

## Programme

### IRG50 Scientific Conference on Wood Protection, 12 - 16 May 2019, Quebec City, Canada

<b>Sunday 12 May</b>		
<b>10:00</b>	<b>Fun Run</b> Fairmont Château Frontenac – starting outside the hotel	
<b>14:30-18:00</b>	<b>Registration</b> Hotel Fairmont Château Frontenac, Salle Verchères	
<b>18:00-21:00</b>	<b>Welcome reception</b> Hotel Fairmont Château Frontenac, Salle Frontenac	

<b>Monday 13 May</b>		
<i>Salle de bal</i>	<b>Opening Plenary Session</b> President: Joris Van Acker Vice-President: Lone Ross Gobakken Secretary-General: Mats Westin	
08:30-08:40	<b>Opening Ceremony of the 50th Annual Conference</b> <b>Opening address by</b> Joris Van Acker, President, The International Research Group on Wood Protection Rod Stirling, Local Organizing Committee	
08:40-09:00	<b>Plenary</b> 1. Opening of the meeting 2. Approval of the agenda 3. Membership issues - Ratification of the election of new members since last year's Plenary 4. Announcement of Ron Cockcroft Award recipients 5. Approval of the Annual Report 2018 and Auditors' report 6. Granting discharge for the Executive Council and Secretary-General from the administration and accountancy for 2018	<b>19-60453</b>  <b>19-60452</b>

## Programme

<i>Salle de bal</i>	<b>Scientific Main Session – keynotes</b> Chair: Lone Ross Gobakken	
09:00-09:30	<b>Durability and climate change - implications for wood building structures in Canada</b> <u>Michael Lacasse</u>	<b>19-50361</b>
09:30-10:00	<b>Wood Protection in Canada</b> <u>Martin Tauvette</u> , Rod Stirling	<b>19-50360</b>
10:00-10:30	<b>Towards better integration of wood protection in the forestry wood industry chain - a case study on hybrid poplar</b> <u>Joris Van Acker</u>	<b>19-50359</b>
<b>10:30-10:50</b>	<b>Coffee / Tea</b>	
<i>Salle de bal</i>	<b>Scientific Main Session – section papers</b> Chairs: Magdalena Kutnik, Christian Brischke, Jun Zhang, Paul Merrick, Morten Klamer	
10:50-11:10	Section 1 - Biology <b>From fungal detoxification systems to wood durability in neotropical forests</b> T Perrot, G Salzet, N Amusant, J Duchene, <u>E Gelhaye</u>	<b>19-10946</b>
11:10-11:30	Section 2 – Test methodology and assessment <b>Exploring the use of X-ray micro CT as a tool for the monitoring of moisture production and mass loss during lab-based fungal degradation testing</b> <u>L De Ligne</u> , J Van den Bulcke, A De Muynck, J M Baetens, B De Baets, L Van Hoorebeke, J Van Acker	<b>19-20654</b>
11:30-11:50	Section 3 – Wood protection chemicals <b>Biocidal effect of nano metal fluorides against brown-rot fungi</b> <u>S M Usmani</u> , K Klutzny, I Stephan, E Kemnitz	<b>19-30732</b>
11:50-12:10	Section 4 – Processes and properties <b>Improvement of wood decay and termite durability resulting from combined treatments based on borax/phenol-formaldehyde impregnation followed by thermal modification</b> S Salman, M-F Thévenon, A Pétrissans, S Dumarçay, <u>P Gérardin</u>	<b>19-40871</b>
12:10-12:30	Section 5 – Sustainability and Environment <b>Outbreak of timber pest in Philippines: A consequence of frequent typhoons</b> <u>P Dhang</u>	<b>19-50348</b>
<b>12:30-14:00</b>	<b>Lunch</b>	

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<b>Parallel session A – special session</b>		
<b><i>Salle de bal</i></b>	<b>Knowledge transfer in Wood Protection</b> Conveners: Christian Brischke & Dennis Jones	
14:00-14:20	<b>Performance based specification of wood – Introducing project CLICKdesign</b> <u>E Suttie</u> , C Brischke, E Frühwald Hansson, S Fortino, J Sandak, M Kutnik, G Alfredsen, C Lucas, R Stirling	<b>19-20661</b>
14:20-14:40	<b>Service life planning of wooden structures: Mathematical prediction models versus professional experience</b> <u>C Brischke</u> , J Niklewski, M Humar, G Alfredsen	<b>19-20663</b>
14:40-15:00	<b>Start with “wood”</b> <u>D Kržišnik</u> , M Humar	<b>19-50353</b>
15:00-15:20	<b>Knowledge exchange and transfer from academia to industry in the field of wood protection research – Activities of the IRG-WP Communications Committee</b> <u>F Latorre</u> , B Abbott, C Brischke, M Humar, D Jones, E Larnøy, L Nunes, A Preston, T Singh	<b>19-50354</b>
15:20-15:40	<b>The InnovaWood Module Bank: Building an international e-learning platform for shared MSc courses in wood science and technology</b> M Irle, U Kies, <u>H Militz</u> , P Sauerbier, M Vieux, A Prosic, B Wolfsberger, F Pichelin, I Mayer	<b>19-50355</b>
<b>15:40-16:00</b>	<b>Coffee / Tea</b>	
<b><i>Salle de bal</i></b>	<b>Knowledge transfer in Wood Protection (cont.)</b> Conveners: Christian Brischke & Dennis Jones	
16:00-16:20	<b>GDR3544 “Science du Bois” - Academic and Industrial French Partnerships on Wood Science</b> J Gril, R Marchal, <u>K Candelier</u>	<b>19-50362</b>
16:20-16:40	<b>Word wrangling: the art of editing scientific publications</b> <u>J Taylor</u>	<b>19-50356</b>
16:40-17:00	<b>Questions and discussion</b>	
17:00-17:20		
17:20-17:40		
<b>19:00-21:00</b>	<b>President’s RECEPTION (upon invitation)</b>	

## Programme

Parallel session B - Working Party Sessions		
<i>Salle Frontenac</i>	WP 3.1. Inorganic preservatives & WP 3.2. Organic preservatives Conveners: Bridget Derham & Frédéric Simon	
14:00-14:20	<b>Accumulation of copper in parenchyma cells in southern pine wood treated with micronized and amine-copper preservatives</b> D Feng, M L Turner, A Limaye, M A Knackstedt, <u>P D Evans</u>	<b>19-20657</b>
14:20-14:40	<b>Use of resin obtained from Italian guayule crops for wood preservation purposes: some preliminary results</b> <u>S Palanti</u> , E Conti, M Russo, F Stefani, C Querci	<b>19-30736</b>
14:40-15:00	<b>Identification of Antifungal Compounds in Konjac Flying Powder and Assessment against Wood Decay Fungi</b> Z Bi, F Yang, Y Lei, J J Morrell, <u>L Yan</u>	<b>19-30737</b>
15:00-15:20	<b>Promoting Commercially Available Epoxy Resins for Non-biocidal Wood Preservation</b> P Poveda, M Mubarak, S Dumarcay, M Montibus, I Le Bayon, M Kutnik, P Gérardin, <u>F Simon</u>	<b>19-40877</b>
15:20-15:40	<b>Questions</b>	
<b>15:40-16:00</b>	<b>Coffee / Tea</b>	
<i>Salle Frontenac</i>	WP 4.3. Treating processes & treatability of timber Conveners: Jinzhen Cao & Kevin Archer	
16:00-16:20	<b>Mineralization of European oak with various ionic salt solutions to achieve an in situ precipitation of calcium oxalate</b> <u>T Franke</u> , T Volkmer	<b>19-40861</b>
16:20-16:40	<b>The Influence of Wood Included Salinity on Nail</b> <u>R Nakano</u> , H Ishiyama, K Sakano	<b>19-40863</b>
16:40-17:00	<b>Treatability of native and exotic alternative timber species</b> D Page, <u>T Singh</u>	<b>19-40864</b>
17:00-17:20	<b>Efficacy of microwave treatments against Pine Wood Nematode</b> L Robertson, <u>M T Troya</u> , F Llinares, J C Cabrero	<b>19-20658</b>
17:20-17:40	<b>Questions</b>	
<b>19:00-21:00</b>	<b>President's RECEPTION (upon invitation)</b>	

## Programme

<b>Tuesday 14 May</b>		
	<b>Parallel session A – special sessions</b>	
<i>Salle de bal</i>	<b>Protecting Sustainable Wood Infrastructure</b> Conveners: Jim Gauntt & Dallin Brooks	
08:30-08:50	<b>Economic and Alternative Preservative Research with an Overview of its Impact on the Dynamics of Wood Tie Markets and Railroads</b> <u>Jim Gauntt</u>	<b>19-30751</b>
08:50-09:10	<b>2018 Railway Tie Survey and the Non-Hazardous Secondary Materials Rulemaking Activities</b> <u>R Fronczak</u> , S Smith	<b>19-50352</b>
09:10-09:30	<b>Protecting Sustainable Wood Infrastructure – Improving the Performance of Poles, Piles, Ties &amp; Timbers with Dual Treatments</b> <u>J Lloyd</u> , A Taylor, C Brischke, N Irby, M Manning	<b>19-30735</b>
09:30-09:50	<b>COPPER NAPHTHENATE: A Product for All Seasons: Protecting the Americas' Infrastructure for Over 100 Years and Potential for Expanded Usage in Europe</b> <u>M H Freeman</u> , J A Brient, M Manning	<b>19-30738</b>
09:50-10:10	<b>Protecting wood exterior infrastructures above ground in Spain. The importance of protection by design in the performance</b> <u>D Lorenzo</u> , M Touza, J Fernández-Golfín, A Lozano, J Benito, M T Troya, L Robertson	<b>19-40874</b>
10:10-10:30	<b>Visual assessment of longitudinal wheel timbers and assessing the feasibility of extending wheel timber service life in the UK railway network</b> <u>J R Williams</u>	<b>19-20651</b>
<b>10:30-10:50</b>	<b>Coffee / Tea</b>	
<i>Salle de bal</i>	<b>Protecting Sustainable Wood Infrastructure (cont.)</b> Conveners: Jim Gauntt & Dallin Brooks	
10:50-11:10	<b>Natural durability and performance of <i>Eucalyptus globulus</i> single family house in Spain after 17 years exposure</b> <u>D Lorenzo</u> , M Touza, J Fernández-Golfín, A Lozano, J Benito	<b>19-40873</b>
11:10-11:30	<b>Questions and discussion</b>	

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11:30-11:50		
11:50-12:10		
12:10-12:30		
<b>12:30-14:00</b>	<b>Lunch</b>	
<i>Salle de bal</i>	<b>Mass Timber – Protecting its Potential</b> Conveners: Adam Taylor & Davor Kržišnik	
14:00-14:20	<b>Monitoring of the building made of CLT in Ljubljana</b> <u>M Humar</u> , D Kržišnik, B Lesar, N Thaler, B Dujič	<b>19-40860</b>
14:20-14:40	<b>Durability testing of mass timber building elements: a call for a collaborative trial</b> <u>JJ Morrell</u>	<b>19-40875</b>
14:40-15:00	<b>The impact of additional interior layers to the moisture dry-out and mould growth risk of CLT walls</b> <u>V Kukk</u> , J Kers, T Kalamees	<b>19-40876</b>
15:00-15:20	<b>Fungal damages in Norwegian massive timber elements – causes and measures</b> <u>M S Austigard</u> , J Mattsson	<b>19-40879</b>
15:20-15:40	<b>Engineered wood constructions in Brazil: the challenge of protection against biodeterioration for market growth</b> <u>L F T di Romagnano</u> , S Brazolin, G A da Silva, G A C Lopez	<b>19-40878</b>
15:40-16:00	<b>Discussion and questions</b>	
<b>16:00-16:20</b>	<b>Coffee / Tea</b>	

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<i>Salle de bal &amp; Verchères</i>	<b>Poster Session</b> Convener: Joris Van Acker & Adam Taylor	
<b>16:20-18:00</b>	<b>POSTER PRESENTATIONS – 3 min each</b>	
P01	<b>Preservative Treatment of CLT - An Example at Shimojishima Airport</b> <u>J Lloyd</u> , N Yamashita, A Taylor	<b>19-30748</b>
P02	<b>Adhesion durability of the thinnest CLT in Japan treated by solvent recovery system</b> <u>K Kawakami</u> , W Ohmura	<b>19-40882</b>
P03	<b>Experimental study on compressive strength performance of cross laminated timber with biodeterioration damage</b> <u>T Mori</u> , Y Otsubo, R Inoue, M Ikeda, K Kambara, W Ohmura	<b>19-40883</b>
P04	<b>Development of accelerated decay test for CLT using a fungus grown on agar medium</b> <u>T Miyauchi</u> , K Kambara, W Ohmura, T Mori, H Matsunaga, N Hattori	<b>19-20664</b>
P05	<b>Application of nano metal fluorides against termites</b> <u>S M Usmani</u> , K Klutzny, Y de Laval, R Plarre, D McMahon, I Stephan, T Hübert, E Kemnitz	<b>19-30733</b>
P06	<b>Wood veneer with high flexibility decorated with nanoparticles for highly efficient water treatment</b> <u>S Chang</u> , D Xu, G Liu, J Hu, X Li, Y Liu	<b>19-50347</b>
P07	<b>Visualization of Feeding Process of Larvae of the Wood-boring Beetles Using X-ray Computer Tomography</b> <u>Y Yanase</u> , H Watanabe, I Fujimoto, T Yoshimura, Y Fujii	<b>19-10953</b>
P08	<b>Characterization of Pectinases from Brown-rot Fungus <i>Fomitopsis palustris</i></b> <u>Y Tanaka</u> , N Konno, T Suzuki, N Habu	<b>19-10951</b>
P09	<b>Wood natural durability an asset to the circular economy of wood industry: valorization of waste from sawmills for the cosmetics sector through the ValorExtr@ct project</b> <u>N Amusant</u> , J Passelande, D Fernand, J Beauchène, E Houel, M Royer	<b>19-10954</b>
P10	<b>Effect of pretreatment of wood surfaces with a copper monoethanolamine solution on the natural weathering performance of semitransparent stains</b> <u>S Isaji</u> , H Shibui, Y Hirabayashi	<b>19-40881</b>
P11	<b>Using X-ray micro-CT to evaluate density loss in anobiid infested wood</b> <u>J L Parracha</u> , M F Pereira, A Maurício, P Faria, L Nunes	<b>19-10956</b>
P12	<b>Wood Protection Through Diffusion: Dimensional Stabilisation with Amine Oxides</b>	<b>19-30747</b>

## Programme

	<u>S Pepin</u> , P Blanchet, V Landry	
P13	<b>Alternative products enhancing dimensional stability comparing to conventional treated products in Japan</b> <u>K Yamamoto</u> , D Tezuka, Y Sugai, S Maeda, I Momohara	<b>19-40885</b>
P14	<b>Penetration pathway of oilborne preservative in heartwood of Japanese larch (<i>Larix kaempferi</i>)</b> <u>H Shibui</u> , T Miyauchi, T Shigeyama, M Ikeda, Y Sugai	<b>19-40886</b>
P15	<b>Exemplary aboveground hardwood protection from <i>Coptotermes curvignathus</i> under weathered conditions conferred by proprietary microemulsion-based cypermethrin (SARPECO®) and permethrin (AXIL®) biocides</b> D Messaoudi, <u>A H H Wong</u> , C A D Tawi, N Bourguiba, O Fahy	<b>19-30749</b>
P16	<b>Influence of Drying Condition of Wood on Rusting of Nail</b> <u>H Ishiyama</u> , N Wada, T Nishimura, T Mori	<b>19-40887</b>
P17	<b>Bamboo Modification with DMDHEU (1,3-dimethylol-4,5-dihydroxyethyleneurea) Catalyzed by Maleic Anhydride</b> <u>W Lu</u> , L Chen, Y Li, X Li	
<b>Posters without presentation</b>		
PW01	<b>Facile in-situ growth of Ag-TiO<sub>2</sub> nanoparticles on polydopamine modified bamboo with excellent mildew-proofing</b> <u>J Hu</u> , Z Lu, G Liu, S Chang, Y Liu, X Li	<b>19-30734</b>
PW02	<b>Diversity of wood decay fungi isolated from ground-contact wood stakes in Korea</b> <u>S-M Yoon</u> , M-J Kim, W-J Hwang, Y-S Choi, D-W Son	<b>19-10952</b>
PW03	<b>Molecular identification of marine borers causing wood deterioration on marine facilities in Korea</b> <u>S-M Yoon</u> , M-J Kim, W-J Hwang, Y-S Choi, D-W Son	<b>19-10955</b>
<b>Poster session</b>		



## Programme

Tuesday 14 May		
	<b>Parallel session B - Working Party Sessions</b>	
<b>Salle Frontenac</b>	<b>WP 1.4. Natural durability</b> Conveners: Rebecca Ibach & Kevin Candelier	
10:50-11:10	<b>Identifying the fungal community on western redcedar (<i>Thuja plicata</i>) wood in field tests above and in ground contact exposure: preliminary results</b> <u>A Dale</u> , S Kus, R Stirling	<b>19-10939</b>
11:10-11:30	<b>Decay and water resistance of Siberian and European larch wood</b> <u>B Lesar</u> , D Kržišnik, M Humar	<b>19-10941</b>
11:30-11:50	<b>Natural durability of four Tunisian Eucalyptus wood species and their respective compositions in extractives</b> S Ben Ayed, M T Elaieb, S Dumarçay, B De Freitas Homen De Faria, M-F Thévenon, P Gérardin, <u>K Candelier</u>	<b>19-10942</b>
11:50-12:10	<b>Chemical defense of trees and wood natural durability: from protection to valorization</b> <u>E Houël</u> , D Stien, N Amusant	<b>19-10943</b>
12:10-12:30	<b>Effectiveness of <i>Gleditsia triacanthos</i> heartwood extractives as wood protector</b> <u>C M Ibáñez</u> , C Mantero, P Raimonda, X Pintos, A Camargo, E Pereira	<b>19-10950</b>
<b>12:30-14:00</b>	<b>Lunch</b>	
<b>Salle Frontenac</b>	<b>WP 1.4. Natural durability (cont.)</b> Conveners: Rebecca Ibach & Kevin Candelier	
14:00-14:20	<b>Determining the natural durability on xylarium samples: mini-block test, wood powder and chemical profiling</b> <u>V Deklerck</u> , L De Ligne, J Van den Bulcke, E Espinoza, H Beeckman, J Van Acker	<b>19-10944</b>
14:20-14:40	<b><i>Coula edulis</i> Baill an unknown wood species as an alternative to the main durable wood species used in Gabon</b> <u>C S A Bopenga Bopenga</u> , S Dumarçay, P Edou Engonga, P Gérardin	<b>19-10945</b>

## Programme

<i>Salle Frontenac</i>	<b>WP 2.2. Microbial test methodology &amp; WP 2.4. International Standardisation</b> Conveners: Susanne Bollmus & Eric Gelhaye	
14:40-15:00	<b>Impact of water holding capacity and moisture content of soil substrates on the moisture content of wood in terrestrial microcosms</b> <u>C Brischke</u> , F L Wegener	<b>19-20662</b>
15:00-15:20	<b>Performance of untreated timbers in above ground decking tests: Preliminary results from an international collaborative trial</b> <u>L P Francis</u> , J Norton, E Melcher, A H H Wong, J Kok Lai, M Klamer, M J Konkler, J J. Morrell	<b>19-10940</b>
15:20-15:40	<b>Durability classification of preservative treated and modified wood</b> <u>S Bollmus</u> , L Bächle, C Brischke, H Militz	<b>19-20659</b>
15:40-16:00	<b>Development of a Standard for Preservative Treated Wood to be used in the Arctic</b> <u>J N R Ruddick</u>	<b>19-30752</b>
<b>16:00-16:20</b>	<b>Coffee / Tea</b>	
<i>Salle de bal &amp; Verchères</i>	<b>Poster Session</b> Convener: Joris Van Acker	
<b>16:20-17:20</b>	(see page 7-8)	

## Programme

<b>Wednesday 15 May</b>		
	<b>Parallel session A - Working Party Sessions</b>	
<i>Salle de bal</i>	<b>WP 4.1. Chemical wood modification</b> Conveners: Ferry Bongers & Holger Militz	
08:30-08:50	<b>The use of bicine and tricine as possible Maillard reagents in a combined thermal/chemical modification of beech</b> <u>D Jones</u> , C-M Popescu, D Kržišnik, M Hočevár, M Humar, M-C Popescu	<b>19-40852</b>
08:50-09:10	<b>Antifouling wood matrix with natural water transfer and micro reaction channels for water treatment</b> <u>G Liu</u> , D Xu, S Chang, J Hu, X Li, Y Liu	<b>19-40853</b>
09:10-09:30	<b>Development of beech wood thermo-chemical modification treatments based on different vinylic derivatives of glycerol and polyglycerol</b> <u>M Mubarok</u> , S Dumarçay, H Militz, K Candelier, M-F Thevenon, P Gerardin	<b>19-40855</b>
09:30-09:50	<b>Dimensional stability and decay resistance of montmorillonite- furfuryl alcohol modified wood</b> <u>L Zhang</u> , J Cao	<b>19-40856</b>
09:50-10:10	<b>Study on the ability of wood-destroying fungi to grow through chemically modified wood</b> <u>L Emmerich</u> , S Strobusch, C Brischke, S Bollmus, H Militz	<b>19-40858</b>
10:10-10:30	<b>Improvement in dimensional stability and Ultra violet resistance of wood through impregnation by liquefied wood polyols</b> <u>A Kumar</u> , A John, T S Mehra	<b>19-40884</b>
<b>10:30-10:50</b>	Coffee / Tea	
<i>Salle de bal</i>	<b>WP 4.4. Coatings, hydrophobic treatments and surface aspects</b> Conveners: Laurence Podgorski & Phil Evans	
10:50-11:10	<b>Color change of timber exposed outdoors - Influence of season exposure test starts</b> <u>K Usami</u> , H Ishiyama	<b>19-40865</b>
11:10-11:30	<b>Gloss and hardness variations as early indicators of wood coating failure during weathering tests</b> <u>L Podgorski</u>	<b>19-40866</b>
11:30-11:50	<b>Effect of damage to polyurea coatings on metal losses from ammoniacal copper zinc arsenate treated</b>	<b>19-40867</b>

## Programme

	<b>Douglas-fir pile sections</b> <u>M J Konkler</u> , J J Morrell	
11:50-12:10	<b>Potential Use of the Pigment from <i>Scytalidium cuboideum</i> and <i>Chlorociboria aeruginosa</i> as an UV-light Protection Additive in Oil Finishes</b> <u>S M Vega Gutierrez</u> , D W Stone, R He, P T Vega Gutierrez, Z M Walsh, S C Robinson	<b>19-40868</b>
12:10-12:30	<b>Charring of Norway spruce wood surface – an alternative surface modification technique?</b> <u>M Petrič</u> , M Pavlič, J Žigon	<b>19-40870</b>
12:30-12:50	<b>Biosourced hybrid phenolic resins as coatings for the protection of wood and wood composites</b> <u>P L de Hoyos-Martínez</u> , R Herrera, J Labid, F Charrier El Bouhtoury	<b>19-30745</b>
<b>13:10</b>	<b>Excursion – including lunch package and dinner</b>	

## Programme

<b>Wednesday 15 May</b>		
	<b>Parallel session B - Working Party Sessions</b>	
<b>Salle Frontenac</b>	<b>WP 5.1. Environment &amp; WP 5.2. Sustainability</b> Conveners: Liselotte De Ligne & Morten Klamer	
08:30-08:50	<b>Incidence of treated wood in a wood recycling facility in Western Oregon, USA: an update</b> <u>JJ Morrell</u>	<b>19-50346</b>
08:50-09:10	<b>Study on Nailed Joint with Iron Contamination.</b> <b>Part1: Shear Performance of Nailed Joint with Iron Contamination</b> <u>R Nakano</u> , D Nakano, H Ishiyama	<b>19-50349</b>
09:10-09:30	<b>Study on Nailed Joint with Iron Contamination.</b> <b>Part 2: Elucidation of the Occurrence Condition of Iron Contamination</b> <u>D Nakano</u> , R Nakano, H Ishiyama	<b>19-50350</b>
09:30-09:50	<b>Wood protection techniques and natural weathering: their effect on aesthetics and preference of people</b> <u>D Lipovac</u> , M D Burnard, A Sandak, J Sandak	<b>19-50351</b>
09:50-10:10	<b>Terrestrial laser scanning (TLS) – a potential tool for improved utilisation of the natural durability of Scots pine for solid wood products</b> <u>P-O Flæte</u>	<b>19-50358</b>
10:10-10:30	<b>Questions</b>	
<b>10:30-10:50</b>	<b>Coffee / Tea</b>	
<b>Salle Frontenac</b>	<b>WP 3.3. Performance – lab and field tests</b> Conveners: Sabrina Palanti & Lukas Emmerich	
10:50-11:10	<b>Boron dual-treatments for Douglas-fir utility poles: Tracking boron migration over time</b> J Cappellazzi, M J Konkler, <u>JJ Morrell</u>	<b>19-30739</b>
11:10-11:30	<b>Chemical Analysis of Southern Pine Pole Stubs Sixty Months Following Treatment with a Methylisothiocyanate-Based Solid Fumigant Stick</b> <u>D J Herdman</u> , T Pope, R R Browning	<b>19-30740</b>
11:30-11:50	<b>Relative efficacy of various oxine copper formulations against brown-rot fungi</b>	<b>19-30741</b>

## Programme

	<u>M Petruch</u> , J Lloyd, A Taylor	
11:50-12:10	<b>Performance of field cut preservatives above-ground and in ground contact exposures</b> <u>R Stirling</u> , D Wong	<b>19-30742</b>
12:10-12:30	<b>Alternative fumigants to Methyl Bromide for wood products: Review of the development and preliminary tests of Ethane Dinitrile (EDN) in Canada</b> <u>A Uzunovic</u>	<b>19-30743</b>
12:30-12:50	<b>H2 hazard class aboveground termite test of rubberwood and kelempayan dip-treated with EC formulations of chlorpyrifos, cypermethrin and permethrin against <i>Coptotermes curvignathus</i></b> C A D Tawi, <u>A H H Wong</u>	<b>19-30746</b>
<b>13:10</b>	<b>Excursion – including lunch package and dinner</b>	

## Programme

Thursday 16 May		
Parallel session A - Working Party Sessions		
<i>Salle de bal</i>	<b>WP 1.2. Basidiomycetes &amp; WP 1.6. Cultural Artifact Protection</b> Conveners: Wibke Unger & Mari S Austigard	
08:30-08:50	<b>Non-stoichiometric oxidation and ROS generation promoted by guaiacol lignin structures and lignocellulose surfaces may be a component of brown rot fungal degradation mechanisms</b> Y Tamaru, M Yoshida, L D Eltis, <u>B Goodell</u>	19-10937
08:50-09:10	<b>Difference of wood decay manner between brown-rot species</b> <u>R Kondo</u> , Yo Horikawa, S Nakaba, K Ando, M Yoshida	19-10938
09:10-09:30	<b>Biodiversity of wood-decaying fungi in French Guiana sequences of the small subunit (SSU) of ribosomal (r) DNA and the two primer pairs SR6/SR10R and SR7/SR1R</b> C Zaremski, A Ducouso-Détrez, N Amusant, A Zaremski	19-10936
09:30-09:50	<b>Green Coloration of Wood in the Forest and Laboratory by <i>Chlorociboria</i> spp. – Applications for Furniture Restoration</b> S Krause, <u>W Unger</u> , P Heydeck	19-10947
09:50-10:10	<b>Study on “Washing” used in Traditional Wooden Building in Japan -Survey in Kawaramachi Area, Gifu Prefecture</b> <u>K Tanaka</u> , H Ishiyama	19-10948
10:10-10:30	<b>An Historical Roof Timber System in the Old Town of Berlin-Spandau</b> M Lüke, <u>W Unger</u> , D Nellessen	19-10949
<b>10:30-10:50</b>	<b>Coffee / Tea</b>	
<i>Salle de bal</i>	<b>WP 3.4. Fire retardants, WP 4.2. Wood composites, WPCs and Engineered wood products &amp; WP 4.5. Thermal wood modification</b> Conveners: Elena Conti & Boštjan Lesar	
10:50-11:10	<b>The development of a suitable fire retardant for Radiata pine and other species</b> <u>B R Derham</u> , M R Fortune	19-30744
11:10-11:30	<b>Potential of totora and derivatives as sustainable lignocellulosic material</b> J F Hidalgo-Cordero, D Casado, J García, L Robertson, <u>M T Troya</u>	19-40859

## Programme

11:30-11:50	<b>An overview of recent studies involving the thermal modification of hardwood species</b> <u>D Jones</u> , M Gaff, F Kačík	<b>19-40869</b>
11:50-12:10	<b>The anti-weathering mechanism of extractives in thermally modified Scots pine</b> H Shen, <u>J Cao</u>	<b>19-40880</b>
12:10-12:30	<b>Questions</b>	
<b>12:30-14:00</b>	<b>Lunch</b>	



## Programme

Thursday 16 May		
Parallel session B - Working Party Sessions		
<i>Salle Frontenac</i>	WP 2.3. Chemical/physical analysis Conveners: Anna Sandak & Bruce Breedt	
08:30-08:50	<b>The Structural Performance of the Nail Driven into the Decayed Wood</b> <u>N Wada</u> , H Isiyama	19-20652
08:50-09:10	<b>Chemical composition, antitermite and antifungal activity of <i>Dacryodes edulis</i> oleoresin</b> <u>W F Bedounguindzi</u> , K Candelier, P E Engonga, Se Dumarcaay, M-F Thevenon, P Gerardin	19-20653
09:10-09:30	<b>Improvement of analytical methods of wood preservatives and its validation with collaborative testing</b> <u>T Miyauchi</u> , K Yamamoto, N Shota, Y Akabori, M Ikeda, J Eisawa, K Kambara, T Osawa, C Igarashi, Y Baba, W Ohmura, M Shimizu, M Samejima	19-20655
09:30-09:50	<b>Hydroxyl accessibility - A brief review of deuterium exchange studies on modified wood</b> G Beck, C Hill, <u>G Alfredsen</u>	19-20656
09:50-10:10	<b>Using X-ray scattering to elucidate the mechanisms behind the moisture and fungal decay resistance of epoxybutene modified Wood</b> <u>R E Ibach</u> , N Plaza	19-40854
10:10-10:30	<b>Validation by micro-computed tomography of an assessment method to measure the residual strength of anobiids infested timber</b> <u>J L Parracha</u> , M F Pereira, A Maurício, P Faria, L Nunes	19-20650
<b>10:30-10:50</b>	<b>Coffee / Tea</b>	
<i>Salle Frontenac</i>	WP 2.1. Prediction of service life Conveners: Angela Dale & Per Otto Flæte	
10:50-11:10	<b>Performance of modified wood in service - multi-sensor data fusion and its multi-way analysis</b> <u>A Sandak</u> , J Sandak, M Cocchi	19-20660
11:10-11:30	<b>Comparative performance of wood/wood-based claddings predicted by four hygrothermal simulation tools</b> <u>M Defo</u> , M Lacasse, A Laouadi	19-20646

## Programme

11:30-11:50	<b>Performance of wood decking after 5 years of exposure: verification of the combined effect of wetting ability and durability</b> <u>M Humar</u> , D Kržišnik, B Lesar, C Brischke	<b>19-20647</b>
11:50-12:10	<b>Durability by design – a case study of the performance of wooden decks after 9.5 years of natural weathering</b> <u>M Kutnik</u> , M Montibus	<b>19-20648</b>
12:10-12:30	<b>Quantifying the effect of microclimatic parameters on the moisture-induced decay risk of wooden structures</b> <u>L Emmerich</u> , C Brischke	<b>19-20649</b>
<b>12:30-14:00</b>	<b>Lunch</b>	

## Programme

Thursday 16 May		
<i>Salle de bal</i>	<b>Scientific Plenary Session – Discussion Forum</b> Session Chairs: Lone Ross Gobakken & Alan Preston	
14:00-15:30	<p align="center"><i>“The 50<sup>th</sup> anniversary of IRG-WP – the past, present and the future”</i></p> <p align="center"><b>50 years of the IRG: A perspective</b> <u>J Jermer</u>, <u>A Preston</u></p> <p align="center"><b>Supporting the IRG: A sponsors viewpoint</b> <u>P Meckler</u></p> <p align="center"><b>How shall we bring IRG-WP into the future?</b> <u>L R Gobakken</u></p> <p align="center"><b>Discussion</b></p>	
15:30-16:00	<b>Coffee / Tea</b>	
<i>Salle de bal</i>	<b>Final Plenary Session</b> President: Joris Van Acker Vice-President: Lone Ross Gobakken Secretary-General: Mats Westin	
16:00-17:00	7. Approval of membership fees for 2020 8. Approval of the budgets for 2019 (forecast May 2019) and 2020  9. Election of new officers Executive Council, Scientific Programme Committee, Communication Committee, Information on EC appointments 10. IRG Secretariat and Secretary-General 11. Appointment of auditors 12. Future venues IRG 51: June 7-11 2020, Bled, Slovenia. IRG 52: May 9-13 2021 Numazu City, Japan. IRG53: June 2022, Norway. 13. Any other business	<b>19-60456</b> <b>19-60457</b>
19:30	<b>CONFERENCE BANQUET</b> (Fairmont Chateau Frontenac, Salle de bal)	