnica de Madrid

2016 - 2017. Master in Architecture by Universidad Politécnica de Madrid

2017 - 2018. Architect in Geneva, Switzerland

2018 - 2019. Master in Rehabilitation of Cultural Heritage by Università degli Studi RomaTre

2019. Stage as an Architect in Parco Archeologico di Pompei, Italy

2019 - present. PhD in Wood and Cork Technology Research Group by Universidad Politécnica de Madrid

2020 - present. Researcher Associate in Timber Construction Research Group of the Universidad Politécnica de Madrid, Spain. Topic: Reuse and recycle of timber from demolition in structural products and design for the deconstruction in the future (InFutUReWood European project).

De Mil, Tom

Expertise: Wood anatomy, Wood technology, X-ray Computed Tomography, dendrochronology

Biography - Tom De Mil

Tom De Mil obtained his PhD in 2017 at UGent-Woodlab in close collaboration with the Royal Museum for Central Africa. With fieldwork in the Democratic Republic of the Congo, his main focus was on X-ray CT scanning of tree cores from tropical forests. He made a field-to-desktop toolchain that allows to perform tree ring analysis and microdensitometry. In his current FWO project he uses this toolchain to analyze rings of the oldest trees in the world: ancient bristlecone pine.

He has made several contributions in peer-reviewed scientific journals (as author and co-author) and presented his progress on conferences, by means of oral and poster presentations

Derikvand, Mohammad

Expertise: Wood science and engineering

Biography - Mohammad Derikvand

Mohammad Derikvand is a postdoctoral researcher from Department of Civil Engineering at Aalto University, Finland. Mohammad does research in a range of different topics related to Wood Science and Engineering. He has been involved in wood-related research activities for more than 12 years and has teaching experience in three different countries. Mohammad's most recent research activities are focused on the shear performance of timber-concrete composite connections and evaluation of the accuracy of various test methods for bond strength measurement of wood adhesives.

Devallance, David

Expertise: Renewable Composite Materials

Biography - David Devallance

David is the research group leader in Renewable Materials Composites at the InnoRenew CoE. He received a Bachelor of Science in wood products processing and manufacturing from the Pennsylvania State University and his Master of Science and PhD in wood science from Oregon State University.

Díaz, René Herrera

Expertise: Wood treatments, non-destructive techniques, wood protection, analytical techniques

Biography - René Herrera Díaz

MSc and Ph.D. in Renewable Materials Engineering from the University of the Basque Country (Spain). Currently, I'm a Postdoctoral researcher funded by the Basque Government at the Innorenew COE research center (Slovenia), where I work on wood modification methods, characterization techniques and valorization of wood products.

Djafaripetroudy, Seyedrahman

Expertise: Cellulose nanotechnology and Biorefinery

Biography - Seyedrahman Djafaripetroudy

I have be working as an Assistant Professor at Biorefinery engineering department at SBU in IRAN. Here we are focusing on the production of cellulose nanomaterials from different agro-based residues such as Bagasse, Wheat and Rice straw for varying industrial application such as paper and board, novel biocomposites. Working on the extraction of hemicelluloses from the mentioned lignocellulosic materials for packaging application will be our future endeavor.

Dolezal, Franz

Expertise: Building acoustics and sound insulation, Sustainability of building products and buildings

Biography - Franz Dolezal

Master studies of architecture at TU Vienna and RWTH Aachen with emphasis on building physics. Doctoral studies at TU Vienna, civil engineering, with building physical subject (flanking transmission in solid wood structures).

Professional experience in building physics, consulting engineer for sustainability and energy conservation and research in building acoustics and sustainability of building products. Since 2017 at IBO in charge for research projects on building acoustics and Life Cycle Assessment of building products.

Member of several national and European standardisation committees and building LCA related boards.

Dömény, Jakub

Expertise: Wood modification and improvements of material properties of solid wood, microwave treatment applications, acceleration of chemical reactions by microwave heating, microwave plasticization and microwave drying

Biography - Jakub Dömény

Dr. Jakub Dömény is academic staff - researcher from Mendel University in Brno, Faculty of Forestry and Wood Technology, Department of Wood Science. His expertise lies in field of wood modification and improvements of material properties of solid wood. He is mainly focused on microwave treatment applications, especially acceleration of chemical reactions by microwave heating, microwave plasticization and microwave drying. He is lecturer of various courses, mainly wood modification, physical and mechanical properties of wood, wood drying and development of new wood-based materials.

Dupleix, Anna
Expertise: Wood sciences, social sciences

Biography - anna dupleix

I began my research career by studying the impact of the physical-mechanical properties of wood on its mechanical machining (peeling process) and its use in civil engineering. After a year of agricultural training to acquire technical skills in beekeeping and a post-doctoral project at the University of Aalto (Finland) on the energy contribution of wood use inside human housing, I began to wonder about the influence of the wood material used to build hives on the health of bee colonies, which are now under threat. The first results of an interdisciplinary approach that brings together anthropology, wood science and ecology to confront traditional knowledge with scientific knowledge reveal habitat properties that can affect living organisms, bees and their parasites, which we then experiment in the laboratory at the level of individuals and colonies. In particular, instrumental devices under development demonstrate the repellent effect of volatile compounds in chestnut wood on the bee parasitic mite, varroa destructor, and quantify the influence of the thermal and radiative properties of the wood and the environment on the internal climate.

Dvoracek, Ondrej

Expertise: Data analysis, Wood disintegration, Machine prototyping

Biography - Ondrej Dvoracek

Ondrej Dvoracek works as a Junior Researcher in the Team Mechanical Disintegration of Competence Centre for Wood Composites and Wood Chemistry, Austria. He received his Bachelor's and Master's degrees from the Brno University of Technology in Mechanical Engineering Design. He is a doctoral candidate at the Technical University of Graz in the Institute of Production Engineering. He also worked as a research worker focused on studying smart magnetorheological fluids used in damping systems, university lector of 3D modelling and developer of long-time prosthetic feet fatigue testing machines. His current research interests include mechanical processes taking place during high-speed cutting of hardwood. He is developing a device which enables to study it.

Effah, Bernard

Expertise: Wood Product Science, Composite Materials Microscopy and Spectroscopy (AFM), Materials Characterisation, Engineered wood, Bioenergy (Biomass)

Biography - Bernard Effah

Dr. Effah is a Senior Lecturer at Kumasi Technical University in Ghana. He holds a **PhD** in Wood Product Science from Stellenbosch University, South Africa. He also holds the following: **Galileo Master Certificate** in Renewable Energy (Biomass) from the European Energy Centre (UK); **MSc.** Wood Science from the Kwame Nkrumah University of Science and Technology – Ghana and **MA.** in Educational Leadership from the University of Education, Winneba – Ghana. Dr. Effah's research interest are; Composite Materials, Microplastics, Microscopy & Spectroscopy (AFM), Materials Characterisation, and Biomass. Dr. Effah is an external examiner for some Universities and a reviewer for some Journals.

Espinoza, Omar

Expertise: Marketing and Management of Forest Products

Biography - OMAR ESPINOZA

Omar Espinoza is Associate Professor at University of Minnesota's Department of Bioproducts and Biosystems Engineering, and chairs the Forest Products Management Development Institute. He is Director of Undergraduate Studies for the Sustainable Systems Management (SSM) major. He worked in managerial positions in the forest products industry for seven years. Omar's educational background include a BS in Industrial Engineering, an MBA, and MS and PhD degrees in Wood Science & Forest Products. His research is focused on marketing and management of innovative wood products.

Fang, Changhua

Expertise: Wood/Bamboo modification

Biography - Changhua Fang

Present: Professor at International Centre for Bamboo and Rattan, China

2007-2011: Postdoctoral Fellow at the Wood Research Center, Laval University, Quebec, Canada

2003-2007: Ph.D in Wood Science and Technology, University of Montpellier II, France

Ferrer, Maria Busquets

Expertise: Material science and engineering

Biography - Maria Busquets Ferrer

Maria Busquets Ferrer works as a Junior Researcher in the Team Smart Wood Natural Materials of Competence Centre for Wood Composites and Wood Chemistry in Austria, while finishing her doctoral studies in the University of Natural Resources and Life Sciences in Vienna. Previously, she completed her bachelor's and master's degree in Carlos III University of Madrid, in the topic of material science and engineering.

Her research is focus on porous materials made from natural resources.

França, Frederico José Nistal

Expertise: Nondestructive tests, physics and mechanics of wood

Biography - Frederico José Nistal França

Frederico José Nistal França is an Assistant Research Professor at Mississippi State University, USA. Originally from Brazil, he holds a PhD degree in Sustainable Bioproducts from Mississippi State University (2017), a Master degree in Forest Science (2014) and a Wood Industry Engineering degree (2012) from the Federal University of Espírito Santo, Brazil. His areas of interest are: physical and mechanical properties of wood, nondestructive evaluation of wood (NDT). Currently, he is conducting the hardwood basic properties project in agreement with Stairways Manufacture Association and the USDA Forest Products Laboratory.

In 2016, Dr. França won the Graduate Student Research Award from College of Forest Resources and Wildlife Research Center. The research was predicting the modulus of elasticity (MOE) and modulus of rupture (MOR) of southern yellow pine based on NDT and visual grading. In 2015, Dr. França was chose to represent Mississippi State University at the Schweighofer Students Workshop in Vienna, Austria, where students in wood science field from had a change to be part of young researchers group to exchange ideas on technology and innovation in the wood industry. In 2013 and 2016 Fred did internships at the Forest Product Laboratory, Madison, WI USA, where he received a Certificate of Appreciation from USDA Forest Service (2013) for his research contribution to the USDA Forest Product Laboratory.

Fredriksson, Magnus

Expertise: CT-scanning, Process control, Sawing optimization, Sawing simulation, Sawmill technology, X-ray scanning

Biography - Magnus Fredriksson

Present employment:

2018- Senior project manager, RemaSawco AB (50 %).
2020- Senior lecturer, Luleå university of technology (LTU), Division of Wood Science and Engineering.

Previous academic employment:

2017-2020 Associate senior lecturer, Luleå university of technology, Division of Wood Science and Engineering.

2014-2016 Researcher, Luleå university of technology, Division of Wood Science and Engineering.

Additional information:

2018- Leave of absence 50 % from LTU to work at RemaSawco AB.
2016 Visiting Postdoctoral Fellow at the University of British Columbia (UBC), Vancouver, British Columbia, Canada.
2010-2014 PhD student, Luleå university of technology, Division of Wood Science and Engineering.
2012-2014 Local representative in Skellefteå for the PhD student association, Luleå University of Technology.
2013 Five weeks as guest student at Forstliche Versuchs- und Forschungsanstalt Baden- Württemberg (FVA), Freiburg, Germany.
2009 MSc in Mechanical Engineering, Linköping University, Sweden.

Frias, Mariana

Expertise: Wood science, chemical and mechanical engineering

Biography - Mariana Frias

Mariana Frias is a M.Sc. candidate at Laval University in Canada, where she studies the parameters involved in the process of wood impregnation under the program of Wood Sciences.

Fruehwald-Koenig, Katja

Expertise: Wood Technology; Products for Timber Engineering; Properties of Wood, Wood and Natural Fibre Based Products; Production of Wood Based Composites; Utilization of Hardwoods; Utilization of Oil Palm Lumber

Biography - Katja Fruehwald-Koenig

1999 Graduation (Diploma) in Wood Science and Technology at the University of Hamburg, Germany

1999-2002 Head of the research group wood technology at JOANNEUM RESEARCH Forschungsgesellschaft mbH, HOLZ.DESIGN.INSTITUT, Judenburg, Austria (applied R&D, consultancy)

2002-2005 Graz University of Technology, Austria (2002-2003 Delegated as scientific officer to Umwelt- und Innovationszentrum Judenburg GmbH, Zeltweg, Austria, duties: technology transfer, consultancy in timber and timber engineering; 2003-2005 Senior researcher (teaching and R&D) at the Institute for Timber Engineering and Wood Technology)

since 2005 Tenure Professor for Products and Production in Timber Engineering at Ostwestfalen-Lippe University of Applied Sciences and Arts, Lemgo, Germany, Department for Production Engineering and Wood Technology, Study Courses Wood Technology (Bachelor + Master Program in German), Production Engineering and Management (Master Program in English), Production Engineering and Management (Master Program in German)
Head of the Laboratory for Timber Engineering: Products and Production
Since 2014 several R&D projects on properties and utilization of oil palm wood

Fu, Yu

Expertise: Material Biodegradation

Biography - Yu Fu

Yu Fu is a Ph.D. candidate in the Department of Mechanical and Energy Engineering at the University of North Texas. Her research currently focuses on the biodegradation of natural fiber and plant-based adhesives. Yu received her bachelor's degree from the Northeast Forestry University in China where she majored in Wood Science and Engineering.

Gallardo, Alberto Quintana

Expertise: Sustainable Building Construction, Life Cycle Assessment, Building Acoustics

Biography - Alberto Quintana Gallardo

Alberto was born in Valencia, Spain. He obtained a bachelor's degree in Technical Architecture in 2014. After that, he decided to study a master's degree in Acoustic Engineering. It was during that period when he started to be interested in research. As its master's final dissertation, he programed and performed a FDTD simulation of sound diffusers based on sonic crystals. After publishing and presenting those results in the Spanish National Congress on Acoustics (Tecniacústica), he was offered a position as a research assistant. The position implied working on the Life Cycle Assessment of sustainable building materials and to characterize their acoustic properties. Over the last four years he has been working on different materials such as, bio-epoxy composites, sheep wool, wooden-framed rice straw panels and clay concrete. He is currently working on a project to boost the valorization of the rice straw generated in Valencia and projects to boost the use of wood in the Spanish building sector.

Gardner, Douglas

Expertise: Wood Science and Technology

Biography - Doug Gardner

Douglas J. Gardner is Professor and Program Leader of Forest Operations, Bioproducts & Bioenergy in the School of Forest Resources at the University of Maine. He is also member of the Advanced Structures and Composites Center and Forest Bioproducts Research Institute. Gardner's research, teaching, and service activities focus on polymer and interfacial science aspects of wood-polymer composite materials. He is also involved in research in the areas of adhesion and surface science, cellulose nanocomposites, extruded wood plastic composites, and additive manufacturing. He has co-authored over 230 technical publications and 140 research presentations, and 5 patents.

Gardner is a Fellow and Past-President of the Society of Wood Science and Technology (SWST). He is also a member of the American Chemical Society, Forest Products Society, and Society of Plastic Engineers. Doug serves on the editorial advisory board of *Reviews of Adhesion and Adhesives*. He has been recognized for his work by receiving the 1992 Cahn Award, and the 2004-2005, 2011-2012 and 2018-2019 G. Peirce and Florence Pitts Weber Outstanding Researcher in Forest Resources Award, the 2007 Director's Outstanding Faculty Award at the AEWC Center, University of Maine, 2008 Forest Products Society L. J. Markwardt Wood Engineering Award and the SWST 2010 2nd Place, 2012 3rd Place, 2013 Honorable Mention, and 2017 1st Place George Marra Award of Excellence. He was awarded the SWST Distinguished Service Award in 2014 and the SWST Distinguished Educator Award in 2018. He appeared in Strathmore's Who's Who 2007-2008. In December 2005 he was a visiting lecturer at Beijing Forestry University, and in June 2006 was a visiting lecturer at BOKU, Vienna, Austria and in March 2015 was a visiting lecturer at the Slovak Technical University in Zvolen, Slovakia. He was recognized as an Honorary Member of the Union of Wood Processing Manufacturers of the Slovak Republic in 2000.

Doug has a BS degree in Forestry (1980) and Certificate of Advanced Study in Pulp and Paper Management (1981) from the University of Maine, and a PhD degree from Mississippi State University (1985).

Gavric, Igor

Expertise: Civil engineering, timber engineering, seismic engineering, structural engineering, cross-laminated timber, mass timber, timber connections

Biography - Igor Gavric

Dr. Igor Gavric is a researcher in the Sustainable Building with Renewable Materials research group at the InnoRenew CoE and an assistant at the Faculty of Mathematics, Natural Sciences and Information Technologies, University of Primorska. He graduated in Civil Engineering at the Faculty of Civil and Geodetic Engineering, University of Ljubljana in 2009. In 2013 he earned his PhD degree in Civil Engineering from the University of Trieste, Italy, in collaboration with the Trees and Timber Institute of Italian National Research Council (CNR IVALSA) in Trento. His PhD research focused on experimental testing and analytical modelling of seismic behaviour of cross-laminated timber (CLT) buildings. During his doctorate programme he was a visiting researcher at FPInnovations, Vancouver, Canada, and at the University of Canterbury, New Zealand and actively participated in COST action FP1004. After completing his PhD, he worked on postdoctoral research projects with University of Sassari, Italy and as a researcher at FPInnovations in Vancouver, Canada. He also has 5 years of experience in structural design practice, construction of timber buildings, and in R&D national and EU projects that he gained at CBD d.o.o. and at the development center Intech-les. His main research interests are on advanced timber and hybrid structural systems, tall timber buildings, seismic behaviour and design methods of cross-laminated timber (CLT) buildings, and cyclic behaviour of timber building wall systems and connections. Dr. Gavric is a member of CEN/TC250/SC8/WG3 working group Eurocode 8: Earthquake resistance design of structures – Timber structures.

Gazo, Rado

Expertise: Wood Products Processing

Biography - Rado Gazo

Rado Gazo, PhD is a professor of Forestry and Natural Resources in the Department of Forestry and Natural Resources Wood Research Laboratory at Purdue University. He authored or co-authored 63 successful proposals for grants and contracts, totaling $6.5 million (attributable to him), with over $5.5 million of that related to evaluating tree, log and lumber quality using CT, laser and image scanning research and development. He has published 40 refereed research journal articles, 5 teaching articles, 6 book chapters, 50 refereed proceeding articles and 175 other publications. He has given more than 115 invited and 210 other presentations to research an industry groups. He also teaches several classes including Properties of Wood, Secondary Wood Products Manufacturing and Furniture Design for CNC.

Rado is an active member of his professional societies. He served for many years as a chair of the Ohio Valley Section and board of director of the Forest Products Society and the Society of Wood Science and Technology. He currently serves as a board director of Ohio Valey Lumber Drying Association.

Before attending graduate school, Rado worked in a sawmill and a furniture company. He received his M.S. in 1989 from the Technical University in Zvolen, Slovakia and his Ph.D. in 1994 from Mississippi State University. Before joining Purdue University, Rado worked as a researcher at the Louisiana Forest Products Laboratory and as a visiting scientist at the New Zealand Forest Research Institute.

Rado has worked with over 100 companies, often in consulting capacity. His research focuses on the application of industrial engineering and operation research techniques to problems in primary and secondary wood products manufacturing industries. In this field, he was the first to develop a flow simulation program that models processing of wood in a furniture company. Companies using his program were able to increase significantly their raw material utilization and process effectiveness. His continuing efforts in this area have brought him international recognition that includes invited papers, a paid visiting research scientist position in New Zealand and a grant from Canadian government/industry research institution, among others.

Since 2004, working closely with Indiana primary and secondary industry, Indiana Hardwood Lumbermen's Association and others, Dr. Gazo helped to formulate a strategy for research on advanced wood products manufacturing. This strategy has now been adopted by then newly created Indiana State Department of Agriculture and was actively supported by Purdue University's Center for Advanced Manufacturing. In the framework of these efforts, Dr. Gazo refocused a major portion of his research activities on the development of CT scanning of logs and lumber, and establishment of a Hardwood Scanning Center. He organized a consortium of Indiana hardwood lumber and veneer manufacturers and other state and national institutions to fund this new area of research. In 2012, this effort has successfully brought the industry first-ever commercially available industrial-grade CT scanner and

related optimization software, and in 2018, the industry first-ever successful automated hardwood lumber grading system.

Georgiades, Maria

Expertise: Wood Technology and Management

Biography - Maria Georgiades

Maria Georgiades is a starting master student in Wood Technology and Management at the University of Natural Resources and Life Sciences in Vienna, where she did her Bachelor Degree in Wood and Fibre Technology. For her bachelor thesis she had a project on climbing holds made from epoxy and different bio-based materials. Then she started a part-time job at the Institute of Wood Technology and Renewable Materials in a research project dealing with wood dust.

Guebitz, Georg

Expertise: Enzyme Technology

Biography - Georg Guebitz

Prof. Dr. Georg M. Guebitz obtained his PhD in Biotechnology from TU-Graz in 1996. As an Erwin-Schroedinger Fellow, he investigated enzymatic processes for lignocellulose processing at University of British Columbia, Canada from 1996 – 98. Since 2013, he holds a full professorship at University of Natural Resources and Life Sciences, Vienna and is the head of the Department of Agrobiotechnology and of the Institute of Environmental Biotechnology with focus on biotechnical functionalisation and processing of materials. He has participated in 30 European projects related to polymer processing and coordinated 9 out of which. In parallel, he cooperated with industry and research centres such as ACIB. Gübitz has published more than 350 scientific papers in peer reviewed journals, he holds 16 patents and has edited various books.

Gusenbauer, Claudia

Expertise: Wood characterization, atomic force microscopy, chemical force microscopy, wood functionalization, wood cell wall science

Biography - Claudia Gusenbauer

Claudia Gusenbauer is currently working as a **doctoral student** at the Institute of Wood Technology and Renewable Materials, BOKU - University of Natural Resources and Life Sciences. In her thesis, she focusses on novel, **high resolution characterization techniques**. The core of her experimental work is Atomic Force Microscopy (AFM), a method which revealed astonishing insights into lignocellulosic materials. With the further development of this method together with complementary approaches such as Raman and Infrared Microscopy, she intends to support the optimization of wood modification procedures. From May to July 2019, she was working at Lehigh University, PA, USA, at the Department of Chemistry at a Scanning Probe Microscopy research lab, in which she learned functionalization procedures and optimized measurement set-ups.

During her master´s program **wood technology** and management (BOKU), she studied for one semester at the Swedish University of Agricultural Sciences (SLU) in Uppsala, Sweden. In her master thesis, which was awarded with the Klaus-Fischer Innovation Award and BOKU Talent Award, she was developing new insulation materials. At the research institute Wood K plus and in the innovation team of Weitzer Parkett, an Austrian wood flooring producer, she gained work experience in the fields of wood adhesive systems, standards and regulations which are relevant in the field of wood science and technology.

Hadi, Yusuf Sudo

Expertise: Wood bio-composites; Wood modification;Wood preservation

Biography - Yusuf Sudo Hadi

Head of Biocomposites Division.

Hansmann, Christian

Expertise: Wood modification and functionalization, Natural building materials

Biography - Christian Hansmann

Christian Hansmann finished his PhD at BOKU and Wood K plus in 2004 on the topic of "Chemical modification of solid wood". After that he started working as a Senior Researcher at the competence center. Now he is Key Researcher, Teamleader of the team Smart Wood and Natural Materials and Area Manager of the area Wood Materials Technologies. His main research focus is besides fundamental research into wood modification on the development of functionalised all new biobased materials.

Haviarova, Eva

Expertise: Sustainable Wood Products Design

Biography - Eva Haviarova

Dr. Eva Haviarova is an associate professor of Wood Products Engineering and Strength Design in The Department of Forestry and Natural Resources, Purdue University. She is responsible for teaching of World Forest and Society, Global Sustainability Issues, and several Wood Products Development courses. She is conducting research in areas of Strength Design, Sustainable Product Development, Value Added for Hardwoods, Design and Development of Low-Cost Furniture for Underprivileged, Design of Light Timber Frames, Global Sustainability Issues, and advanced Wood ID. She has published over 50 peer-reviewed publications and delivered over 200 professional presentations. Through her outreach activities, she is working mainly with the forest products industry. She is active member of several professional associations and currently serves as the President of the Society of Wood Science and Technology.

Heim, Lucie

Expertise: Agroforestry, wood development

Biography - Lucie HEIM

I am a french PhD student. My thesis entitled "Understanding the mechanisms of xylogenesis and the physiology of poplars, black locust and walnut trees in agroforestry for a valorization in the wood sectors" just started in January, 2020. Three laboratories are involved : LaBoMaP (ENSAM), UMR PIAF (INRAE) and UR BioWooEb (Cirad).

Hellmayr, Raphaela

Expertise: Cradle to cradle in wood technology

Biography - Raphaela Hellmayr

Raphaela Hellmayr is a PhD student at the University of Natural Resources and Life Sciences in Vienna at the Institut of Wood Technology and Natural Materials. She holds a Masters Degree in Wood Technology and Management obtained at the University of Natural Resources and Life Sciences, Vienna. She obtained a Bachelors degree in Forest Products Technology & Timber Construction at the Salzburg University of Applied Sciences (Campus Kuchl, Austria). During her studies she did extensive internships, such as at Stellenbosch University (South Africa), or at the Swiss Federal Institute of Technology in Zuerich. Her research is about novel bio-based adhesives and applications as well as on specific aspects in wood-processing.

Hellmeister, Marilia

Expertise: Wood Science, Mass Timber, Sustainability, Life Cycle Assessment

Biography - Marilia Hellmeister

Master's student at the University of Maine - School of Forest Resources. Research interests in the area of Mass Timber, Carbon emissions, Life Cycle Assessment and environmental impacts. Forest Engineer graduated from Sao Paulo State University, Brazil. Studied abroad at the University of Kentucky (2013-2014) and completed a summer internship at the Forest Products Laboratory (FPL-USDA) in the sector anatomy of wood. Experience in Wood Frame Structures, Forest Logistics and wood certification.

Hess, Dominik

Expertise: Physical properties of wood, modification of wood

Biography - Dominik Hess

Dominik Hess is a Ph.D. student and young researcher from Mendel University in Brno, Faculty of Forestry and Wood Technology, Department of Wood Science and Technology. He is mainly focused on wood modification and physical properties of wood.

Hogger, Elfriede

Expertise: Research on existing adhesive systems, Method development and analysis of adhesives

Biography - Elfriede Hogger

Elfriede Hogger is currently working as a Junior Researcher and PhD student at Wood K plus, Kompetenzzentrum Holz GmbH.

Education:

-2010-2013 Bachelor studies: Forest Products Technology and Timber Construction, FH Salzburg Kuchl

-2013-2015 Master studies: Forest Products Technology and Management, FH Salzburg Kuchl

- 2015-current PhD studies: Wood technology and renewable materials, University of Natural Resources and Applied Life Sciences, BOKU, Vienna

Focus:

- Research on existing adhesive systems

- Method development and analysis of adhesives

Horváthová M, Michaela

Expertise: Fire engeneering, testing materials on wood and bio based

Biography - Michaela Horvathova

none

Hyytiä, Annika

Expertise: Sustainable development internationally in forests and forest products

Biography - Annika Hyytiä

Annika Rantala (Hyytiä)

Student, Faculty of Biological and Environmental Sciences

Doctoral Student, Forest Economics and Marketing, "Sustainable development – International framework – Overview and analysis in the context of forests and forest products", Department of Forest Sciences, University of Helsinki, Finland

Jahan, Md Sarwar

Expertise: Pulping, Biorefinery and Wood Chemistry

Biography - Md Sarwar Jahan

After completing M.Sc in Applied Chemistry, Dr. Jahan joined in BCSIR Labs in 1992 and started his carrier on pulp and paper. He received PhD degree, completed postdoctoral research on wood and pulping chemistry. Dr. Jahan was a Visiting Scholar at the University of New Brunswick. So far I have published more than 160 research articles in different international journals. His main focus of research is to utilize lignocelluloses in producing pulp, chemicals and biomaterials.

Jakob, Matthias

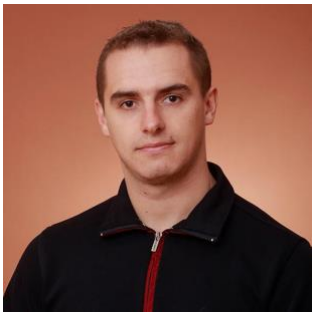
Expertise: Wood modification, Wood densification

Biography - Matthias Jakob

Matthias Jakob is currently working as a doctoral candidate at the Institute of Wood Technology and Renewable Materials, BOKU - University of Natural Resources and Life Sciences, Vienna.

After a school education in cooking, he is today more often cooking wood veneers than vegetables, to get the best out of wood. His research topic focusses on the modification of wood to enhance its mechanical and physical properties and to make it more competitive to metals and well-established polymer composites. The main idea of his work is to increase the wood's density by transversal compression to exploit the well-known density-strength relationship of wood. To avoid damages during densification, he reduces the cell wall rigidity by a partially delignification of wood.

Matthias Jakob holds a bachelor degree in “Environment and Bio-Resources Management” and a master degree in “Material and Energetic Exploitation of Renewable Raw Materials”. During these highly interdisciplinary programs, he found his passion in wood and natural fibers sciences. True to the motto “Try to use wood in a material way, at the end you can still burn it.”, he is today focusing more on the material- than on the energetic exploitation.



Jambrkovic, Branimir

Expertise: Additive Manufacturing (Fused Deposition Modeling), Bio-based composites (Wood filaments), 4D printingRaman spectroscopy, Forest Products Technology, CNC Technology

Biography - Branimir Jambreković

Branimir Jambreković was born on December 10, 1991, in Bjelovar. He finished elementary school in Nova Rača and high school of mathematics in Bjelovar. In 2010, he enrolled at the Faculty of Forestry, University of Zagreb, where he graduated in 2015 and earned a master's degree in wood technology. He has been employed since May 16, 2016, at the Faculty of Forestry as an assistant at the Institute of Wood Science, where he enrolled in the postgraduate doctoral study the same year. On the Institute of Wood Science, he is entrusted with the implementation of exercises from the teaching courses Technical properties of wood 1, Technical properties of wood 2, Physical properties of wood, Mechanical properties of wood, Investigation of physical and mechanical properties of wood, Special products of wood, Technological properties of wood.

Jullien, Delphine

Expertise: Analysis of the hygromechanical behavior of wood for the conservation of painted panels from cultural heritage, Characterization of the physical properties of tropical wood used in clarinets, Tree biomechanics: growth stresses and wind effect, Material constituting the hives: interaction between wood and health of bee colonies

Biography - delphine jullien

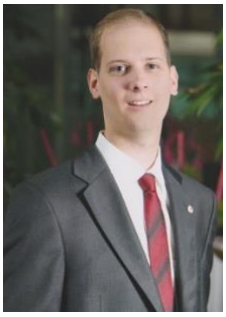
PhD 1995 (University of Montpellier),

assistant-professor 1998- (University of Montpellier),

head of Wood team of LMGC (University of Montpellier) 2017-.

Research in wood mechanics, especially tree biomechanics: growth stresses assessment and modelling in trees, relation with tree morphology; application to conservation of wooden objects from cultural heritage: monitoring of in situ microclimate and deformations of painted panels, use of image correlation, hygroscopic behaviour of wood, mechanical simulation of restoration acts or artwork manipulations in close collaboration with restorers; and more recently interaction between the beehive material and the honey-bee colonies: influence of wood specie on bees health.

Justin, Atanasso Akpovi



Kain, Stefan

Expertise: Additive Manufacturing (Fused Deposition Modeling), Bio-based composites (Wood filaments), 4D printingRaman spectroscopy, Forest Products Technology, CNC Technology

Biography - Stefan Kain

DI Stefan Kain, BSc completed his master's degree in 2016 (degree program: wood technology and wood management) at the University of Applied Sciences Salzburg. In the same year he started working as a junior researcher at the University of Applied Sciences Salzburg (Campus Kuchl) and was entrusted with the research project "TFP Hybrid Materials", which was successfully completed in December 2019.

Since January 2020, he has been working as a junior researcher for the "SCSM - Salzburg Center for Smart Materials" project, in which he deals with the processing and characterization of biogenic materials for Fused Deposition Modeling (3D printing). In addition, Stefan Kain is working on his doctorate at the University of Salzburg (NAWI) under the supervision of Prof. Alexander Petutschnigg (University of Applied Sciences Salzburg) and Prof. Maurizio Musso (University of Salzburg).

Kamgoj, Gourav

Expertise: Wood Science and Technology

Biography - Gourav Kamboj

Gourav Kamboj

- **Education:**

2009 – 2012 Graduate in Physics, Chemistry and Mathematics. Kurukshetra University Kurukshetra-India.

2012 – 2014 Masters in Wood Science and Technology. Forest research Institute (Dehradun)-India.

Since 2017 Doctoral degree program in Wood Processing and Technology in Czech University of Life Science-Prague

• **Other knowledge -foreign languages, passing special courses, etc:**

English. Hindi.

• **Employment and work experience - including student stays:**

2014 –2015 -quality inspector of furniture in C.L. Gupta Export Pvt. Ltd. India.

2015 – 2018 -quality executive in Fab India overseas Pvt. Ltd.

Kasal, Bohumil

Expertise: Wood Civil Engineering

Dr. Bohumil Kasal graduated in 1980 from the Technical University Zvolen in Slovakia with the engineering degree (Ing.) in Wood Technology. Between 1980 and 1987 he worked at the State Wood Research Laboratory in Bratislava, Department of Physics as a Research Engineer. Between 1987 and 1989, Dr. Kasal worked at the area of wood composites at Virginia Polytechnic Institute and State University in Blacksburg, USA and received a MS degree in Sustainable Biomaterials. He then moved to Oregon State University (1989-1992) where he worked as a Research Associate and received a MS degree in Civil and Environmental Engineering (Structures) and PhD degree in Renewable Materials with minors in Applied Mathematics and Structural Engineering. In 1992 he worked at Alpine Engineered Products, Inc. in Pompano Beach, Florida as a Research and Development Engineer. Since 1992, Dr. Kasal was an Assistant Professor, Associate Professor and Professor at the North Carolina State University in Raleigh, NC at the Department of Wood and Paper Science. He also held a faculty position at the department of Civil and Environmental Engineering. At NC State, Dr. Kasal´s work focused on engineering applications of wood, relations between genetic markers and wood properties, and methods for the in-situ evaluation of timber. Dr. Kasal´s work in historic timber evaluation was presented by the US National Science Foundation in its budget request to the Congress of the United States in 2005 as one the examples of a successful international research. Dr. Kasal´s research on light-frame wood structures under natural hazard loads was discussed in various media networks such as ABC, NBC or NBC International, and in 2001-2002, Dr. Kasal was a Senior Fulbright Scholar and Visiting Professor in Dresden, Germany. During that time, he led an EU research project on seismic performance of timber frames that was featured by the EU as an example of a successful team research.

In 2005, Dr. Kasal was named the Bernard and Henrietta Hankin Chair of Residential Building Construction at the Pennsylvania State University at University Park, PA – a prestigious endowed chair position. He was also appointed a Professor of Architectural Engineering and a Professor of Civil and Environmental Engineering, and directed the Pennsylvania Housing Research Center. At Penn State, Dr. Kasal conducted research on low-rise buildings subjected to wind loads and directed international research on timber structures under seismic loading and composite wood structures. He taught courses in wood mechanics, wood composites and the design of timber structures. Dr. Kasal held honorary appointments at the University of Bristol, UK and University of New Brunswick, Canada, adjunct Professorship at the North Carolina State University, USA and he is a Professor at the Czech Technical University in Prague, Czech Republic and Professor at the University of Primorska, Slovenia.

In 2010, Dr. Kasal was selected to be the Director of the Fraunhofer Institute for Wood Research, Wilhelm-Klauditz-Institute WKI. At the same time, he was appointed as a Professor of Organic and Wood-based Construction Materials at the Technical University of Braunschweig.

Kasal is a member of the American Academy of Mechanics, American Society of Experimental Mechanics, Society of Wood Science and Technology and a number of other professional societies and editorial boards and has authored over 200 publications. He is also accredited as a professional engineer in the area of diagnostics and building evaluation. In 2011 he was elected a Fellow of the International Academy of Wood Science and in 2017 a Member of the American Society of Civil Engineers.

Kibleur, Pierre

Expertise: Wood-based panels, X-ray micro-tomography, Image processing

Biography - Pierre Kibleur

Pierre Kibleur obtained his master's degree in Computational Science and Engineering from EPFL (Ecole Polytechnique Federale de Lausanne), in 2018. His current research at Ghent University revolves around the dynamic behavior of wood-based panels, particularly swelling due to water absorption.

Koc, Kucuk Huseyin

Expertise: Industrial management, furniture, quality improvement applications

Biography - Kucuk Huseyin KOC

He is a faculty member at Istanbul University-Cerrahpasa Faculty of Forestry, Department of Forest Industry Engineering. His work focuses on forest industry, furniture, industrial management and quality. He has around 140 publications in the study area. 16 of these publications have been published in international refereed journals. 25 of the publications are papers presented at international scientific meetings and their full text is published. 75 of them are articles published in national refereed journals. 40 of the publications are in the form of papers presented at national scientific meetings and published in full text. He has also published two books, a common national patent that has been approved, and several ongoing and completed projects.

Kolajo, Tolulope

Expertise: Pulp and Paper technology, Biocomposites, Biomass processing

Biography - Tolulope Kolajo

Bio-sketch on Tolulope Eunice KOLAJO

I am a young faculty member who has just obtained a Ph.D. and given a teaching position at the Department of Wood Products Engineering, Faculty of technology, University of Ibadan, Nigeria. A thorough, meticulous and excellence driven person with special interest in teaching and research. My research has been focused on the indigenous plants in pulp and papermaking as well as conversion of agricultural and forest wastes to renewable energy resources.

Among other researches, I have designed and constructed a chemical reactor that operates on low temperature (published in *International Journal of Engineering Research and Technology (IJERT).* ISSN: 2278-0181.Vol. 5 Issue 01, January-2016. Pg. 217-219) for delignification of non-woody biomass into cellulose pulp laps for the paper industry and bio-refineries. The reactor was constructed using locally sourced materials and technology and can be easily operated, repaired and maintained, providing more earnings from maize production as well as job opportunities for the teeming unemployed youths. I have conducted a study to obtain the optimum chemical pretreatment schedule for the maize stalk biomass, produced and characterized bio-ethanol from maize stalks.

I have presented some research findings on some indigenous plants that have been found suitable for papermaking as well as biosynthesis in some local conferences (35th and 39th Annual Conference of the Forestry Association of Nigeria, 3rd Biennial National Conference of the Forest and Forest Products Society). My research focus is the use of other agricultural wastes: coconut husks, banana and plantain stalks, cassava peels, sugarcane bagasse which are abundantly cultivated in Nigeria into renewable energy resources to maximize output from farming and forest operations, and domesticating the machines and processes.

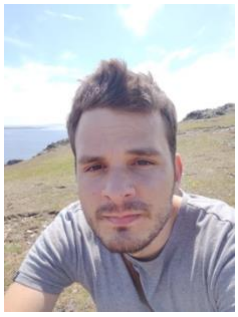
An opportunity to attend the SWST 2020 Convention will provide the requisite exposure, learning new techniques in bio-energy conversion and storage, learning new information, finding solutions to problems.

Kovacevic, Marko

Expertise: VOC emission from wood and wood-based materials; process optimization regarding VOC-emission

Biography - Marko Kovacevic

Marko Kovačević is a junior researcher at Kompetenzzentrum Holz (Wood K Plus), a research institute in the area wood and wood-related resources located in Austria. Since 2018 Marko's main research topics have been VOC-emission from wood and wood-based products, as well as VOC-emission reduction by modifying production process parameters. He is a PhD-Student at University of Renewable Materials and Life Sciences (BOKU) and is currently enrolled in a Micromasters program in Data Analytics at Georgia Institute of Technology (Georgia Tech). Marko graduated from University of Belgrade with a diploma degree in wood science and from University of Renewable Materials and Life Sciences (BOKU) with a master's degree in wood technology and management.



Krajnc, Luka

Expertise: Forestry, wood, mechanical properties, silviculture, non-destructive evaluation

Biography - Luka Krajnc

Luka Krajnc, PhD, is a forestry researcher studying what affects mechanical and physical properties of wood and how to manipulate them in the forest. He specialises in using non- and semi-destructive methods for assessing mechanical and physical properties of wood at various stages, from standing trees to wood products.

Krystofiak, Tomasz

Expertise: Proecological adhesives and lacquer products, Glue-lines and lacquer coatings, Wood modification, Wettability and surface phenomena, Wood based materials

Biography - Tomasz Krystofiak

Tomasz Krystofiak - Dr habil. eng.; He works in the Department of Wood Based Materials, Laboratory of Gluing and Finishing of Surfaces on Poznan University of Life Sciences (Poland). In 2002 he finished PhD. work. He is interested in proecological adhesives and lacquer products, properties of the glue-lines and coatings, wettability and adhesion processes, activation and modification of the different surfaces. Member of Management Committee in the COST Action CA15216.

Kuzman, Manja Kitek

Expertise: Developing wood construction, innovative use of wood, sustainable wood products and product design, energy-efficient timber construction, building modernization with prefabricated components and architects' perception of engineer wood product, 3D-printing design and healthy living environment with wood

Biography - Manja Kitek Kuzman

Dr. Manja Kitek Kuzman is an associate professor of architecture at the Biotechnical Faculty, Department of Wood Science and Technology, University of Ljubljana. She is responsible for teaching of construction and design, innovations and sustainable wood architecture. Her research and teaching interests revolve around developing wood construction, innovative use of wood, sustainable wood products and product design. Her current research interests include comparison of wood constructions in US and Europe and architects' perception of engineer wood product, 3D-printing design and healthy living environment with wood.

Larasatie, Pipiet

Expertise: competitive marketing and business management strategies of forest products industries, including business development of engineered wood products, public perceptions of wooden multi storey building (Tall Wood Buildings), digitalization in business, and gender diversity in the forest sector workforce and higher education

Biography - Pipiet Larasatie

Interdisciplinary scholar and social scientist studying competitive marketing and business management strategies of forest products innovation, including business development of engineered wood products (Cross Laminated Timber/CLT), public perceptions of wooden multi-storey building (Tall Wood Buildings), and gender diversity in the forest sector workforce and higher education.

For more information about her research, please visit www.competitive-forest.com

Leban, Jean-Michel

Expertise: Wood Science

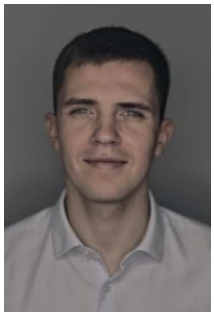
Biography - Jean-Michel LEBAN

Jean-Michel Leban is Research Director, EFPA, INRA, Champenoux, France.

He is *Editor in chief for Annals of Forest Science*

He was *Professor, Director of the School of Wood Science* (ENSTIB), Lorraine University

Research area, linking Growth and Yield and Wood Properties models, microdensitomtry



Lechowic, Daniel

Expertise: Machining processes of wood and wood-based products and smart manufacturing solutions for the wood industry

Biography - Daniel Lechowicz

Daniel Lechowicz studied Wood Technology at Poznań University of Life Sciences and majored in Mechanical Wood Technology. He is a Junior Researcher in Competence Centre for Wood Composites and Wood Chemistry in Tulln, Austria. As a member of the Mechanical Disintegration Team, his current research interests include machining processes of wood and wood-based products and smart manufacturing solutions for the wood industry.

Leiter, Lena Maria

Expertise: Wood Technology and Management, Material and Energetic Exploitation of Renewable Raw Materials

Biography - Lena Maria Leiter

I am about to graduate in the two master degrees "Wood Technology and Management" and "Material and Energetic Exploitation of Renewable Raw Materials (NAWARO)" at the University of Natural Resources and Life Sciences, Vienna. Last year I did a 6 month student exchange via ERASMUS at the Ghent University (Belgium) as part of my studies.

I have a great passion for working with wood, especially as a renewable raw- and building material. During my school time at a high school with a focus on forestry I had the opportunity to work in several forestry companies, which extended my knowledge of the business aspects of working with the material. During my studies, I concentrated on the processing of wood and thus expanded my experience with wood as a material.

At my high school I practiced my communicative skills as a pupil representative and at the University I continued as an elected student representative for forestry and wood industry. It was not only my job to help students, but also to keep an active communication with the
lecturers. Thus, I also became a member of the "academic study commission for the development and improvement of the related curricula (forestry, timber industry, natural dangers and wild life)".

Through this work I had the opportunity to participate in the "Student workshop at schweighofer Prize 2017". In 2019 I was part of a team that participated in the "Evergreen Innovation Camp Hackathon".

Li, Jing

Expertise: Structure and mechanical characterization of biomass materials

Biography - jing li

Personal biography

Jing Li, Chinese citizen, Female, Born on August 15, 1985. Devoted to scientific research on the structure and function of biomass materials. Mainly engaged in the studies on the macroscopic and microscopic morphological structure characterization of wood/bamboo, mechanical properties testing and its environmental factors etc; Introduced the artificial intelligence deep learning algorithms into the field of bamboo structure research, and solved the key technical problems of automatic detection, positioning, counting and measurement of related morphological parameters for different types of vascular bundles; Developed "Rapid Analysis of Section Structure of Functionally Graded Material " software.

Education

09/2019 - present Ph. D. Candidate in Wood Science and Technology. Chinese Academy of Forestry, China.

09/2017 - 06/2019 Master of Science in Wood Science and Technology. International Center for Bamboo and Rattan, China.

09/2003 - 06/2007 Bachelor of Management. Central South University of Forestry and Technology, China.

Li, Jingyu
Expertise: Wood physics

Biography - Jingyu Li

Doctor candidate from Beijing Forestry University. Interested in wood-water study.

Li, Ling

Expertise: Wood physics, wood pellets, biomass, bioenergy

Biography - Ling Li

Dr. Ling Li is an assistant professor of sustainable bioenergy systems at the School of Forest Resources of the University of Maine.

Li, Shujun

Expertise: Wood Protection, Wood Chemistry

Biography - Shujun Li

Shujun Li got her Ph.D. in 2001 at Northeast Forestry University, China, majored in Wood Science and Technology, Since September 1, 2007, she has worked for more than 12 years as a full professor at College of Material Science and Engineering, Northeast Forestry University. She visited Oregon State University twice, in the group of Prof. Jeff Morrell.

Liang, Daxin

Expertise: Cellulose; biomass composites; water treatment; adsorption

Biography - Daxin Liang

Dr. Daxin Liang is an Associate Professor in College of Materials Science and Engineering, Northeast Forestry University. Dr. Daxin Liang has published numerous SCI indexed papers on the subject of thermoelectrics, biomass composites, and nanomaterials. He is a recognized expert in materials science, giving many invited papers at international meetings around the world. His work published in Nano Letters (Flexible Nanocrystal-Coated Glass Fibers for High-Performance Thermoelectric Energy Harvesting, Nano Letters, 2012, 12, 2140) attracted global interest, and was reported by over 10 international media such as Science Daily and C&EN.

Lipovac, Dean

Expertise: Mental health in the built environment

Biography - Dean Lipovac

Dean Lipovac completed a master's degree in applied psychology at the Faculty of Mathematics, Natural Sciences and Information Technologies, University of Primorska (UP), in Koper, Slovenia and is currently a PhD student. He is an assistant researcher at the InnoRenew CoE and Andrej Marušič Institute (UP). His main research interest is the connection between the built environment and human mental health. His work is focused on researching how different materials used in indoor design influence physiological, emotional, and cognitive indicators of well-being.

Liu, Huanrong

Expertise: Bamboo based engineering material, especially in the manufacture process, testing, utilities, and pruduct in structure and furniture

Biography - Huanrong Liu

Huanrong Liu, PhD. , Assistant researcher of International Center for bamboo and rattan. Her main research: Bamboo engineering composites.

Bamboo is rich in China, She mainly work on bamboo-based composite, including the reasonable and scientific designing, manufacturing, and performance-evaluating (static performance and impact and fatigue performance), in order to explore sufficient utilization of bamboo engineering composites in area of building, bridge, boat, and so on.

Liu, Wendi

Expertise: Natural fibers-reinforced composites; Polymer composites

Biography - wendi liu

Dr. Wendi Liu is a researcher at College of Transportation and Civil Engineering, Fujian Agriculture and Forestry University (FAFU), China. He obtained two Ph.D. degrees in Forestry Engineering from FAFU in 2016 and Integrated Systems Science from Akita Prefectural University, Japan in 2019. He had a visiting experience in Civil Engineering at Brunel University, UK from January 2015 to November 2017.

Dr. Liu has more than 7 years experience in the research of natural fibers reinforced polymer composites. He has authored more than 20 papers in the leading wood science and composites science journals including Cellulose, Holzforschung, Wood Science and Technology, Composites Science and Technology, Composites Part A, ACS Sustainable Chemistry and Engineering, etc. His research interests include surface modification of natural fibers, development of biobased thermosets from vegetable oils, as well as strengthening and toughening of poly(lactic acid)-based blends and composites.

Liu, Yamei

Expertise: Wood anatomy, Biomass materials

Biography - Yamei Liu

I come from School of Forestry&Landscape Architecture , Anhui Agricultural University, I teach undergraduates in it, and I also do research on wood science and technology. My research fields are the qualities and uses of wood, and biomass composite materials. I graduated with a PhD in 2010 and been a teacher up to now. I also worked as a student counselor from 2015 to 2019. I have presided and participated in more than 10 scientific research projects, such as National natural science foundation of China, The National Key Research and Development Plan of China, and so on. Since 2007, I have had about ten papers published in different journals, including Ann. For. Sci.

Nowadays, I have finished two main projects, one is focus on the formation of reaction wood , the other is on the wood quality properties in fast-growing plantations.

Liu, Yuansong

Expertise: Wood science and technology

Biography - Yuansong Liu

Liu yuansong, male, born in ganzhou city, jiangxi province, China,1993-12-08, is currently studying in the school of materials science and technology, Beijing forestry university. The bachelor's degree was completed in Inner Mongolia agricultural university, and master's degree was completed in nanjing forestry university. The research interests include wood composites and biological modification of wood, and he has published relevant papers in related journals, such as *Composite structures*, *Dyes and pigments*, *European Journal of Wood and Wood Products*.

Llana, Daniel

Expertise: Non-destructive testing for grading new timber and evaluation of existing structures, Reuse and recycling of recovered wood, Standardization

Biography - Daniel F. Llana

Dr. Daniel F. Llana

2007. Bachelor of Engineering (Agronomy) by Universidad de León, Spain.

2010. M.Sc.Eng. (Rural Construction) by Universidad Politécnica de Madrid, Spain.

2016. Ph.D. by Universidad Politécnica de Madrid, Spain. Topic: Non-destructive techniques applied to structural grading of timber in new and rehabilitation works.

2016-2017. Post-doc at the Universidad Politécnica de Madrid, Spain. Topic: Assessment of existing timber structures by NDT techniques.

2017-2020. Post-doc in the Timber Engineering Research Group of the National University of Ireland Galway, Ireland. Main topics: Engineered Wood Products, Recycling of timber from demolition and Hardwood forest.

2020-present. Post-doc in the Timber Construction Research Group of the Universidad Politécnica de Madrid, Spain. Topic: Reuse and recycle of timber from demolition in structural products and design for the deconstruction in the future (InFutUReWood European project).

Main research areas:

Non-destructive testing applied to the grading of structural timber

Assessment of existing timber structures

Reuse and recycle of timber from demolition in mass timber products

Standardization

Loh, Yueh Feng

Expertise: Wood Science and Technology, Oil palm trunk plywood, Biocomposite

Biography - Yueh Feng Loh

n/a

Ma, Xinxin

Expertise: Wood and bamboo science and technology

Biography - Xinxin Ma

Xinxin Ma obtained Ph.D at China Academy of Forestry and served as an associate professor at International center for bamboo and rattan. She engaged in mechanical property of bamboo materials, including creep and fatigue property of bamboo scrimber and other bamboo-based materials.

Mandal, Sujata

Expertise: Development of sustainable Nanocomposites for pollution control, energy harvesting/conversion/storage, and biomedical applications; Use of sustainable and low-cost methods for water purification and wastewater management; Optimization of energy efficiency in the area of water purification, wastewater management, and sustainable building

Biography - Sujata Mandal

Sujata Mandal is a doctoral candidate and a teaching fellow in the Mechanical and Energy Engineering department at the University of North Texas. Sujata earned dual master's degrees in Physics (from Kumaun University in India) and in Sustainable Energy Systems from State University of New York at Cortland. Sujata graduated from her masters in sustainable energy systems with a strong GPA of 3.6, and she maintains an outstanding GPA of 3.96 in the program. Prior to joining the University of North Texas, she served as full time visiting faculty of physics in SUNY Onondaga and an adjunct in the department of chemistry at SUNY Cortland. She received the second prize in the 3MT thesis competition and received a graduate student research award from the University of North Texas. Also, while in India, Sujata served as Head of High School Activities between 2011 and 2014 for the Sehwag International School and served as Department Chair for Science and Mathematics for the Vidya Sanskar International School and Ashok Hall, India 2006-2010. She was also appointed as Management Representative for ISO 9001 -Quality Management Policy and ISO -14401-Environment Management Policy. Sujata attended the International Water Conference at the University of Oklahoma (US) and presented her research work in Sep 2019.

Marrot, Laetitia

Expertise: Composites, textile, lignocellulosic materials, bio-carbon

Biography - Laetitia Marrot

Dr. Laetitia Marrot is a researcher in the Renewable Materials Composites Group at the InnoRenew CoE. She earned her PhD in Materials Science in 2014 from the University of South Brittany, France and then worked as a postdoctoral researcher at the University of Grenoble Alpes, France in the Laboratory of Pulp and Paper Science.

Her research has focused on sustainable composites reinforced by natural fibers, mechanical and physico-chemical properties of natural fibers, adhesion between natural fibers and polymer matrices at several scales of observation, and optimization of mechanical properties of complex cellulosic products.

At the InnoRenew CoE, she is working on the development of new applications for hemp and wood by products in the Slovenian industry.

Mascia, Nilson

Expertise: Wood mechanics, Wood structures, Strength of materials

Biography - Nilson Mascia

- Post Doctorates

  CNR (Consiglio Nazionale delle Ricerche)

  - Ivalsa (Istituto per Valorizzazione del Legno e delle Specie Arboree)

  - Florence-Italy,2015-2016

  Forest Products Laboratory-Madison-Wi-USA ,2015

  State University of Wisconsin-Madison, USA, 1998
- Full Professor State University of Campinas, 2011
- Associate Professor in Strength of Materials

  State University of Campinas, 1997
- Doctoral Degree in Structural Engineering

  State University of São Paulo, 1991
- Master Degree in Structural Engineering

  State University of São Paulo, 1985
- Civil Engineer

  State University of São Paulo, 1981

Mensah, Prosper

Expertise: Determine durability, mechanical and physical properties of wood-based and non-wood-based composite; non-timber forest products (NTFP); industrial utilization of biomass; sawmilling of wood species, furniture manufacture and testing and utilization of small diameter trees; Teaching and Training; Facilities management, remodeling of buildings, fixing and maintenance

Biography - Prosper Mensah

Prosper Mensah is a Principal Technologist in the Wood Industry and Utilization Division of CSIR- Forestry Research Institute of Ghana. The Institute is mandated among others to 1. Conduct high quality user-focused forestry research that generates scientific knowledge and appropriate technologies. 2. Disseminate forestry related information for the improvement of the social, economic and environmental well-being of the Ghanaian people. 3. To enhance the sustainable development, conservation and efficient utilisation of Ghana's forest resources. 4. To foster stronger linkages through collaborative research across disciplines among its scientists, stakeholders and external Institutions.

My filed of interests are to determination of durability, mechanical and physical strength properties of wood, wood-based and non-wood-based composite products for efficient utilization. Conduct research into non-timber forest products (NTFP) such as *Theobroma cacao* stem and *Bambusa* as alternative to wood to reduce the overexploitation of timber in Ghana. Research into the industrial utilization of available biomass *(Musa paradisiaca* pseudostem, *Theobroma cacao* pod, sawdust and other Agro forest residues) for the production of particleboards to build ecological and green houses and also for affordable furniture and housing in Ghana, sawmilling of wood species, furniture manufacture and testing, teaching and training and facilities management, remodeling of buildings, fix and maintenance

My Professional Background

2017 – 2020: PhD, Wood Science and Technology, University of Education, Winneba-Kumasi Campus

2006 – 2009: M.Phil. Wood Science and Technology, University of Education, Winneba-Kumasi Campus

2003-2007: B. Ed Technology Education (*First Class*). University of Education, Kumasi Campus.

1996-2000: Professional Teacher Certificate 'A', Post-Secondary (*with 2 distinctions*) College of Education, Komenda

Research Project

1. Characterization of particleboards manufactured from four agro-forest residues – comparative between cassava starch and urea formaldehyde.
2. Anatomical and Chemical mix influencing the characterization and utilization of *Theobroma cacao* stem wood

3. Effect of moisture content and preservatives on discoloration of oil palm lumber.

I am current a part-time lecturer in the department of construction and wood in the University of Education Winneba-Kumasi campus and also Lectures on the same University IDeL program at Ejisuman in Kumasi. I have successfully supervise sixteen undergraduate student.

Prosper Mensah is active member in International Society of Wood Science and Technology – Wisconsin (2019 to date), Ghana Science Association (2019 to date) and CSIR-FORIG Research Staff Association (2019 to date).

Mitchual, Stephen

Expertise: Wood Biomass Energy and Wood Composite Materials

Biography - Stephen Mitchual

Stephen Jobson Mitchual is an Associate Professor in Wood Science and Technology at the University of Education, Winneba, Ghana. He holds MSc and PhD degrees in Wood Science and Technology from the Kwame Nkrumah University of Science and Technology in Ghana. Currently, he is the Dean of the Faculty of Technical Education. He teaches courses in Wood Science and Technology and other related disciplines at both undergraduate and postgraduate levels. Over the years, he has extensively conducted research in the area of wood biomass-energy, wood composite, sawmilling and sawmill safety and has published several scientific research articles in reputable international journals. He co-authored the following scientific research papers: Physico-chemical characteristics and market potential of sawdust charcoal briquettes; Effect of species, particle size and compacting pressure on relaxed density and compressive strength of fuel briquettes; and Briquettes from combination of maize cobs and *Ceiba pentandra* at room temperature and low compacting pressure without a binder which have been cited widely in reputable international journals. Additionally, he has attended and presented his research works at various international conferences. He is a member of the Society of Wood Science and Technology in the United State of America.

Moya, Roger

Expertise: Wood species in tropical species, especially wood from plantation; purpose of producing wood or raw material to produce renewable energy

Biography - Roger Moya

Roger Moya Roque received his B.S from the Instituto Tecnológico de Costa Rica, your M.S from Universidad de Concepción-Chile and PhD from Universidade de São Paulo-Brazil. At Brazil he studied density and anatomy variation on wood with x-ray densitometry and analysis image, respectively in the PhD research. He joined the Forestry School of Instituto Tecnológico de Costa Rica and has served on committees for large number organizations of Costa Rica. He has authored more than 100 scientific papers and 5 books.

Muilu-Mäkelä, Riina

Expertise: Plant molecular biology, Wood science

Biography - Riina Muilu-Mäkelä

Riina Muilu-Mäkelä has over 15 years of experience in plant and wood science. Originally, she is a molecular biologist and graduated as a doctor from the University of Oulu in 2015. In her PhD work she investigated abiotic stress responses of Scots pine seedlings on transcription and metabolite levels and more specifically focused on polyamine metabolism. She has been involved in several international research projects and worked formerly in University of Oulu and in Finnish Forest Institute. She got the permanent position in Natural Resources Institue Finland at the beginning of 2017 and since then she has been a leader of two multidisciplinary projects where the health and well-being effects of wood materials have been investigated. Riina has been talking about the health effective properties of wood in different events and has given some interviews to magazines about this popular subject. Her first state of the art study was written in 2014 about the health benefits of wood in indoor use.

Musah, Munkaila

Expertise: Forest biomaterials; Wood properties, quality and modifications; Mass timber (cross laminated timber)

Biography - Munkaila Musah

Munkaila Musah is a PhD Candidate at the College of forest Resource and Environmental Science, Michigan Technological University with research focus on the bonding properties, engineering performance and life cycle analysis of cross laminated mix species from the Great Lakes region. The primary goal of His research highlights the bonding performance of wood adhesive composite for load bearing capacities aimed at sustainable wood utilization efficiency, marketing and application of wood in the construction industry.

Muszynski, Lech

Expertise: Wood-based composites, cross-laminated timber (CLT), mass-timber panel (MTP) manufacturing; properties

Biography - Lech Muszynski

Dr. Lech Muszyński is a Professor in the Department of Wood Science and Engineering at the Oregon State University. A native of Poland, he received his M.S. in Wood Technology and Ph.D. in Forestry and Wood Technology from the Agricultural University of Poznań (now the University of Life Sciences in Poznań). In 1998-2004 he worked in the Advanced Engineered Wood Composites Center at the University of Maine. His research area includes mechanical performance of solid wood, advanced wood-based composites, with stress on interface performance, bonding, durability, fire resistance, damage assessment, and hygro-mechanical behavior. Since 2010 one of the focus areas of his research has been the cross laminated timber (CLT) technology. Dr. Muszyński has toured CLT manufacturing plants, construction sites, CLT-focused research centers, and CLT-related businesses across the globe.

Myronycheva, Olena
Expertise: Biodegradation

Biography - Olena Myronycheva

PhD student Wood Science and Engineering

Nakamurakare, Esteban Ceriani

Expertise: Entomology, Mycology, Forest Pest Management, Ambrosia Beetles, Pheromones

Biography - Esteban Ceriani Nakamurakare

My research interests focus on studying the interactions between tree-pathogens and host plant, i.e. tree-pathogens being fungus/insects or combination of both. As an undergraduate student I followed the specialization in entomology, this formation aided me as a PhD candidate providing both conceptual knowledge and laboratory skills at the time of studying a multitrophic interaction between beetle-plant-fungi (PhD thesis on the most important forest pest of *Populus* in Argentina, being an "ambrosia interaction"). During my academic career, I also learned and applied multiple microbial methodologies of isolation, culturing and fungal identifications techniques. Additionally, I gained invaluable field experience as I was responsible for more than ten collection-trips amongst different commercial plantations of *Populus* spp. in Argentina. Nowadays, as a CONICET-Researcher (early stage) I have solid skills in bioinformatics, computed tomography analyses and molecular biology.

Negro, Francesco

Expertise: Wood technology; development of innovative wood-based products; grading of structural timber; sustainability of wood-based products

Biography - Francesco Negro

Francesco Negro is Research fellow in Wood Technology at DISAFA, University of Torino, Italy. He mainly deals with the development of innovative wood-based products, Regulations in the wood sector and sustainability of wood and derived products.

Németh, Gábor

Expertise: Finite Element Analysis and the study of the dynamic behaviour of wood material

Biography - Gábor Németh

Gábor Németh is a full-time simulation engineer at Magna International Inc. and a PhD candidate at the University of Sopron, Hungary, under the supervision of Dr. Endre Magoss and Dr. Sándor Borza.

Given his background in automotive engineering, his main area of research is the dynamic behaviour of wood material, more precisely the damping effect of different species under free or forced vibration. Since this topic is considered a fairly neglected subtopic of wood physics, he chose it as a convenient topic for his PhD research as well. Given the fact that he works with numerical calculations on a daily basis, his research often incorporates FEM simulations in order to validate his physical measurements and to help with the interpretation of the obtained data.

Neyses, Benedikt

Expertise: Wood modification, Wood densification-(Ionic liquids)

Biography - Benedikt Neyses

- Born and raised in Germany.
- B.Eng. in Mechanical Engineering at FH Aachen University, Germany.
- Moved to Skellefteå, Sweden in 2013.
- M.Sc. in Wood Technology at Luleå University of Technology.
- PhD at Luleå University of Technology, Graduation in October 2019.
- Currently Assistant professor in the Wood Science and Engineering Division at Luleå University of Technology.
- Climbing and being in nature are my main hobbies.

Niemelä, Aarne

Expertise: Mass Timber and Sustainable Architecture

Biography - Aarne Niemelä

Aarne is architect MSc and assistant researcher at the InnoRenew CoE. He obtained a master's degree in architecture and urban planning at Aalto University, after studies at its predecessor, Helsinki University of Technology, and Technische Universität Berlin. At InnoRenew, his main activity during the last two years has been the architectural design of the new Research center, which is currently under construction at Izola, Slovenia.

He was born in Turku, Finland and has over 15 years of experience on architectural planning in the fields of residential, educational, cultural and commercial buildings as well as broader urban development concepts. Together with Eva Prelovsek Niemelä and various colleagues, he has been awarded in several architectural competitions (e.g. Europan). Defining the borders between private, semi-private and public spaces is one of his key points of interest in architecture, along with the shifts between small and large scales. Currently, he is involved with the opportunities of renewable materials and their potential to bring benign influence on the whole of built environment and its users.

Niemelä, Eva Prelovsek

Expertise: Mass Timber and Sustainable Architecture

Biography - Eva Prelovšek Niemelä

Eva Prelovšek Niemelä is a researcher at the InnoRenew CoE, an architect and authorized designer architect for buildings in Slovenia. Her main research interest is in using timber in architecture and interior design. Her current work is based on the implementation of Slovenia's biggest wooden building – InnoRenew CoE institute's building, its monitoring during construction and after completion to predict ageing of wood in correlation to weather conditions, micro-climatic circumstances and design of details.

She finished her education in the field of architecture at the Technical University in Vienna and at the Academy of Fine arts in Vienna in 2002. In 2006 she finished her master studies at the Faculty of Architecture, University of Ljubljana. Since 2005 she has been working in her architectural studio Atelje Prelovšek. She set up many expositions in the National Gallery in Ljubljana and in other galleries in Slovenia and abroad. She conducted many new buildings and renewals.

Between the years 2008 and 2017 she also regularly wrote articles in architectural magazines and, as a curator and moderator, co-organized the Month of Design (Mesec oblikovanja) and the Architectural Conferences within the City of Design in Ljubljana. In the years 2015-2017 she was the chief editor of the architectural magazine HIŠE.

Nop, Patrik

Expertise: Acoustics of wood

Biography - Patrik Nop

Non-available

Nopens, Martin

Expertise: Wood-Water-Interactions, Timber Construction

Biography - Martin Nopens

Since April 2016 I am working as research associate in the Institute for wood science (Universität Hamburg) within the workgroup of Prof. Dr. Andreas Krause. Between 2010 and 2016 I studied wood science and technology (B. Sc. as well as M. Sc.) at the Institute for wood science. In my early days I did an Apprenticeship as cabinetmaker (2000-2003), as well as an Advanced training master carpenter (2006-2007) and worked from 2003 to 2010 as cabinet maker at different places.

Nüssel, Luca

Expertise: Triboelectric charging of wood dusts

Biography - Luca Nüssel

Luca Nüssel is a Master student at the University of Natural Resources and Life Sciences Vienna. He is attending the master programme Wood Technology and Management while he holds a bachelor degree in wood and fiber technology. Luca is currently working at the Institute of Wood Technology and Natural Materials on the topics of sawdust reduction and triboelectrical charging of sawdust.

Oporto. Gloria

Expertise: Biomaterials and composites from lignocellulosic sources

Biography - Gloria Oporto

Dr. Gloria S. Oporto is a faculty member in the School of Natural Resources at West Virginia University (WVU). She completed her B.Sc. in Chemical Engineering at the University of Concepción, Chile, and continued working at the University of Concepcion as a Research Engineer in areas that included wood chemistry, wood-based composites, and energy from woody biomass. She received her Doctor of Philosophy degree in Forest Resources and her certificate in Advanced Engineered Wood Composites from the University of Maine in December, 2009. Dr. Oporto has been working at WVU since June, 2010 and she was promoted to Associate Professor in 2016 in the Wood Science and Technology Program. Her main interests are focused in nanomaterials and its application in advanced composites, and biomaterials from lignocellulosic sources.

Oudjehane, Azzeddine

Expertise: Construction project management, Green building, Sustainability and resilience in Construction, Mass timber design and construction

Biography - Azzeddine Oudjehane

Dr. Azzeddine Oudjehane has over 30 years of experience leading multi-disciplinary projects in R&D, business innovation and market development working with various stakeholders from academia, government and industry. Azzeddine holds graduate degrees in both Applied Science and Business Administration.

In 2012, Azzeddine joined the first undergraduate BSc in Construction Project Management in Canada at SAIT. Azzeddine strives through teaching excellence to train the next generation of construction project managers in Alberta and Canada, while developing scholarly applied research that meets the needs of the Alberta industries.

With over 100 publications and presentations at international conferences, Dr. Oudjehane serves in various journal review committees and has chaired sessions at conferences. In the past year, he gave several presentations and keynotes on the role of innovation for sustainable construction practices. Azzeddine currently serves as the Vice Chair of the Leadership Board for the AB Chapter of CaGBC. He is also the treasurer and secretary of the Board of Directors for Value Analysis Canada. Azzeddine is currently leading several applied research projects demonstrating the feasibility and value of sustainable and innovation practices in construction.These include sustainable mass timber design and construction as well as innovation integrating artificial intelligence and unmanned systems in construction project management.

Özparpucu, Merve

Expertise: Wood materials science

Biography - Merve Özparpucu

Merve Özparpucu is a material scientist who obtained her Ph.D. degree in ETH Zurich in Wood Materials Science Group in 2018. During her Ph.D., she analyzed genetically modified wood micro-mechanically, chemically and structurally for understanding the mechanical function of the lignin in the wood cell walls. After her Ph.D., she became a postdoc researcher at the Technical University of Munich, Chair of wood science. Her current focus lies on investigating the interactions between the chemical components of wood and wood adhesives which plays a crucial role in the development of new advanced wood-based materials and composites.

Pan, Mingzhu

Expertise: Wood functional composites

Biography - Mingzhu Pan

Chunxiang Ding, Mingzhu Pan*, He Chen, Shuai Zhang, Changtong Mei*

College of Materials Science and Engineering, Nanjing Forestry University, Nanjing 210037, China

Panwar, Rajat

Expertise: Bioeconomy, corporate sustainability and corporate responsibility

Biography - Rajat Panwar

To be added.

Pecnik, Jaka Gasper

Expertise: Wood mechanics, wood adhesive interface, bio-based composite

Biography - Jaka Gašper Pečnik

Jaka Gašper Pečnik, is assistant researcher at Innorenew Coe and Institute Andrej Marušič at the University of Primorska. He is in charge of mechanical laboratory testing, focusing on static and dynamical properties of the solid wood, wood-based composites, adhesive bonds and fracture of wood. He is a second year PhD student at the Faculty of Management of the University of Primorska.

Peszlen, Ilona

Expertise: Wood Science

Biography - ILONA PESZLEN

Ilona Peszlen is an Associate Professor at the Department of Forest Biomaterials, North Carolina University. Previously, she was a faculty member at the Department of Forestry, Iowa State University and at the Institute of Wood Sciences, University of West Hungary. She teaches wood property related courses. Her research emphasis is on juvenile and reaction wood, effects of environment on wood properties, genetic improvement of wood quality, and on properties and utilization of plantation wood.

Ilona received her **B.S.** in *Wood Technology* (1978), her **M.S.** in *Wood Engineering* (1979) from the University of Sopron, and her **M.S.** in *Higher Education* (1984) from the University of Gödöllő, Hungary. She was the recipient of a **Fulbright Scholarship** and completed her **Ph.D.** in *Wood Science & Forest Products* (1993) at the Virginia Polytechnic Institute and State University, Blacksburg, Virginia. She did post-doctoral research at the North Carolina State University, Raleigh and at the University of Canterbury, Christchurch, New Zealand.

Pinchevska, Olena

Expertise: Wood drying, wood-based materials

Biography - Olena Pinchevska

Head of the Department of Technology and Design of Wood Products in National University of Life and environmental Sciences of Ukraine. Scientific interests- wood drying ans science of wood.

Pipiska, Tomas

Expertise: Wood-based composites, plywood, OSB, particleboard

Biography - Tomas Pipiska

The author is focused on the wood composites and bonding of the hardwood species

Poohphajai, Faksawat

Expertise: Wood Modification, Biomaterials for wood coating

Biography - Faksawat Poohphajai

Faksawat Poohphajai is an assistant researcher in the Wood Modification group at the InnoRenew CoE, Slovenia and PhD student at Aalto University, Finland. She graduated with a Bachelor of Science in Forestry (Forest Products) from Kasetsart University, Thailand, in 1996 and worked as a forest officer for the Royal Forest Department, Thailand, for 15 years. In 2018, she completed a Master of Science in Wood Technology from Luleå University of Technology, Sweden. Her PhD research topic is "Evaluation of Biofilm for wood protection". The overall objective of the study is to evaluate the interaction of biofilm that is built up by *Aureobasidium pullulans* with wood materials and its mode of actions in protecting the wood substrate against environmental conditions.

Qiu, Renhui

Expertise: Wood plastic composites; Biocomposites; Biobased resins; Green building materials

Biography - Renhui Qiu

Prof. Renhui Qiu received his Ph. D. degree from the Northeast Forestry University, China. He is currently a professor and the dean of College of Material Engineering, Fujian Agriculture and Forestry University, China. Prof. Qiu is leading a research group on natural fibers-reinforced polymer composites, natural fibers-reinforced asphalt/cement concrete materials, pervious concrete, and biobased polymer and composites, in which more than 10 granted projects have been conducted and finished. Prof. Qiu has more than 70 peer-reviewed articles published in ACS Sustainable Chemistry & Engineering, Cellulose, Holzforschung, Wood Science and Technology, Composite Science and Technology, etc.

Quesada, Henry

Expertise: Industrial Engineering

Biography - Henry Quesada

Dr. Quesada has been a faculty member of the Department of Sustainable Biomaterials since 2008. He works in the areas of marketing, process improvement and supply chain management applied to wood products.

Reichel, Vicky

Expertise: Hybrid lightweight construction and integrated manufacturing - cutting processes for multi material components

Biography - Vicky Reichel

- Holding a M. Sc. in Automotive Engineering
- Ph. D. Student since 2017 at Institute of Machine Tools and Production Technology at the department "manufacturing of hybrid components" working at Open Hybrid LabFactory
- Research Focus: Cutting techniques for hybrid components

Ruponen, Jussi

Expertise: Fire safety, Wood products technology, Wood material technology

Biography - Jussi Ruponen

Director, Customer Applications (Dec 2019 – Present)
Product Manager (Feb 2019 – Dec 2019)
Palonot Oy operates a business of a fire-retardation solution provider and a fire-retardant supplier.
I am responsible for global B2B customer management and acquisition. My responsibilities include broad technological customer support, with demanding application development. Additionally, my expertise is employed within various R&D projects.

Graduate student researcher and part-time lecturer at Aalto University (Sep 2009 - Present)

Sandak, Anna

Expertise: Wood modification

Biography - Anna Sandak

Anna is the research group leader in Wood Modification at the InnoRenew CoE.

Since 2016 she is an assistant professor and research associate at the Faculty of Mathematics, Natural Science and Information Technology at the University of Primorska. She was previously employed at Trees and Timber Institute of Italian National Research Council, where she coordinated the Laboratory of Surface Characterization.

She has PhD in Wood Science and M.Sc. in Biology. Anna is a member of Italian Society for Near Infrared Spectroscopy, International Committee for Near Infrared Spectroscopy, International Research Group on Wood Protection, International Society for Plant Spectroscopy and Network of Early-Career Sustainable Scientist & Engineers and in 2012 she was nominated as IUFRO Officeholder, deputy of division 5.03.05 – Biological resistance of wood. She also actively contributes to several COST actions, including FP1006, FP1101, FP1303, FP1407, FP1405, TU1403, CA 15216 and CA16226.

Her research activities include multi-aspect characterization of lignocellulosic materials, non-destructive testing, evaluation of degradation level of wood and wood-based products and application of different spectroscopic techniques for the characterization of bio-based materials. Anna is analyzing the multi-scale relationship and performance of modified and functionalized bio-based materials and implementing them as new architectural elements. Her passion is to search for biomimetic solutions for the design of new materials and to promote knowledge-based use of bio-inspired materials in modern sustainable buildings

Sandak, Jakub

Expertise: Wood science and technology

Biography - Jakub Sandak

Jakub, “Kuba”, has a Doctor of Philosophy in Agricultural Sciences from Tottori University (Japan), a master of Science in Natural Resources Process Engineering from Shimane University (Japan), an engineer of Wood Science and Technology from University of Life Sciences in Poznan (Poland). He is a third-generation carpenter, currently a researcher at InnoRenew Centre of Excellence, assistant professor and research associate at the Faculty of Mathematics, Natural Science and Information Technology at the University of Primorska.

Saražin, Jaša

Expertise: Bio-based wood adhesives, bonding wood with metal and curing characterisation of adhesives

Biography - Jaša Saražin

Jaša Saražin is a doctoral student at University of Ljubljana, Biotechnical faculty, scientific area Wood and Biocomposites. His research work is focused on bio-based wood adhesives, bonding wood with metal and curing characterisation of adhesives.

Savov, Viktor

Expertise: Technology of Wood-Based Panels; Technology of Fibreboards

Biography - Viktor Savov

Associate Professor at University of Forestry - Sofia, Bulgaria

Department of Mechanical Wood Technology

Subject taught - Technology of Materials from Wood Fibres

Scharf, Alexander

Expertise: Thermo-mechanical wood densification and hardness testing

Biography - Alexander Scharf

Alexander Scharf is a PhD student in Wood Science and Technology at Luleå University of Technology. Research topic: Surface densification of wood.

Schau, Erwin M.

Expertise: Research, with a focus on the life cycle assessment (LCA) methods for bio-based product system

Biography - Erwin M. Schau

Dr. Erwin M. Schau is a researcher at the InnoRenew CoE where his activities are to conduct science and research, including life cycle assessment (LCA).

He holds a PhD degree from the Norwegian University of Science and Technology (NTNU), Faculty of Social Sciences and Technology Management and a Master's degree from the Department of Industrial Economy and Technology Management within the Industrial Ecology program at NTNU.

Since 1996 he has been involved in research on the environmental impact of biobased systems and has more than 15 years of experience from different research companies, international institutions, and universities in life cycle sustainability assessment of feed, food, and fibre products like food products, paper and wood products (e.g. bamboo bicycles), but also on automotive products and transport systems.

His main focus has been on energy use and climate change, applying and developing the LCA of products for the biobased industry. From 2013 to 2018 Dr. Erwin M. Schau performed research and development for the European Commission's Joint Research Center (Italy) on the European Union recommended life cycle assessment method – the Environmental Footprint (EF), where he led the pilot projects developing Product Environmental Footprint Category Rules (PEFCR) for the fields of intermediate paper and olive oil. The life cycles in these projects start with the raw material and seedlings production and finish with the end of life, like waste handling (e.g. incineration) or recycling.

Schmid, Thomas

Expertise: Wood adhesives, Wood-based panels, Wood plastic composites

Biography - Thomas Schmid

Thomas Schmid is 25 years old. After studying wood technology at Rosenheim Technical University of Applied Sciences hes currently employed at the universitys laboratory for wood adhesives and wood based panels. His research is based on the topic of woodfiber enhanced plastic materials and wood-plastic composites.

Schmidt, Evan

Expertise: Mass Timber research and construction

Biography - Evan Schmidt

With a diverse background in Design and Wood Science, Evan manages outreach and education activities at TallWood Design Institute. Evan received his M.S. in Wood Science at Oregon State University, where his research focused on hygrothermal performance of cross laminated timber during construction and in service. Prior to attending OSU he studied architecture and worked as an independent contractor providing landscape design service and drafting and permitting services for residential construction.

Schuh, Mathias

Expertise: Engineered wood, adhesives, wood composites

Biography - Mathias Schuh

Since 12/2018: Research Associate and PHD-Student at the Chair of Wood Science, Wood Research Munich, Technical University of Munich
2018: Master's thesis at the Institut für Holztechnologie Dresden (IHD), Department of Materials
2016 - 2018: Master program Wood Science and Technology, Technische Universität Dresden
2012 - 2017: Bachelor program Forest Sciences, Technische Universität Dresden

Schwarzkopf, Matthew

Expertise: Utilization of agricultural/industrial residues for value added wood-based products

Biography - Matthew Schwarzkopf

Dr. Matthew Schwarzkopf is a Researcher at the InnoRenew Centre of Excellence and an Assistant Professor at the University of Primorska. He earned his Ph.D. in 2014 from Oregon State University, USA with a dual major in Wood Science and Materials Science.

His research interests include micro-mechanical testing of the wood-adhesive/polymer interphase, optical measurement techniques, wood-plastic composites, low-grade woody biomass utilization, and measurement of micro-scale local surface properties of wood.

He is currently involved in a variety of international projects including a Horizon 2020 project, ProEnrich, promoting the utilization of agricultural residuals.

Matthew holds a MS in Wood Science from Oregon State University (Oregon, USA 2009) and a BS in Forestry from Iowa State University (Iowa, USA 2007).

Sebera, Vaclav

Expertise: Wood and composite mechanics, finite element analysis, tree biomechanics, material science, wood technology

Biography - Vaclav Sebera

Dr. Václav Sebera is a researcher at the InnoRenew CoE. He is focusing on mechanics of wood and wood-based composites at various levels of observation. Within this field, he employs optical techniques based on Digital Image Correlation (DIC) and numerical approaches utilizing Finite Element Method (FEM). He further focuses on tree biomechanics investigating stability of trees and works on the development of inspection techniques. In 2009 he received a Fulbright scholarship for a research project at Oregon State University (USA). Four years later he earned his Ph.D. at Mendel University in Brno (Czech Republic) where he was employed as Research assistant since then. He also works as a external lecturer at the University of Applied Sciences in Rosenheim (Germany).

Seidu, Haruna

Expertise: Mechanical Properties of Wood, Furniture Testing, Wood Utilization, Information Technology

Biography - Haruna Seidu

Haruna Seidu is a Principal Technologist at the CSIR-Forestry Research Institute of Ghana. He was employed to the institute in 2013 as a technical officer in charge of mechanical property determination of wood. He was upgraded to the position of a Principal Technologist in 2018 after acquiring a masters degree in Information Technology from the Open University of Malaysia. In 2016, He was sponsored to Bern Institute of Applied Science to by the UNDP to be trained in ISO 17025 protocols. He has attended several conferences organised by UNIDO locally. Currently, He is in charge of testing of wood, wood based panels and Furniture using European Standards at the Wood and Furniture Testing Centre located in the Institute. He am currently engaged in everal research activities including the determination of Eucalyptus properties to augment the dwindling teak.He is also involve in the standardization of wood product by the Ghana Standard Authorithy.

Between 2002 and 2012, he was a Senior High school at the Asare Bediako Senior High School in the Ashanti Region near Obuasi where he taught integrated science and Information Technology. This was after he completed Tamale Technical University, where he pursued and graduated with HND Agricultural Engineering in completed in 2001. To boost my Teaching carrier, he persued professional teaching program at the University of Education Winneba and graduated in 2010.

Sernek, Milan

Expertise: Wood adhesives, adhesive bond performance, bonding of modified wood and properties of wood-based composites

Biography - Milan Sernek

Milan Šernek earned a doctoral degree at Virginia Polytechnic Institute and State University, USA. Currently, he is full professor and head of the Department of Wood Science and Technology, Biotechnical faculty, University of Ljubljana, Slovenia. He teaches courses about adhesives and wood bonding, wood-based composites and designing of technological processes. His research work is focused on the wood adhesives, adhesive bond performance, bonding of modified wood and properties of wood-based composites.

Sethy, Anil Kumar

Expertise: Wood Science and Technology

Biography - Anil Kumar Sethy

Academic:

- PhD (Wood Science): The University of Melbourne, Australia - 2011
- MSc (Wood Science and Technology): Forest Research Institute-Deemed University, Dehradun, India- 2001

Research Career:

- Researcher- Czech University of Life Science, Prague, Czech Republic- (May 2019 - continuing - By availing study leave from IWST, Bangalore, India)
- Scientist- Institute of Wood Science and Technology, Bangalore, India (since April 2003)

Research interest: Wood composite, Wood modification and Wood quality assessment.

Publication:

- 20 papers in peer reviewed scientific journals
- 16 papers/posters in national and international conferences

Scholarships obtained:

- MIRS and MIFRS from the University of Melbourne to pursue PhD.
- SF Pond Trust travelling scholarship to present a paper in the 41st IRG-2010, held in France.
- Go8 Australia-Germany Joint Research co-operation scheme funding for exchange visit to the University of Gottingen, Germany.

Shang, Lili

Expertise: Basic properties and functional modification of bamboo and wood materials, Rattan - based new carbon materials

Biography - Lili Shang

Ms. Lili SHANG was graduated in 2017 with postdoctor majoring in wood science and technology at Chinese Academy of Forestry Sciences. She has been working in International Center for Bamboo and Rattan (ICBR) as a research scientist since 2017. Now, she mainly studies in the properties and modification of rattan.

Sichamba, Kennedy

Expertise: Utilisation of Wood and Non wood plant materials for paper making and Bio-energy production

Biography - Kennedy Sichamba

Mr. Kennedy Sichamba obtained his Master of Science degree in Wood Science and Engineering from Oregon State University, USA, in 2012, and is currently a lecturer at Copperbelt University in Zambia. His masters degree research focused on utilizing western juniper harvesting residues (foliage and twigs) for oil extraction and biofuels production. His current work involves teaching Pulp and Paper Technology to undergraduates, as well as supervising their research projects in the field. He is so very passionate about utilizing non-wood plant materials for pulp and paper, bioenergy production, and other chemical products.

Sobotkova, Alena

Expertise: Furniture, furntiure design and technology, material engineering

Biography - Alena Sobotkova

PhD student of furniture design and Technology at Mendel University in Brno. Currently in the third year working on my thesis with the topic of Sustainability in furniture design. I have previous experience of teaching at Louisiane State University for one year as part of PhD study at MENDELU. I did also three month internship at Salzburg University of Applied Sciences. I have working experience in the field of furniture, interior and graphic design.

Solt, Pia

Expertise: Wood adhesives

Biography - Pia Solt

EDUCATION:

Apr. 15 - Jun. 19: Doctor of wood technology and renewable materials

University of Natural Resouces and Life Science, Vienna (BOKU)

- PhD Thesis: Alternative Adhesive Systems for Wood Panel Application - Bio-based and Formaldehyde-free Adhesives
- *Summa cum laude*

Sep. 12 - Sep. 14: Master of Wood technology and economy

University of applied sciences, Salzburg

- Master Thesis: Development and investigation of a high density panel based on chemical tanned leather shavings (Wet Blue) and wood fibres
- *Passed with distinction*

Sep. 09 - Jul. 12: Bachelor of Wood technology and timber construction

University of applied sciences, Salzburg

- Bachelor Thesis: Valorisation of pulp and paper waste water: Lignin polymer

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PROFESSIONAL EXPERIANCE:

Jul. 19 - now*:* Senior scientist

Wood K plus - Kompetenzzentrum Holz GmbH ,Tulln, AT

Feb. 15 - Jun. 19: Junior Researcher & PhD student

Wood K plus - Kompetenzzentrum Holz GmbH ,Tulln, AT

Oct. 15 - now: Lector "Technologie des Holzes"

University of Natural Resources and Life Science, Vienna, AT

Dec. 12 - Feb. 15: Junior Researcher

University of applied sciences, Salzburg, AT

Solt-Rindler, Axel

Expertise: Novel wood/non-wood combinations (inorganic and organic materials); all-new bio-based functionalized materials; ignition and burning behavior of bio-based materials; development of multi-layered panel materials; nanoindentation, dynamic mechanical testing, quasi-static mechanical testing ; thermal conductivity and thermal degradation of wood-based materials; light and scatter electron microscopy

Biography - Axel Solt-Rindler

Education

Feb.2015 – Jun.2019 *Universität der Bodenkultur Wien*

Doctoral studies of Natural Resources and Life Sciences *(with distinction)*

- PhD Topic: The Significance of bond region micromechanics on the moisture related dimensional stability of thin wooden multi-layered panels

(Prof. Dr. Johannes Konnerth)

Sep.2009 – Sep.2014 *Fachhochschule Salzburg*

Master in Forest Products Technology & Management *(with distinction)*

- Master Topic: Development and investigation of a high density panel based on synthetic tanned leather shavings (wet white) and wood fibres (Prof. Dr. Marius C. Barbu)

Bachelor in Forest Products Technology *(with merit)*

- Bachelor Topic 1: Investigation of the property change and strength of fibreboards produced of natural and synthetic resins under different temperature conditions (Dr. Thomas Schnabel)
- Bachelor Topic 2: Investigation of the properties of bark in relation to its use as a blow-in insulation (Dr. Stefan Hinterreiter)

Business

Jun.2019 – now *Kompetenzzentrum Holz GmbH* Tulln, Austria

Senior Researcher

Feb.2015 – Jun.2019 *Kompetenzzentrum Holz GmbH* Tulln, Austria

Research Associate

Apr.2013 – Jan.2015 *Fachhochschule Salzburg* Kuchl, Austria

Junior Researcher

Starman, Vesna

Expertise: Educational science, breaking gender stereotypes in relation to career choice and gender, how to involve all age groups in wood science

Biography - Vesna Starman

Vesna is an assistant researcher at the InnoRenew CoE.

As a Master of Science in the area of social pedagogical science, she is most likely to face challenges that include behavioural and emotional problems. She also writes articles on these subjects and conducts lectures for the professional and general public.

She teaches pedagogy at the preschool education programme at the high school SŠ Izola.

At the InnoRenew CoE she focuses primarily on breaking gender stereotypes in relation to career choice and gender, and she is researching how to involve all age groups in wood science.

Straze, Ales

Expertise: Wood physics, wood mechanics, wood drying, hydrothermal treatment of wood, NDT characterization of bio-based materials, acoustics of wood and lignocellulosic composites

Biography - Ales Straze

Born

July 16th, 1971, Celje, Slovenia

Studium / Education

1997 Graduation, Wood Science and Technology, Biotechnical Faculty, University of Ljubljana
2000 Master of Science, Wood Science and Technology, Biotechnical Faculty, University of Ljubljana
2010 Ph. D. Wood Science, Biotechnical Faculty, University of Ljubljana

Work positions

1997 - Junior researcher at Biotechnical Faculty, University of Ljubljana
2000 - Assistant researcher at Biotechnical Faculty, University of Ljubljana
2011 - Assistant Professor of Wood Science, University of Ljubljana
2016 - Associate Professor of Wood Science, University of Ljubljana

Expertise

Wood physics, wood mechanics, wood drying, hydrothermal treatment of wood, NDT characterization of bio-based materials, acoustics of wood and lignocellulosic composites

Work, research, lecturing abroad

2007 STSM at Chalmers University of Technology, Göteborg
2011 STSM at Bern University of Applied Sciences, Biel, Switzerland
2012 STSM at CNR-IVALSA – Italian Trees and Timber Institute, Trento, Italy
2015 Invited lecturer at Kazakh National Agrarian University, Faculty of Forestry, Almaty, Kazakhstan
2015, 2016 Invited lecturer at Mendel University in Brno, Czech Republic
2017 Invited lecturer at FHS Salzburg-Kuchl, Austria
2018 Invited lecturer at Kazakh National Agrarian University, Faculty of Forestry, Almaty, Kazakhstan
2019 invited lecturer at University of Zagreb, Faculty of Forestry, Zagreb, Croatia

Projects (selection; member of the research team)

V4-1419 Rational use of hardwoods with a focus on beech wood, 1.7.2014—30.6.2017
P4-0015 Wood and lignocellulosic composites, 1.1.1999—31.12.2019
L4-7163 Rational use of wood in the context of sustainable forest management,1.9.2005—31.8.2008
L4-7367 Optimisation of algorithm of drying process in respect of optimal physical and chemical properties of wood, 1.9.2005 - 31.08.2008
APPLAUSE, Allient Plant Species (1.9.2017 – 1.9.2020)

Suchomelova, Pavlina

Expertise: Numerical simulations of wood behavior, Physical and mechanical properties of wood, Moisture transport and thermal transfer in wood, Wood mechanics

Biography - Pavlina Suchomelova

Author is Ph.D. student and young researcher at the Dep. of Wood Science and Technology of Mendel University in Brno. She is focused on the numerical simulations of wood and wood-based materials physical and mechanical behavior.

Sun, Hao
Expertise: Wood Science and Technology

Biography - Hao Sun

Hao Sun, Ph.D candidate, major in wood science and engineering. He graduated from Northeast Forestry University majoring wood science and technology in 2018 with a bachelor's degree in engineering.

Research area: Improvement the mechanical properties and dimensional stability of rubber wood through thermal modification and impregnation of latex; Preparation and characterization of wood-based composites

Tellnes, Lars G.F.

Expertise: Life cycle assessment (LCA), environmental Product declarations (EPD), industrial ecology, wood products and buildings

Biography - Lars G. F. Tellnes

Lars Tellnes is a reasearcher within sustianable innovations focusing on Wood Products and Construction industry. He has a master in industrial ecology and has previously worked at the Norwegian Institute of Wood Technology. For the last Three years, he has been Affiliated at Ostfold Research which soon will change name to Norwegian Institute of Sustainability Research. Besides Research, he is also teaching life cycle assessment at the Norwegian University of Life Sciences. Tellnes is a specialist withing life cycle assessment and environmental Product declarations of Wood Products and have been working With a large number of industrial Companies. Internationally he has spread his experiences With several Networks such as International Research Group on Wood Protection, COST actions and sustainable built environment Conference series.

Tran, Anita

Expertise: Wood adhesion, adhesive bonding, cold temperature cure/hardening, nanoindentation

Biography - Anita Tran

Anita Tran is working as doctoral candidate at the Institute of Wood Technology and Renewable Materials at the University of Natural Resources and Life Sciences (BOKU) Vienna. Coming from a broad interdisciplinary background, her main fields of interests are renewable resources in real life applications and material testing. Therefore, she is currently working on **low temperature curing of wood adhesives** aiming for more energy efficiency in industrial processes. This involves diverse testing methods such as nanoindentation and rheology to generate fundamental knowledge on cold bonding mechanisms.

She holds a bachelor degree in International Business Communication and a master double degree in Renewable Resources from Technical University of Munich and BOKU. During her master thesis at BOKU she focused on producing porous wood materials to substitute conventional foams for which she received the Science Rotary Award Tulln.

Tsai, Yi-Hsuan

Expertise: Biology of materials, analysis of the traditional materials of the guqin, the Chinese seven-string zither

Biography - Yi-Hsuan Tsai

Yi-Hsuan Tsai is a graduate student in the School of Forestry and Resource Conservation, National Taiwan University. He majors in biology materials, and his research topic is the analysis of the traditional materials of the guqin, the Chinese seven-string zither.

Tschannen, Christof

Experetise: Wood-Based Panels

Biography - Christof Tschannen

Apprenticeship as a cabinet maker in Switzerland followed by a Bachelor and Master degree in wood technology from Bern University of Applied Sciences. Bachelors degree in 2016, Masters degree in 2019. Experience in research and development in the field of wood composites. Research assistants post from summer 2016 to 2019 in the institute for materials and wood technology at Bern University of Applied Sciences. Submitted topic as Master Thesis. Current position as Junior Scientist at BUAS since 2019.

Ueda, Rintato

Expertise: Timber Engineering, Wood Preservation

Biography - Rintato Ueda

A PhD student, belonging to Graduate School of Agriculture, Hokkaido University.

Ugulino, Bruna

Expertise: Wood Products Manufacturing

Biography - bruna Ugulino

Bruna Ugulino works as Researcher at the Primary Wood Products Manufacturing, Smart Manufacturing Department of FPInovations, at QUebec City.

Vay, Oliver

Expertise: Physical characterization of wood and natural materials, engineering of materials like wooden floorings and thermal insulations

Biography - Oliver Vay

Oliver Vay works as a Senior Researcher in the Team Smart Wood Natural Materials of Competence Centre for Wood Composites and Wood Chemistry, Austria. He received his diploma degree from University of Hamburg and his PhD degree from University of Natural Resources and Applied Life Sciences, Vienna.

His research areas include physical characterization of wood and natural materials, engineering of materials and thermal insulations. He also worked as a research worker focused on developing wooden floorings.

Vojáčková, Barbora

Expertise: Tree biomechanics, arboriculture, numerical simulation

Biography - Barbora Vojáčková

2015 - 2019 (not finished) PhD Forest Phytology, PhD Thesis: **Branch Mechanical Response to Static Loading.**

Research: Involvement in the national projects (**2020 - now**) **Tree Dynamics: Understanding of Mechanical Response to Loading**; (**2014 - 2017**) Non-invasive Technology system for the tree stability measurement and safety evaluation and European project (**2016 - 2019**) Veteran Tree Management Skills Certification.

Work: **2008 - now** Working in arboriculture with specialisation to **tree risk assessment**; **2011 - now** Working on Department of Wood Science and Technology, Faculty of Forestry and Wood Technology, Mendel University in Brno.

Previous study: College of Landscape Architecture, BSc Arboriculture, MSc Forest Engineering.

Wahyude, Imam

Expertise: WOOD STRUCTURE AND IDENTIFICATION; WOOD QUALITY

Biography - Imam Wahyudi

1986: Graduated from IPB University, Indonesia. Majoring in Forest Products Technology (S1)

1990: Graduated from from IPB University, Indonesia. Majoring in Wood Science and Technology (S2)

2000: Graduated from from Nagoya University, Japan. Majoring in Wood and Bio-material Physics (S3)

1987 to present: Lecturer at Faculty of Forestry IPB University, Indonesia

2007 to present: Head of Wood Quality Laboratory, Faculty of Forestry IPB University, Indonesia

Walsh, St John

Expertise: Architecture

Biography - St John Walsh

St John established Alder Architects in 2018 having gained over 10 years experience working with award winning architecture practices in Ireland and the UK on a range of projects from small scale domestic commissions to large public and commercial buildings.

While working with Donaghy & Dimond Architects in Dublin, he was project architect on both Inchicore National School & the Gate Lodge extension in Rathfarnham, respectively awarded RIAI Awards for Best Educational Building & Domestic Extension in 2015. With AY Architects, he was project architect on Eleanor Palmer Science Lab, built for Eleanor Palmer Primary School in Camden, which has been awarded a RIBA London Award for 2019. He has also worked with Scott Tallon Walker & BDP architects on award-winning large scale commercial & residential projects.

Having studied in Dublin and Copenhagen, St. John graduated from UCD in 2010 with a first class honours degree and continues to be involved in academia. Currently in the role of design studio tutor at the UCD School of Architecture, he has previously acted as a visiting critic at UCL's Bartlett School of Architecture and studio mentor at the Royal College of Art London.

Wang, Dong

Expertise: Electrospun functional nanocomposites

Biography - Dong Wang

My name is Dong Wang and I am a PhD student at Northeast Forestry University (School of Material Science and Engineering) of China under the supervision of Prof. Guangping Han.

Research Area: High-Performance Supercapacitors Based on Lignin-based Nanofibers by Electrospinning; Preparation and Properties of Electrospun Cellulose Nanocrystal reinforced Composite Nanofibers.

Wang, Jingxin

Expertise: Bioenergy and biomaterials; TEA and LCA; Manufacturing and processing

Biography - Jingxin Wang

Dr. Jingxin Wang is Professor and Associate Director for Research, and the Director of Renewable Materials and Bioenergy Research Center in the Division of Forestry and Natural Resources at West Virginia University, USA. He received his degrees in Forest/Mechanical Engineering from Northeast Forestry University, China. He received a M.S. in Computer Science from West Virginia University, and a Ph.D. in Forest Resource Management from the University of Georgia, USA. He has taught forest and biomass harvesting and analysis, computing applications in forest and natural resources for both undergraduate and graduate students for more than 20 years. His research interests include biomass energy and bioproducts, forest carbon sequestration and optimization, computer simulation and system modeling, and forest ecosystem management and climate change. Dr. Wang has authored or coauthored 170 refereed papers, and 12 books or book chapters. Currently, he is a leading PI for several USDA and USDOE biomass energy and bioproducts projects. He has served as an editorial board member and associate editor for four international journals and adjunct professor for four Chinese universities/institutions. He is an active member in six international professional societies. Dr. Wang received the prestigious 2016 Benedum Distinguished Scholar Award at West Virginia University.

Wang, Qifan

Expertise: VOCs and odor emission from wood-based panel

Biography - Qifan Wang

Qifan Wang, Ph.D. candidates, College of Material Science and Engineering, Northeast Forestry University, Harbin, China. Main research direction: Volatile Organic Compounds

Wang, Xun

Expertise: Phase Change Materials

Biography - Xun Wang

Xun Wang is a Ph.D. candidate at University of North Texas, the United States. His research focuses on identifying thermal performance of phase change material composite involved in building applications. The identification may improve the thermal insulation of building and reduce the energy consumption.

Wanschuua, Regina

Expertise: Wood extractives

Biography - Regina Wanschura

Degree in Forest Science as Dipl-Ing. 2007

2007-2009 StoraEnso Wood-Supply in Munich (Unterschleißheim)

Since 2010 Co-worker at the TUM School of Life Sciences Weihenstephan, Chair of Wood Science, Munich, Germany

Willems, Wim

Expertise: Wood physics, wood modification

Biography - Wim Willems

Wim Willems (1964), obained a BSc degree in Process Control engineering in 1985 and his MSc degree in Applied Physics in 1990 at Eindhoven Technical University in the Netherlands. After 4 years of industrial research and development, he got involved in his family-owned company in the wood industry, gaining expertise in hardwood drying. In 2003, he invented a new type of thermal wood modification technology using pressurized unsaturated steam, which led to the foundation of a new company, FirmoLin, in 2008, in which he is still working, responsible for the research and development activities. He earned his PhD degree summa cum laude on thermal wood modification in the Wood Biology and Wood Products group of Göttingen in Germany in 2015.

He currently shares time between his supporting activities in process equipment engineering and quality control of thermally modified timber for FirmoLin on the one hand and as an independent researcher on the other hand, working on the subject of wood modification, with emphasis on the aspects of wood-moisture interaction and wood durability.

Winter, Armin

Expertise: Natural Materials Science, Cellulose Science

Biography - Armin Winter

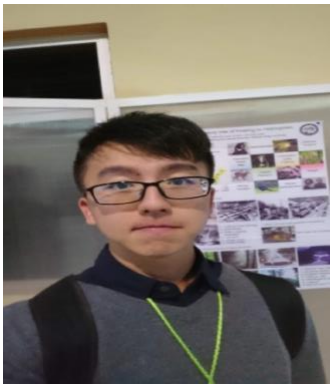
na

Yang, Shumin

Expertise: Wood anatomy and characteristics, Non-destructive testing

Biography - shumin yang

Dr. Shumin YANG was graduated in 2003 with PhD majoring in wood science and technology at Tottori University, Japan. She has been working in International Center for Bamboo and Rattan (ICBR) as a research scientist since 2010 and was promoted to associate professor in 2012. Now, she mainly launches studies in the following areas: A. Anatomical characteristics of cell wall of plants, B. Non-destructive Technology for wood and bamboo based on X-ray imaging. She has chaired or participated in over 10 national and provincial level projects and has published two books (including co-authored works) and over 40 publications papers. Currently, she is a member of Bamboo and rattan resources and utilization Branch under Chinese Society of Forestry (CSF), also a member of biomass materials Branch under CSF.



Yeh, Chin-Hao

Expertise: Biomaterial Structural Design

Biography - Chin-Hao Yeh

I am Chin-Hao Yeh, and I come from Taiwan. I study at National Chung Hsing University, and my major is forestry, I am now in Biomaterial Structural Design Lab, and my thesis is about nature fiber composites.

Yeo, Hwanmyeong

Expertise: Wood Physics, Wood Drying, Heat and Mass Transfer

Biography - Hwanmyeong YEO

Professor, Environmental Materials Science Major, Department of Forest Sciences, Seoul National University

Yildirim, Mert

Expertise: Nanotechnology, composite materials and biomaterials

Biography - Mert Yildirim

Mert YILDIRIM is a Ph.D. student in the Department of Forest Industrial Engineering at Istanbul University-Cerrahpasa. He received his M.Sc. (2019) degree in Forest Industrial Engineering and MBA (2019) degree in Master of Business Administration at Istanbul University. During his graduate studies, he won various prizes in national competitions and worked on their TUBITAK projects. His research interests include nanotechnology, composites and biomaterials.

Zeng, Bin

Expertise: Wood science and technology

Biography - Bin Zeng

My name is bin Zeng, 24 years old , I am studying for a master's degree at Northeast Forestry University. my research area focus on volatile organic compounds (VOCs) emission of wood-based panels and solid wood.

During the postgraduate period, I am actively involved in various scientific research projects, such as Participated in "The National Key Research and Development Program of China (2016YFD0600706-2)" 《Study on VOCs Release Law, Limitation and Odor Detection Technology of Decorated Wood-based Home Materials》---Responsible for experiment, data statistics and analysis; Participated in "Project of National Natural Science Foundation of China (grant no. 31971582)".《Study on the Expression of Wood Odor Characteristic Map and the Formation Mechanism of Odor》---Mainly assisted in the improvement and debugging of domestic volatile organic compounds (VOC) sampling equipment, collected and analyzed VOC from different materials; Participated in "Independent Innovation Fund for Doctoral Students".

I study hard with excellent results and outstanding achievements in scientific research, Apply my professional knowledge to practice and publish 3 papers:

Analysis of odorants in wood of *Cinnamomum burmanni（Nees et T.Nees）Blume* with different moisture content. *Scientia Silvae Sinicae*. (First author / Chinese Core Journal) (In Chinese)

Effects of temperature on volatile organic compounds and odor emissions of PVC-overlaid MDF. *Wood Research* . (Third Author /SCI)

Study on VOCs and Odor Release of Painted Veneered Particleboard. *Scientia Silvae Sinicae*. (Third author / Chinese Core Journal) (In Chinese).

In order to study the research results of other scholars in related fields, understand the future research trends, and improve their research capabilities and insights, I hope to have the opportunity to participate in this major conference.

Zhang, Xiubiao

Expertise: Wood and bamboo science and technology

Biography - Xiubiao Zhang

Xiubiao Zhang, PhD., Assistant researcher of International Center for bamboo and rattan. Research fields: Bamboo-based / wood-based engineering composites, including the scientific designing, manufacturing and performance-evaluating.

Žigon, Jure

Expertise: Wood Science and Technology, focus on surface treatment technologies

Biography - Jure Žigon

ŽIGON, Jure, PETRIČ, Marko, DAHLE, Sebastian. Dielectric barrier discharge (DBD) plasma pretreatment of lignocellulosic materials in air at atmospheric pressure for their improved wettability : a literature review. *Holzforschung : International Journal of the Biology, Chemistry, Physics and Technology of Wood*, ISSN 0018-3830. 2018, vol. 72, iss. 11: 979-991

ŽIGON, Jure, PETRIČ, Marko, DAHLE, Sebastian. *Wettability of wood surfaces with waterborne acrylic lacquer stains adjusted by DBD plasma in air at atmospheric pressure : predavanje na 11th International Symposium on Contact Angle, Wettability and Adhesion, 13 - 15 June 2018, New Jersey, USA*.

ŽIGON, Jure, PETRIČ, Marko, DAHLE, Sebastian. Artificially aged spruce and beech wood surfaces reactivated using FE-DBD atmospheric plasma. *Holzforschung : International Journal of the Biology, Chemistry, Physics and Technology of Wood*, ISSN 0018-3830. Tiskana izdaja, 2019, vol. 73, iss. 12: 1069-1081.

Zlámal, Jan

Expertise: Non-destructive testing of wood, wood science, non-destructive evaluation of wood in forest

Biography - Jan Zlámal

Jan Zlámal is Ph, D. student at the Department of wood science and Technogy of Mendel University in Brno. He joined the Mendel University in 2014 where Graduated from Wood Technology and Timber Management study program with master degree.

During his university studies, he focused on the topic of moon-wood and the influence of the logging period on the timber quality. Furthermore he worked on topic of prediction of spruce timber properties based on non-destructive in-situ testing. His Ph, D. studies began in 2019 and are primarily focused on the possibilities of estimating the properties of wood by non-destructive and semi-destructive testing methods.

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