

Time	Presenting Author Name	Paper Title	DOI-link
Session 71 08:00-09:30			
Moderator: Just, Alar		Room 201	
		Theme: 3.2 Fire engineering	
08:00	Tomoyo HOKIBARA	EFFECT OF THE SACRIFICIAL LAYER THICKNESS AND THE BARRIER LAYER TYPE ON SELF-EXTINGUISHING FOR WOODEN FIREPROOF-STRUCTURAL ELEMENTS	https://doi.org/10.52202/069179-0218
08:15	David Barber	FIRE TESTING EXTERIOR CROSS-LAMINATED TIMBER WALLS TO NFPA 285	https://doi.org/10.52202/069179-0219
08:30	Cristian Maluk	EXPLORING THE INFLUENCE OF HEATING CONDITIONS IN THE CHARRING PROFILE OF BARE TIMBER AND TIMBER PROTECTED WITH A THIN INTUMESCENT COATING	https://doi.org/10.52202/069179-0221
08:45	Leif Tore Isaksen	FIRE SAFETY ENGINEERING OF BUILDINGS WITH VISIBLE TIMBER CONSTRUCTIONS	https://doi.org/10.52202/069179-0223
09:00	Harry Mitchell	OBSERVATIONS OF SMOULDERING FIRE IN A LARGE TIMBER COMPARTMENT	https://doi.org/10.52202/069179-0224
Session 72 08:00-09:30			
Moderator: Niederwestberg, Jan		Room 202	
		Theme: 3.5 Structural modelling, analysis & design	
08:00	Christian Viau	LESSONS LEARNED FROM A DECADE OF RESEARCH ON WOOD ASSEMBLIES UNDER BLAST LOADING	https://doi.org/10.52202/069179-0300
08:15	Alex Sixie Cao	A NONLINEAR DYNAMIC MODEL FOR COLLAPSE INVESTIGATIONS IN TALL TIMBER BUILDINGS - PRELIMINARY RESULTS	https://doi.org/10.52202/069179-0301
08:30	Daiki Hinata	STRUCTURAL PERFORMANCE OF TWO-PANEL CLT SHEAR WALL WITH BOLTED CONNECTION	https://doi.org/10.52202/069179-0375
08:45	Christian Viau	PREDICTIVE CAPABILITIES OF FINITE ELEMENT MODELLING FOR TIMBER MEMBERS SUBJECTED TO BLAST LOADS	https://doi.org/10.52202/069179-0304
09:00	Thomas Tannert	EXPERIMENTAL INVESTIGATIONS ON CLT PANELS WITH OPENINGS	https://doi.org/10.52202/069179-0305
Session 73 08:00-09:30			
Moderator: Burkart, Hauke		Room 203	
		Theme: 3.7 International Codes & Timber engineering	
08:00	Marc Alam	TALL WOOD BUILDINGS WITHIN THE 2020 NATIONAL BUILDING CODE OF CANADA	https://doi.org/10.52202/069179-0392
08:15	Ebenezer Ussher	BEARING SUPPORTS REINFORCED WITH SCREWS: EXPERIMENTAL INVESTIGATION AND DISCUSSION OF THE DESIGN MODELS IN EUROCODE 5	https://doi.org/10.52202/069179-0393
08:30	Maria Loebjinski	MODIFICATION OF PARTIAL SAFETY FACTORS FOR A SEMI-PROBABILISTIC EVALUATION OF EXISTING TIMBER STRUCTURES	https://doi.org/10.52202/069179-0394
08:45	Lori Koch	REVIEW OF THE CODE DEVELOPMENT EFFORTS FOR TALL MASS TIMBER BUILDINGS IN THE US	https://doi.org/10.52202/069179-0395
09:00	Antje Simon	IMPROVEMENT OF THE DURABILITY OF TIMBER BRIDGES BY INTELLIGENT DESIGN AND RESPONSIBLE MAINTENANCE	https://doi.org/10.52202/069179-0396
09:15	Pedro Palma	UPDATING EUROCODE 5 - DESIGN GUIDANCE FOR INCREASING THE ROBUSTNESS OF TIMBER STRUCTURES	https://doi.org/10.52202/069179-0398
Session 74 08:00-09:30			
Moderator: Mahnert, Karl-Christian		Room 104	
		Theme: 1.3 Long-term behaviour	
08:00	Meng Gong	EFFECTS OF HUMIDITY AND LOAD LEVEL ON THE CREEP OF DOWNSCALED CROSS-LAMINATED TIMBER	https://doi.org/10.52202/069179-0071
08:15	Petr Hradil	INTEGRATED APPROACH TO PREDICT DETERIORATION OF MECHANICAL PROPERTIES OF DECAYING WOOD	https://doi.org/10.52202/069179-0073
08:30	Arthur Bontemps	CREEP TESTS ON PARTIALLY DRIED NOTCHED BEAOF SILVER FIR WOOD (ABIES ALBA)	https://doi.org/10.52202/069179-0074
08:45	Thomas Lindblad	WEAR RESISTANT PROTECTION OF WOODEN POLES IN ADVERSE ENVIRONMENTS	https://doi.org/10.52202/069179-0066
09:00	Jonas Niklewski	SIMPLIFIED ENVIRONMENTAL ANALYSIS OF THE LONG-TERM PERFORMANCE OF WOOD CLADDING AND DECKING	https://doi.org/10.52202/069179-0075
09:15	Jiří Kunecký	ON THE USE OF ARUCO MARKERS IN LONG TERM MONITORING OF TIMBER STRUCTURES	https://doi.org/10.52202/069179-0076
Session 75 08:00-09:30			
Moderator: Lecomte, Cédric		Room 105	
		Theme: 1.4 Engineered timber products and production	
08:00	Lei Han	DENSIFIED WOODEN NAIL FOR ADHESIVE- AND METAL- FREE TIMBER ASSEMBLES	https://doi.org/10.52202/069179-0090
08:15	Farid Vafadar	EXPERIMENTAL INVESTIGATION OF FINGER JOINTS UNDER TENSILE AND BENDING LOADS	https://doi.org/10.52202/069179-0091
08:30	Mohammad Derikvand	POTENTIAL OF REUSING SALVAGED WOODEN MATERIALS IN FABRICATING DOWEL LAMINATED STRUCTURAL ELEMENTS WITH WOODEN CONNECTORS	https://doi.org/10.52202/069179-0092
08:45	Janina Gysling	STRUCTURAL SAWN WOOD PRODUCTION IN THE CHILEAN SAWMILL INDUSTRY, DATA ANALYSIS FROM SURVEYS CARRIED OUT FOR 4 YEARS	https://doi.org/10.52202/069179-0093
09:00	Cristóbal Tapia Camú	ROTATIONAL STIFFNESS OF NEWLY DEVELOPED LVL-BASED COLUMN-HEAD REINFORCEMENT FOR POINT-SUPPORTED SLAB-COLUMN BUILDING SYSTEMS	https://doi.org/10.52202/069179-0094
Session 76 08:00-09:30			
Moderator: Nore, Kristine		Room 106	
		Theme: 2.2 Sustainability and Life cycle assessment	
08:00	Steven Kontra	DESIGN AND CRADLE-TO-GRAVE LIFE-CYCLE ASSESSMENT: FULLSCALE SIX-STORY SHAKE-TABLE TEST BUILDING LATERAL SYSTEMS	https://doi.org/10.52202/069179-0138
08:15	Anna Wagner	COMPARATIVE LIFE CYCLE ASSESSMENT OF TIMBER-CONCRETE-COMPOSITE WALLS WITH CONCRETE AND CLT-WALL ELEMENTS	https://doi.org/10.52202/069179-0132
08:30	Roja Modaresi	GHGS EMISSIONS FROM SAWNWOOD PRODUCTS IN NORWAY- THE IMPORTANCE OF HARMONISED LCA METHODOLOGY IN ENVIRONMENTAL PRODUCT	https://doi.org/10.52202/069179-0133
08:45	Hooman Eslami	INFLUENCE OF DIFFERENT END-OF-LIFECYCLE SCENARIOS ON THE ENVIRONMENTAL IMPACTS OF TIMBER-CONCRETE COMPOSITE FLOOR SYSTEMS	https://doi.org/10.52202/069179-0134
09:00	Jae-won Oh	A STRUCTURAL-MEMBER LEVEL ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF TIMBER, REINFORCED CONCRETE AND STEEL IN BUILDING CONSTRUCTION	https://doi.org/10.52202/069179-0135
09:15	Guido Nieri	HYBRID STRUCTURES IN HIGH-RISE BUILDINGS: THE USE OF APPROPRIATE MATERIALS	https://doi.org/10.52202/069179-0139
Session 77 08:00-09:30			
Moderator: Vessby, Johan		Room 107	
		Theme: 3.10 Circular design for sustainability ..., 3.1 Connections	
08:00	Ute Groba	RE:SOURCE PAVILION - EXPLORING THE CIRCULAR USE OF WOODEN BUILDING MATERIALS	https://doi.org/10.52202/069179-0472
08:15	Esther Vandamme	ADAPTABILITY IN MULTI-STOREY TIMBER BUILDINGS - TOWARDS DIFFERENTIATED DURABILITY LAYERS IN ARCHITECTURE	https://doi.org/10.52202/069179-0473
08:30	Marcin Luczkowski	PROPOSAL OF INTERACTIVE WORKFLOW FOR CIRCULAR TIMBER STRUCTURE DESIGN	https://doi.org/10.52202/069179-0474
08:45	Juha Franssila	POSSIBILITIES TO PROMOTE CIRCULAR ECONOMY IN MID-RISE TIMBER CONSTRUCTION IN THE PROJECT PLANNING AND EARLY DESIGN PHASES	https://doi.org/10.52202/069179-0150

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Session 78 10:00-11:30 Room 201			
Moderator: Maluk, Cristian		Theme: 3.2 Fire engineering	
10:00	Wenxuan Wu	EXPERIMENTAL INVESTIGATION OF THE RELATIONSHIP BETWEEN TIMBER SPECIES AND SMOULDERING	https://doi.org/10.52202/069179-0225
10:15	Andrea Lucherini	PREDICTING THE EFFECTIVE CHAR DEPTH IN TIMBER ELEMENTS EXPOSED TO NATURAL FIRES, INCLUDING THE COOLING PHASE	https://doi.org/10.52202/069179-0226
10:30	Muhammad Yasir	EXPERIMENTAL AND FINITE ELEMENT ANALYSIS OF IRISH SITKA SPRUCE CLT FLOOR PANELS UNDER EXPOSURE TO STANDARD FIRE CONDITIONS	https://doi.org/10.52202/069179-0227
10:45	Adam Glew	A DESIGN APPROACH TO EXTERNAL FIRE SPREAD FROM BUILDINGS WITH EXPOSED MASS TIMBER	https://doi.org/10.52202/069179-0228
11:00	Binsheng Zhang	NUMERICAL ANALYSIS ON THE FLEXURAL PERFORMANCE OF COMPOSITE STEEL-TIMBER BEAUNDER FIRE CONDITIONS	https://doi.org/10.52202/069179-0229
11:15	Boris Iskra	FIRE-PROTECTED TIMBER ELEMENTS OF CONSTRUCTION - RESPONSE DURING FIRE DECAY AND COOLING PHASE	https://doi.org/10.52202/069179-0230
Session 79 10:00-11:30 Room 202			
Moderator: Zhang, Shengdong		Theme: 3.5 Structural modelling, analysis & design	
10:00	Toshiaki Sato	SEISMIC PERFORMANCE EVALUATION OF REINFORCED WOODEN TEMPLE BASED ON LONG TERM EARTHQUAKE OBSERVATIONS	https://doi.org/10.52202/069179-0306
10:15	Ebenezer Ussher	ASSESSMENT OF THE FUNDAMENTAL PERIOD OF MULTI-STOREY CROSS LAMINATED TIMBER BUILDINGS	https://doi.org/10.52202/069179-0308
10:30	Lukas Rauber	NUMERICAL MODELLING OF LIGHT TIMBER FRAME WALLS – COMPARATIVE STUDY OF THREE FASTENER REPRESENTATIONS	https://doi.org/10.52202/069179-0309
10:45	Medhanye Biedebrhan Tekleab	AN ENGINEERING MODEL FOR THE DESIGN OF CUT-BACKS IN RIBBED PANELS	https://doi.org/10.52202/069179-0313
Session 80 10:00-11:30 Room 203			
Moderator:		Theme: 3.7 International Codes & Timber engineering	
10:00	M. Omar Amini	EVALUATION OF CLT SHEAR WALLS FOR INCREASED STRUCTURAL HEIGHT LIMIT AND FOR EFFECT OF VARYING PANEL ASPECT RATIO	https://doi.org/10.52202/069179-0400
10:15	Renan Prandini	BEAVER: A PARAMETRIC DESIGN FRAMEWORK FOR TIMBER ENGINEERING	https://doi.org/10.52202/069179-0401
10:30	Hauke Burkart	SECOND GENERATION OF EUROCODE 5-2 ON TIMBER BRIDGES, AN OVERVIEW	https://doi.org/10.52202/069179-0391
Session 81 10:00-11:30 Room 104			
Moderator: Haller, Peer		Theme: 1.3 Long-term behaviour, 1.4 Engineered timber ...	
10:00	María Pilar Giraldo	EXPERIMENTAL STUDY OF THE EFFECTS OF ACCELERATED AGING CYCLES ON THE FIRE REACTION PERFORMANCE OF FIVE WOOD SPECIES	https://doi.org/10.52202/069179-0077
10:15	Julian Brogli	LONG TERM BEHAVIOR OF A TWO-WAY SPANNING TIMBER CONCRETE SLAB WITH STEEL TUBE CONNECTOR	https://doi.org/10.52202/069179-0078
10:30	Marc Pantscharowitsch	ON THE UTILISATION OF THE WORKSPACE OF AN INDUSTRIAL ROBOT FOR MILLING STRUCTURAL TIMBER COMPONENTS – EXPERIMENTAL TRIALS WITH DIFFERENT ARM POSITIONS AND EVALUATION OF SURFACE QUALITY	https://doi.org/10.52202/069179-0082
10:45	Suthon Srivaro	IMPACT OF MATERIAL CHARACTERISTICS, ADHESIVE TYPES, AND CLAMPING PRESSURES ON BONDING PERFORMANCE OF RUBBERWOOD	
11:00	David Obernosterer	BIRCH FOR ENGINEERED TIMBER PRODUCTS: PART II	https://doi.org/10.52202/069179-0084
Session 82 10:00-11:30 Room 105			
Moderator:		Theme: 1.5 Quality control of timber-based materials	
10:00	Andreas Weidenhiller	NON-PARAMETRIC LOWER CONFIDENCE BOUNDS FOR THE FIFTH PERCENTILE - EN 14358 IN COMPARISON TO A FULLY NON-PARAMETRIC APPROACH	https://doi.org/10.52202/069179-0101
10:15	Ulf Lemke	NEW CRITERIA FOR VISUAL STRENGTH GRADING OF SAWN TIMBER FROM BIRCH GROWN IN SWEDEN	https://doi.org/10.52202/069179-0102
10:30	Jens Frohnmüller	FIBRE-OPTIC MEASUREMENTS FOR MONITORING ADHESIVELY BONDED TIMBER-CONCRETE COMPOSITE BEAMS	https://doi.org/10.52202/069179-0103
10:45	Boris Poupet	ESTIMATION OF MOISTURE DISTRIBUTION IN SAWN TIMBER USING COMPUTED TOMOGRAPHY	https://doi.org/10.52202/069179-0104
11:00	Stanley Emeka Iwuoha	VARIATION IN MECHANICAL PROPERTIES WITHIN AND BETWEEN PLANTATION-GROWN GMELINA ARBOREA TREES	https://doi.org/10.52202/069179-0098
Session 83 10:00-11:30 Room 106			
Moderator: Modaresi, Roja		Theme: 2.2 Sustainability and LCA, 2.5 Human perception & health	
10:00	Emma Rohde	BENCHMARK LIFE-CYCLE AND CONSTRUCTION ASSESSMENT OF COMPOSITE STEEL-TIMBER SYSTEMS	https://doi.org/10.52202/069179-0439
10:15	Efthymia Ratsou Stæhr	MEETING THE 2050 PARIS AGREEMENT TARGETS USING MASSIVE TIMBER IN SCHOOL BUILDINGS	https://doi.org/10.52202/069179-0136
10:30	Felipe Victorero	REVIEW AND COMPARISON OF DIFFERENT TIMBER BUILDING PRODUCTS' EMBODIED EMISSIONS USING FREE DATABASES.	https://doi.org/10.52202/069179-0127
10:45	Mark Fretz	DEVELOPING AN APPLICATION FOR MASS PLYWOOD PANELS IN SEISMIC AND ENERGY WALL RETROFITS	https://doi.org/10.52202/069179-0141
11:00	Bror Sundqvist	CROSS-LAMINATED PANELS WOOD PANELS IN A PATIENT ROOM AND STUDIES OF INTERIOR ENVIRONMENT	https://doi.org/10.52202/069179-0145
11:15	Takashi Shima	COMBINED EFFECTS OF VISUAL AND OLFACTORY STIMULATION BY INTRODUCING WOOD WHILE WORKING OR RESTING	https://doi.org/10.52202/069179-0143
Session 84 10:00-11:30 Room 107			
Moderator: Branco, Jorge		Theme: 3.11 RILEM TC TPT	
10:00	David Glasner	ENERGY DEMAND FOR THE DRIVING IN OF SELF-TAPPING TIMBER SCREWS AND ITS APPLICABILITY	https://doi.org/10.52202/069179-0475
10:15	Michael Gstettner	INFLUENCE OF THE SPECIMEN PREPARATION ON THE EMBEDMENT STRENGTH OF SELF-TAPPING SCREWS	https://doi.org/10.52202/069179-0476
10:30	Caroline Dapieve Aquino	INFLUENCE OF TEST METHODS ON THE PARALLEL TO GRAIN EMBEDMENT STRENGTH AND FOUNDATION MODULUS CHARACTERIZATION	https://doi.org/10.52202/069179-0477
10:45	Robert Jockwer	DEVELOPMENT OF COMPREHENSIVE TESTING PROCEDURES FOR HIGH-PERFORMANCE BONDED-IN RODS	https://doi.org/10.52202/069179-0478
11:00	Jorge Branco	PROTOCOLS FOR CYCLIC TESTS OF TIMBER JOINTS. A DISCUSSION	https://doi.org/10.52202/069179-0479

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Session 85 12:00-13:00			
Moderator: Palma, Pedro		Room 201	
		Theme: 3.2 Fire engineering	
12:00	Chamith Karannagodage	NUMERICAL SIMULATIONS OF FIRES IN EXPOSED TIMBER COMPARTMENTS	https://doi.org/10.52202/069179-0231
12:15	Laura Schmidt	EXPLICIT FIRE SAFETY FOR MASS TIMBER STRUCTURES – FROM THEORY TO PRACTICE	https://doi.org/10.52202/069179-0232
12:30	Andrianos Koklas	FIRE CHARACTERISTICS OF A COMPARTMENT WITH EXPOSED CLT WALLS: AN EXPERIMENTAL INVESTIGATION USING THE STANDARD ISO 834 CURVE	https://doi.org/10.52202/069179-0233
12:45	Panagiotis Kotsovinos	FIRE SPREAD CHARACTERISTICS IN LARGE COMPARTMENTS WITH AN EXPOSED TIMBER CEILING	https://doi.org/10.52202/069179-0234
Session 86 12:00-13:00			
Moderator: Ugarte, Juan		Room 202	
		Theme: 3.5 Structural modelling, analysis & design	
12:00	Ghasan Doudak	LATERAL DEFORMATION AND KINEMATIC MODES OF BALLOON-TYPE MULTI-PANEL CLT SHEARWALL SYSTEM	https://doi.org/10.52202/069179-0314
12:15	Henrik Danielsson	SHEAR FAILURE MECHANISM III IN CROSS LAMINATED TIMBER - NUMERICAL INVESTIGATIONS OF FRACTURE BEHAVIOUR	https://doi.org/10.52202/069179-0317
12:30	Miriam Kleinhenz	DETERMINATION OF THE EFFECTIVE WIDTH OF CROSS-LAMINATED TIMBER RIB PANELS USING DIGITAL IMAGE CORRELATION	https://doi.org/10.52202/069179-0319
Session 87 12:00-13:00			
Moderator: Huber, Dr. Johannes		Room 203	
		Theme: 3.8 Mixed, composite & hybrid structures	
12:00	Angelo Aloisio	DESIGN OF ASYMMETRIC FRICTION CONNECTION FOR SESIMIC RETROFITTING OF RC FRAMES WITH CROSS-LAMINATED TIMBER PANELS	https://doi.org/10.52202/069179-0411
12:15	Elif Appavurarther Sumichrast	SHEAR TESTS ON PERFOBOND CONNECTIONS IN TIMBER CONCRETE COMPOSITES	https://doi.org/10.52202/069179-0412
12:30	Ghasan Doudak	STRUCTURAL PERFORMANCE OF REINFORCED GLULAM BEAMS	https://doi.org/10.52202/069179-0409
12:45	Salla-Mari West	DELTABEAM® WITH TIMBER FLOOR JOINTS – LOAD BEARING CAPACITY AT AMBIENT TEMPERATURE AND IN FIRE SITUATION	https://doi.org/10.52202/069179-0413
Session 88 12:00-13:00			
Moderator: Nyrud, Anders Qvale		Room 104	
		Theme: 1.4 Engineered timber products and production	
12:00	Jens Hartig	INVESTIGATIONS ON MULTIFUNCTIONAL TIMBER ELEMENTS IMPREGNATED WITH PARAFFINIC PHASE CHANGE MATERIALS	https://doi.org/10.52202/069179-0085
12:15	Birger Buschmann	ADDITIVE MANUFACTURING OF WOOD COMPOSITE PARTS BY INDIVIDUAL LAYER FABRICATION - THE PRODUCTION PROCESS AND RESPECTIVE MACHINERY	https://doi.org/10.52202/069179-0086
12:30	Katja Fruehwald-Koenig	ELASTOMECHANICAL PROPERTIES OF GLUED LAMINATED TIMBER MADE OF STRENGTH GRADED OIL PALM LUMBER	https://doi.org/10.52202/069179-0087
12:45	Mikael Perstorper	BENDING PROPERTIES OF 100 NARROW CLT-BASED BOARDS – STATIC AND DYNAMIC TESTS, FE-MODELLING AND DIC ANALYSIS	https://doi.org/10.52202/069179-0089
Session 89 12:00-13:00			
Moderator: Niklewski, Jonas		Room 105	
		Theme: 1.5 Quality control of timber-based materials	
12:00	Andreas Weidenhiller	PREDICTION OF DOUGLAS FIR SAWN TIMBER YIELD BASED ON LOG COMPUTED TOMOGRAPHY	https://doi.org/10.52202/069179-0105
12:15	David Gil-Moreno	CONSIDERATIONS FOR GRADING SPECIES COMBINATIONS. THE EXAMPLE OF DOUGLAS FIR WITH LARCH IN IRELAND AND UK	https://doi.org/10.52202/069179-0106
12:30	Daniel Ridley-Ellis	CONSIDERATIONS FOR GRADING SPECIES COMBINATIONS. GENERAL REMARKS ON SCENARIOS AND REQUIREMENTS	https://doi.org/10.52202/069179-0107
12:45	Prashanth Gunasekaran	ULTRASONIC-BASED DEFECT IDENTIFICATION IN TIMBER USING UNIFORM MANIFOLD APPROXIMATION AND PROJECTION (UMAP)	https://doi.org/10.52202/069179-0109
Session 90 12:00-13:00			
Moderator: Øvrum, Audun		Room 106	
		Theme: 2.5 Human perception & health, 2.7 Building operation ...	
12:00	Pasi Aalto	WOOD INTERIORS IN ARCHITECTURE: AN EYE-TRACKING STUDY	https://doi.org/10.52202/069179-0144
12:15	Ingrid Bakke	EMISSION OF VOLATILE ORGANIC COMPOUNDS FROM WOOD MATERIALS AND IMPACT ON INDOOR AIR QUALITY	https://doi.org/10.52202/069179-0142
12:30	Kaja Heltorp	CIRCULAR WOOD CONSTRUCTION – EXPECTATIONS, EXPERIENCES AND ACCEPTANCE AMONG USERS, ARCHITECTS AND INDUSTRY REPRESENTATIVES	https://doi.org/10.52202/069179-0146
12:45	Bettina Franke	QUALITY ASSURANCE OF TIMBER STRUCTURES BY NEW MONITORING METHODS FOR THE MOISTURE CONTENT OF WOOD	https://doi.org/10.52202/069179-0148