

WBC SPRING 2024 IAB TECHNICAL COMMITTEE MEETING

THURSDAY, APRIL 18, 2024

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Participants

Technical Committee Members

AkzoNobel

Heath Saunders

Arclin

Jesse Larson

Bakelite Synthetics

Bob Breyer

Bao Do

Jessica Jennings (**Chair**)

Boise Cascade

Danny Way

Forest Products Laboratory, USDA

Andy Martin

Sam Zelinka

Freres

Patrick Farrell

Hexion

Chris Wren

Cole Burch

LP Building Solutions

Paul Merrick

Roseburg Forest Products

Sarath Vega

Tim Zattau

Willamette Valley Company

Jesse Paris

Evan Davis

Sudip Chohdhury

Guests

Simpson Strong-Tie

Jung Hong

WBC

Patricia Vega – Managing Director

This meeting was hosted by Oregon State University at Richardson Hall and facilitated by Jessica Jennings, Chair of the WBC IAB Technical Committee. The Managing Director, Dr. Patricia Vega attended the session and acted as Scribe. The eleven member companies were in attendance. There was one guest in attendance.

Agenda Topics

1. Funding Decisions
2. Appointment/Modification of Technical Advisors
3. Research Updates
 - LIFE Form Summary review
 - Feedback: TC impressions progress/student preparation
4. New Business: Research Program Strategic Planning Scheduling

Decisions and Recommendations

A. Funding Decisions

A.1. Decision: The members approved four new funding requests for a total of \$219,716. The proposals approved were RFP-24 (Special Project), Q-02-PR, Q-07-RI, and Q-12-FR. There were no continuation requests. Total research funding for FY2025 was \$219,716.

SITE	YEARS	PROJECT	AMOUNT REQUESTED	VOTES	APPROVED
New Funding Requests					
OSU	1/3	RFP-24: <i>Understanding Elevated Temperature Response of Wood and Wood Composites</i>	\$55,170	55	\$55,170
VT	1/2	Q-01-HI: <i>Identifying Adhesive Bondline Quality to Improve Cross-Laminated Timber Performance</i>	\$54,035	0	--
OSU	9 M	Q-02-PR: <i>Preliminary investigation of the potential for sorbitol-citrate modification to function in North American wood species and improve strandboard durability and dimensional stability</i>	\$38,793	50	\$38,793
OSU	1/1	Q-05-NA: <i>Using thermally modified wood for manufacturing mass timber elements with improved dimensional stability</i>	\$17,565	0	--
OSU	1/2	Q-06-SC: <i>Artificial intelligence integrated near-infrared hyperspectral imaging for rapid prediction of percent wood failure (PWF) in laminated wood products</i>	\$56,500	5	--
OSU	1/2	Q-07-RI: <i>Vibrational and stress-wave methods for rapid and cost-effective assessment of veneer-based mass timber elements</i>	\$59,000	68.33	\$59,000
OSU	1/2	Q-08-LE: <i>Optimization of log conditioning and peeling process and online monitoring of veneer surface roughness by cost-effective sensory framework for producing high-quality veneer and wood products with enhanced properties</i>	\$57,000	20	--
MSU	1/1	Q-09-NE: <i>Enhancing Coating Performance on Profiled Medium-Density Fiber Boards (MDF)</i>	\$60,000	50	--
OSU	1/2	Q-10-SC: <i>Characterization of post-consumer wood waste for incorporation in wood-based panels</i>	\$55,560	8.33	--
AUB	1/1	Q-11-PE: <i>Robust fire test method for the performance evaluation of wood-based composites</i>	\$52,599	45	--
VT	1/2	Q-12-FR: <i>Simple cross-laminate adhesive durability test</i>	\$66,753	58.33	\$66,753
New Funding Requests				360	\$219,716
Total Research Funding FY2025				360	\$219,716

A.2. Comment: For Fiscal Year 2025 there are 2 special projects: RFP-24 (Roseburg Forest Products) and FPL-24 (Forest Products Lab). For this reason, both members allocated their votes in the special projects. RFP-24 requested additional funding for \$15,170. FPL will present project for approval during the Fall meeting.

A.3. Decision: The IAB Technical Committee **approved a motion** to request all PIs presenting new research proposals, to be more precise with the title of the research proposals.

A.4. Decision: The IAB Technical Committee **approved a motion** to inform the PI of research proposals Q-09-NE and Q-11-PE to reach out to the IAB Technical Committee members to request feedback within 30 days for the chance of resubmitting the proposals in the next funding cycle.

B. New Appointments/Modification of Technical Lead & Advisors

PROJECT	TECHNICAL LEAD & ADVISORS
New Appointments	
RFP-24: <i>Understanding Elevated Temperature Response of Wood and Wood Composites</i> PI: Arijit Sinha, Islam Hafez, and Wenjia Wang Site: OSU	IAB TC Lead: Sarath Vega Boise Roseburg
Q-02-PR: <i>Preliminary investigation of the potential for sorbitol-citrate modification to function in North American wood species and improve strandboard durability and dimensional stability</i> PI: Gerald Presley, Laurence Schimleck, John Simonsen, and Islam Hafez Site: OSU	IAB TC Lead: Mohammad Tasooji Arclin Hexion LP Roseburg Willamette
Q-07-RI: <i>Vibrational and stress-wave methods for rapid and cost-effective assessment of veneer-based mass timber elements</i> PI: M. Riggio, V. Nasir Site: OSU	IAB TC Lead: Patrick Farrell Bakelite Boise FPL Freres Roseburg
Q-12- FR: <i>Simple cross-laminate adhesive durability test</i> PI: Frazier, Dillard (VT), Peresin & Gururaja (AU), Nairn (OSU) Site: VT	IAB TC Lead: Jesse Paris Arclin Bakelite Boise Freres Willamette
Modification of Technical Committees	
I-10-FR: <i>Carbon Isotope Ratios, novel view of CH2O emissions</i> Student: Mark Cashman PI: Chip Frazier Site: VT	IAB TC Lead: Bob Breyer Arclin Freres Bakelite Hexion Willamette

PROJECT	TECHNICAL LEAD & ADVISORS
BOISE-22: <i>Using Notch Delamination to Study Moisture-Adhesive Interactions</i> Student: Samuel Ayeni PI: Arijit Sinha & John Nairn Site: OSU	IAB TC Lead: Danny Way Boise Freres Roseburg
N-02-MU: <i>Long-term response of wood-based composites in variable climate conditions</i> Student: Oluwafunbi Adeleye PI: Lech Muszynski, John Nairn, Mariapola Riggio Site: OSU	IAB TC Lead: Danny Way Bakelite Boise Freres LP Roseburg Willamette
O-02-VI: <i>Monitoring Phenol Formaldehyde and Wax Content with VIS/NIR Smartphone Technology</i> Student: Seth Adusei PI: Brian Via Site: AUB	IAB TC Lead: Chris Wren Arclin Bakelite DAF Freres Hexion Roseburg Willamette
O-07-PE: <i>Understanding the fundamental influence of wood extractives on wood adhesion</i> Student: Diego Cuartas PI: Soledad Peresin, Suhasini Gururaja, John Nairn, John Simonsen & Chip Frazier Site: AUB	IAB TC Leads: Bob Breyer & Bill Leggate AkzoNobel Arclin Bakelite DAF FPL Hexion Willamette
O-09-SC: <i>Near Infrared Hyperspectral Imaging and Chemometric Techniques for Estimation of Percent Wood Failure (PFW) in Adhesive Bonds</i> Student: Ighoyivwi Onakpoma PI: Lawrence Schimleck & Lech Musyński Site: OSU	IAB TC Lead: Darren Riedlinger Arclin Bakelite Boise FPL Freres DAF Hexion Roseburg

B.1. Comment: The IAB Technical Committee **highly recommends** the PIs of new projects meet with their technical advisors to discuss the next steps before starting the project.

C. Research Updates

C.1. The IAB Technical Committee Technical Leads provided summary feedback for each research project (*Appendix B*). Feedback was provided via the online WBC LIFE Forms. Due to special circumstances feedback for project I-10-FR was provided by Chris Wren, feedback for project O-09-SC was provided by Jesse Larson in place of Darren Riedlinger.

C.2. The following IAB TC members acted as TC Leads for current research updates during the meeting, summarizing LIFE Form feedback, following discussion, and drafting summary statements for the projects:

PROJECT	TECHNICAL LEAD
M-04-FR: Wax Migration – Final Report IAB TC Lead: Jesse Paris Student: J.C. Stant PI: Chip Frazier Site: VT	Jesse Paris
I-10-FR: Carbon Isotope Ratios, novel view of CH₂O emissions IAB TC Lead: Bob Breyer (new Technical Lead) Student: Mark Cashman PI: Chip Frazier Site: VT	Chris Wren
N-02-MU: Long-term response of wood-based composites in variable climate conditions IAB TC Lead: Danny Way Student: Oluwafunbi Adeleye PI: Lech Muszynski, John Nairn, Mariapola Riggio Site: OSU	Danny Way
O-02-VI: Monitoring Phenol Formaldehyde and Wax Content with VIS/NIR Smartphone Technology IAB TC Lead: Chris Wren Student: Seth Adusei PI: Brian Via Site: AUB	Chris Wren
O-07-PE: Understanding the fundamental influence of wood extractives on wood adhesion IAB TC Lead: Bob Breyer & Bill Leggate Student: Diego Cuartas PI: Soledad Peresin, Suhasini Gururaja, John Nairn, John Simonsen & Chip Frazier Site: AUB	Bob Breyer
O-09-SC: Near Infrared Hyperspectral Imaging and Chemometric Techniques for Estimation of Percent Wood Failure (PFW) in Adhesive Bonds IAB TC Lead: Darren Riedlinger Student: Ighoyivwi Onakpoma PI: Lawrence Schimleck & Lech Musyński Site: OSU	Jesse Larson
P-03-PR: Identifying maximum tolerance and mechanisms of interaction for two common resins systems and two fire retardant treatments IAB TC Lead: Tim Zattau Student: Shane Johnson PI: Gerald Presley Site: OSU	Tim Zattau
BOISE-22: Using Notch Delamination to Study Moisture-Adhesive Interactions IAB TC Lead: Danny Way Student: Samuel Ayeni PI: Arijit Sinha & John Nairn Site: OSU	Danny Way

- C.3. Decision:** The system to screen New Research Proposals is efficient and sufficient, for future feedback the option “abstain” will be removed from the LIFE Forms.
- C.4. Decision:** For future meetings, there will be no poster presentations, instead short presentations will be appreciated.
- C.5. Decision:** For New Research Proposals, the PIs are encouraged to address comments in the LIFE Forms, focus on the impact slide – industry relevance, and show accuracy and focus in the proposal’s title.
- C.6. Decision:** Create a contact list with specialties for all members of the IAB Technical Committee available to all Faculty members.

D. New Business: Research Program Strategic Planning Scheduling

- D.1. Decision:** The IAB Technical Committee approved the revision of the WBC Research Themes.
- D.2. Decision:** The revision process will be done via LIFE Forms feedback and discussion of the results during the IAB Fall Meeting 2024.

E. Action Items

1. Share new and continuing funding approvals with PIs – VEGA.
2. Share with faculty project and proposal feedback, Technical Advisor Committee, and IAB TC Lead assignments (*Appendix A*) – VEGA.
3. Share with faculty decisions A.3, A.4., B.1., C.4., C.5., and C.6. – VEGA.
4. Send reminders to PI to contact IAB TC for feedback before May 10th, 2024 – VEGA.
5. Create and share with Faculty, the IAB Technical Committee contact list and specialties – VEGA.
6. Create, share, and summarize the LIFE Forms for review of WBC Research Themes – VEGA.
7. Follow-up activities programmed in the WBC Research Program Calendar (*Appendix B*) in preparation for Fall 2024 – VEGA.

Appendix

A. Research Updates Summary Statements - LIFE Forms Summary

B. Research Program Calendar 20



WBC RESEARCH PROGRAM RESEARCH PLANNING 2024

NOTE: Dates may be subject to change.

	NOV 2023	DEC 2023	JAN 2024	FEB 2024
	<p>NOV 9 Request of NEW RESEARCH IDEAS from Faculty.</p>	<p>DEC 5 Faculty submits NEW RESEARCH IDEAS.</p> <p>DEC 7 Feedback Forms are created and sent to IAB TC Members.</p>	<p>JAN 11 IAB TC Members submit feedback for IDEAS via LIFE Forms. Due date for Faculty to address questions.</p> <p>JAN 29 IAB Feedback sent to Faculty members.</p>	<p>FEB 5 Introducing new Faculty members and Students</p> <p>FEB 6 Request for NEW RESEARCH PROPOSALS –Faculty. Request for Research Updates – Students</p> <p>FEB TBD Webinar for Students – <i>Presenting Research to Industry</i></p>
MAR 2024	APR 2024	MAY 2024	JUN 2024	JUL 2024
<p>MAR 5 Faculty send New Research Proposals (incl. video). Students send Research Updates (PPT, Video, and Technical Reports).</p> <p>MAR 7 Feedback Forms are created and sent to IAB TC Members.</p>	<p>APRIL 5 Due date IAB TC Members submit feedback for IDEAS via LIFE Forms.</p> <p>APR 12 Due date for Faculty to address questions.</p> <p>APR 17-18 IAB Spring Meeting Faculty presents New Research Proposals. Students present Research Updates. IAB TC Funding decisions. IAB EC Meeting.</p>	<p>MAY 02 Request for ANNUAL REPORTS from Faculty.</p> <p>MAY 21 Request for RESEARCH TOPICS from IAB TC Members</p>	<p>JUN 20 IAB TC Members submit Research Topics</p> <p>JUN 25 TOPIC Ratings form sent to IAB TC Members</p> <p>JUN 27 Faculty – Due date to submit ANNUAL REPORTS.</p>	<p>JUL 18 Request for Research Updates – Students</p> <p>JUL 25 IAB TC Members submit TOPIC ratings</p> <p>JUL 30 Research Roadmap “Hopper” FY2025 shared with IAB members and Faculty. Roundtable topics selected. Leads request.</p>
AUG 2024	SEP 2024	OCT 2024	NOV 2024	DEC 2024
<p>AUG 13 Leads for Research Roundtable confirmed</p> <p>AUG 15 Students send Research Updates (presentation & video).</p>	<p>SEP 3 Feedback Forms created and sent to IAB TC Members and Faculty.</p> <p>SEP 25-26 IAB Fall Meeting 2024 Students present Research Updates. Research Roundtable. IAB TC meeting.</p>	<p>OCT 17 Research Roundtable Summary submitted to IAB members and Faculty.</p>	<p>NOV 5 Request of NEW RESEARCH IDEAS from Faculty.</p>	<p>DEC 3 Faculty submits NEW RESEARCH IDEAS.</p> <p>DEC 10 Feedback Forms are created and sent to IAB TC Members.</p>