

Tuesday, July 05, 2022

15:00 – 19:00 **Conference Accreditation** ICSA2022 Desk – Foyer

Wednesday Morning (WeM), July 06, 2022

07:30 – 18:00 **Conference Accreditation** ICSA2022 Desk – Foyer

08:30 – 09:00 **Opening Ceremony** Auditorium 3.107

09:00 – 10:15 **Keynote Lectures** Auditorium 3.107 Chair(s): Paulo Cruz and Marie Frier Hvejsel
L. F. Hansen "Cities of nature - A new paradigm for nature-based urban design"
W. Sobek "Build for more with less"

10:15 – 10:45 **Coffee Break**

10:45 – 12:45 **Concurrent Technical Sessions** WeM 1 to WeM 6

WeM 1 - Auditorium 3.107	WeM 2 - Room 4.105	WeM 3 - Room 5.125	WeM 4 - Room 5.127	WeM 5 - Room 5	WeM 6 - Room 6
Critical practice Critical practice (1)	Mini-Symposia Bio Design: New material practices for a sustainable building culture (1)	General Session Innovative architectural and structural design (1)	General Session Comprehension of complex, conceptual and futuristic structures	Special Session Advances in Wood Construction: Technology and Architecture (1)	General Session Educating architects and structural engineers (1)
Chair(s): I.W. Foged	Chair(s): M.R. Thomsen, P. Nicholas, C. Collet & N. Diniz	Chair(s): C. McCoy	Chair(s): D. Costanza	Chair(s): N.M. Larsen, P. Tidwell & M. Kiel	Chairs: L. Luytens
Probiotic Structures* <i>R. Beckett</i>	Principles of biological design as a model for biodesign and biofabrication in architecture** <i>A. Goidea & D. Andreen</i>	Influence of flexibility of connections on load distribution of TCC-road bridges <i>P. Dreifke, T. Göckel, A. Laubach & J. Schaffitzel</i>	Complexity, Simplified: The Impact on Design with Structural Steel Systems <i>T.M. Boake</i>	Forest-Building: exploring carbon sequestration in wood buildings and forests with system dynamics modelling <i>P. Osborne</i>	Team Totemics: Consequences of an Exquisite Corpse <i>P. Wong, D. Thaddeus & F. Hsu</i>
Multi-Storey Rammed Earth Construction* <i>J. Jeppesen, N. Brix, J. Johannsson & L.K. Nielsen</i>	Knitted Cultivation: Textiling a Multi-Kingdom Bio Architecture <i>J. Scott, R. Kaiser, D. Ozkan, A. Hoenerloh, A. Agraviador, E. Elsacker & B. Bridgens</i>	Design, Fabrication and Erection of a Kinetic Glasshouse <i>C.H. Bitloch, S. Urbano, N. Guitart, J. Torres & L. Estupiñá</i>	The planning and construction of a double curved building in cross laminated timber (CLT) panels <i>L.D. Houck & S. Melville</i>	Towards a Mass Timber Agenda: The local and regional viability of mass timber in Miami-Dade County <i>C. Meyer & S. Meyer</i>	Transformable Building Structures in Architectural Engineering Education** <i>M.C. Phocas, M. Matheou & W. Haase</i>
Cast & Place: A Cast Aluminum Pavilion Defined by Clay* <i>E.M. Segal, L. Ramsburg, J. Draper, S. Thompson, P. Draper, B. Lindsay, M. Dowd & A.A.H. Cheng</i>	Experimentation of natural materials: the use of chitin in additive manufacturing <i>T. Campos, P.J.S. Cruz & B. Figueiredo</i>	Post-tensioned Ceramic Structures: Design, Analysis and Prototyping** <i>M. Bechthold, Z. Seibold & S. Mhatre</i>	Karbandi and crossed-arch dome, from a possible common ground to constructive and geometric differentiation <i>C.P. Do Vale</i>	Designing the thermal properties of bio-composites for thermal mass and dynamic insulation <i>R. Fortin, A. Halepaska & S. Craig</i>	José Zanine Caldas and the structural learning from physical models <i>A.B.P. Carvalho, C. Bartholomeu & M.C.L. dos Santos</i>
Textile Column: Drawing and weaving with 3D printed clay* <i>S. Pain, N. Bartov, E.P. Choo & J. Young</i>	Fungal bioremediation of plastic waste into building materials <i>E. Elsacker, L. van Rompaey, E. Peeters & L. de Laet</i>	Shape optimization of a concrete floor system for sustainability, acoustical, and thermal objectives <i>J.M. Broyles, A.J. Hartwell, E.G. Alvarez, M.A. Ismail, L.K. Norford, C.T. Mueller & N.C. Brown</i>	Steel "pyramids". Lafuente's architectural experimentations in the 1970s. <i>M. Abita, A. Tosone, D. Di Donato & R. Morganti</i>	The Path to Future Wood: Component Based Structural Assembly Systems <i>A. Meyboom & D. Correa</i>	Students' perceptions on teaching-learning structures using BIM in Brazil. <i>L. Mattana, J.C. Souza, M.P. Porto, M.C. Villela & P.B. Flores</i>
Thatched Facades for a Sustainable Future. CO2 neutral fire-retardants for vertical thatched surfaces* <i>A. Beim & H. Ejstrup</i>	Remediating Architecture: A bio-hybrid approach employing fungal mycelium <i>C. Colmo & P. Ayres</i>	Design process: Goian-Cerveira footbridge over the Miño River, Spain-Portugal <i>A.B. Larena, J.G. Mateo, M.S. de Oliveira & J.B. Larena</i>	Multi-criteria analysis of buildings transformation potential in planning and design <i>R. Andersen & L.B. Jensen</i>		Space, Stability & Strength: An Integrated Pedagogy for Urban Tectonics and Landscapes <i>M. Laboy</i>
Las Aradas Memorial. Engaging in popular building techniques* <i>H. Fallon & T. Montulet</i>		Exploration of static equilibrium representations; policies and genetic algorithms <i>I. Mirtsopoulos & C. Fivet</i>	The Role of Structural System and Building Materials of World Expo Pavilions on Providing Sustainable Solutions for Post-Expo Use <i>I.M. Makinaci & A. Berk</i>		The case of an Adaptable Rationalization and structural Dual Generative and Parametric Analysis that may synchronously Control the deformation of the Sydney Opera House System <i>A. Sophocleous-Lemonari, P. Fereos, M. Georgiou & A. Balabanides</i>
Critical practices panel <i>I.W. Foged, A. Lendager, F. Jensen, K. S. Poulsgaard & L.F. Hansen</i>					

Wednesday Afternoon (WeA), July 06, 2022

12:45 – 13:45 **Lunch Break**

13:45 – 15:05 **Concurrent Technical Sessions** WeA 1 to WeA 6

WeA 1 - Auditorium 3.107	WeA 2 - Room 4.105	WeA 3 - Room 5.125	WeA 4 - Room 5.127	WeA 5 - Room 5	WeA 6 - Room 6
Critical practice Critical practice (2)	Mini-Symposia Bio Design: New material practices for a sustainable building culture (2)	General Session Innovative architectural and structural design (2)	Special Session BE-AM on Tour (1)	Special Session Advances in Wood Construction: Technology and Architecture (2)	General Session Educating architects and structural engineers (2)
Chair(s): I.W. Foged	Chair(s): M.R. Thomsen, P. Nicholas, C. Collet & N. Diniz	Chair(s): M. Bechthold	Chair(s): U. Knaack & O. Tessmann	Chair(s): N.M. Larsen, P. Tidwell & M. Kiel	Chairs: T. Fowler & S. Rihal
Adaptive Reflective Environments*	Prototaxites stellaviatori: A fungal growth simulation model for Mycelium-Based Composites education in applied arts	Skins – cultural approaches to experimental facades designed by architect Byoung Cho	Function integration and reinforcement of free-form thin sheet metal using Wire Arc Additive Manufacturing.(WAAM)	Natural Form and Industrial Building – Two Case Studies	Musical Structures as Structural Pedagogy
<i>I.W. Foged & M. Sørensen</i>	<i>A. Rigobello, N. Gaudillière-Jami & P. Ayres</i>	<i>L.H. Hansen</i>	<i>C.B. Costanzi & U. Knaack</i>	<i>P. Tidwell, P. Heikkinen & J. Torvinen</i>	<i>D.J. Oakley</i>
Multi-layer planar reciprocal frames: a structure prototype for floor and roof systems*	Mycostructures - Growth-driven fabrication processes for architectural elements from mycelium composites**	The Anthony Timberlands Center for Design and Materials Innovation	Design of optimized 3D-printed steel nodes	Integrative strategies across the digital timber value chain	Can education of structural engineers be improved by including architecture in the curriculum?
<i>M. Dunn</i>	<i>E. Biala & M. Ostermann.</i>	<i>P. MacKeith & J. Boelkins</i>	<i>M. Erven & J. Lange</i>	<i>T. Svilans, M. Tamke & M.R. Thomsen</i>	<i>S.D. Taraldsen, B. Izumi, B.N. Sandaker, M. Luczkowski, B. Manum & A. Rønquist</i>
Reuse and misuse with heat formed acrylic*	Craft and structural innovation of mycelium structures in architectural education	Experiencing structure: Structural design as the making of a spatial artistic expression	How to dress a column: An architect's method for designing with 3D printed clay	Timber structures made of naturally curved oak wood: prototypes and processes**	Structure as (Primary) Generator of Architectural Design: a Study of a Master Dissertation Studio**
<i>A. Chao, E.M. Segal, L. Ramsburg & P. Draper</i>	<i>J. Dessi-Olive.</i>	<i>R. Zhang & S. Wang</i>	<i>S. Pain, E.P. Choo, N. Bartov & J. Young</i>	<i>N.M. Larsen, A.K. Aagaard, M.M. Hudert & L.W. Rahbek</i>	<i>L. Luyten</i>
Physical model: Goian-Cerveira footbridge over the Miño River, Spain-Portugal*	Bioluminescent micro-architectures: Planning design in time, an eco-metabolistic approach to biodesign**	Generative Design of Mega-Structures: A Structural Grammar Approach	3D printing of column structures for architectural applications**		Flipped Classroom for teaching structures in Architecture courses
<i>M.S. de Oliveira, A.B. Larena, J.G. Mateo & J.B. Larena</i>	<i>G. Tyse, M. Tamke, M.R. Thomsen & A.F. Mosse</i>	<i>V. Tomei, D. Faiella, F. Cascone & E. Mele</i>	<i>B. Waldschmitt, C. Borg Costanzi, U. Knaack & J. Lange</i>		<i>E.N.P. Costa & J.M. Sánchez</i>
Critical practices Panel					
<i>I.W. Foged, A. Lendager, F. Jensen, K. S. Poulsgaard & L.F. Hansen</i>					

Wednesday Evening (WeE), July 06, 2022

15:05 – 15:40 **Coffee Break**

15:40 – 17:30 **Concurrent Technical Sessions** WeE 1 to WeE 6

WeE 1 - Auditorium 3.107	WeE 2 - Room 4.105	WeE 3 - Room 5.125	WeE 4 - Room 5.127	WeE 5 - Room 5	WeE 6 - Room 6
Critical practice Critical practice (3)	Mini-Symposia Bio Design: New material practices for a sustainable building culture (3)	General Session Computer and experimental methods	Special Session BE-AM on Tour (2)	General Session Glass Structures	General Session Educating architects and structural engineers (3)
Chair(s): I.W. Foged	Chair(s): M.R. Thomsen, P. Nicholas, C. Collet & N. Diniz	Chair(s): M. Blenkuš	Chair(s): U. Knaack & O. Tessmann	Chair(s): D. Oakley	Chair(s): M. Laboy
Kinetic Thin Glass Building Envelope* <i>H. Mulder</i>	Material probes into paper waste as a bacterially-induced and 3D printed foam: Combining biodesign and circular principles <i>A.F. Mosse & J.-F. Bassereau</i>	Digital prototyping as a tool for early design evaluation <i>D.I. Dimitrov</i>	Concrete AM: An insight into the control of main parameters <i>J. Ribeiro, B. Figueiredo, P.J.S. Cruz & A. Camões</i>	Looking at the foundations of structural glass with a digital microscope <i>F.A. Veer</i>	Drawing the organicity chart: structure analysis exercises for better design skills <i>Th. Vilquin</i>
Towards a new Nordic understanding of Novel Envelope Design* <i>M. Singh</i>	Living Manufacture: Principles for a microbial 3D printer <i>T. Arnardottir, M. Dade-Robertson, M. Zhang & J. Loh</i>	Viability study of an integrated optimized tool for form-found timber structures <i>A. Zamora, J.M. Cabrero & M.M. Hudert</i>	The business case for 3D printing in the built environment <i>P.L. Rosendahl & A. Wolf</i>	The adhesively-bonded glass brick system of the Qaammat Pavilion in Greenland: From research to realization** <i>F. Oikonomopoulou, T. Bristogianni, M. van der Velden & K. Ikonomidis</i>	A Consultancy Design Studio Model for Advanced Structural Integration <i>T. Fowler & S. Rihal</i>
Prototyping Collective Gestures: Reworking the way and the work of architecture* <i>M.F. Hvejsel, W. Ahues, M. Stumpf & M. Wyller</i>	Between Breakfast and Bed: Towards Fluid Modes of Designing and Cohabiting with Living Organisms <i>S. Keune, A. Mody & M. Westerlaken</i>	A Digital Process for Reconstructing Wind Turbine Blade Geometry from Point Cloud Data <i>C. Kiernicki, S. Kakkad, M. Bermek & T.R. Gentry</i>	AM of discrete ceramics – Post tensioned gantry structures <i>J. Carvalho, P.J.S. Cruz & B. Figueiredo</i>	Test facilities and concept for the evaluation of optical anisotropy effects in tempered glass <i>S. Dix, K. Thiele, L. Efferz, C. Schuler, J. Schneider & S. Kolling</i>	What is built and what is taught** <i>C. Olmedo, J. Antuña & A. Calle</i>
Re:Shuffle* <i>L. Mangliár & M.M. Hudert</i>	A Study Model for the Reconstruction of Urban Ecological Niches <i>A. Ilgün, R. Mills, F. Mondada & T. Schmickl</i>	Artificial intelligence and machine learning for low carbon architecture. Prototype carbon estimation tool development case study <i>M. Płoszaj-Mazurek</i>	Reinforcement Lattices for 3DCP: a fabrication method based on ruled surfaces <i>A. Anton, L. Reiter, E. Skevaki & B. Dillenburger</i>		The long road to education for upcoming data-driven practices in architecture: gaps, difficulties and silos <i>A. de Boissieu & R. Deutsch</i>
Double Curved Stressed Skin Structures for Architecture* <i>A. Meyboom, D. Correa & O.D. Krieg</i>	PolyBrick 2.0: Design and Fabrication of Load Responsive Structural Lattices for Clay Additive Manufacturing <i>E.B. Birol, C.J. Hernandez & J.E. Sabin</i>	Expertise, playfulness, analogical reasoning: three strategies to train Artificial Intelligence for design applications** <i>G. Mirra & A. Pugnale</i>	Additively manufactured paper products from cellulose-pulped fibers and its quality according to rheology and 3D printing performance <i>D.A. Agha & U. Knaack</i>		Consolidating Pedagogies In Between Architecture and Engineering <i>I. Serefoglu, R. Pedreschi & M.P. Maldonado</i>
					An investigation in flipping the structural classroom in an architecture program <i>S. Shadravan</i>
Critical practices panel <i>I.W. Foged, A. Lendager, F. Jensen, K. S. Poulsgaard & L.F. Hansen</i>					
17:30 – 18:00	Break Walk along the fjord to visit the site of the Ephemeral Permanence 1:1 Design & Build workshop				
18:00 – 18:40	Onsite presentation: Ephemeral Permanence 1:1 Design & Build workshop M. Rinke, A. Tellini & T. Olsen				
19:00 – 21:00	Welcome Reception & Exhibition: Summerhouse Uzton Center				

Thursday Morning (ThM), July 07, 2022

08:00 – 18:00	Conference Accreditation ICSA2022 Desk – Foyer				
08:30 – 09:45	Keynote Lectures Auditorium 3.107 Chair(s): Paulo Cruz and Marie Frier Hvejsel T. Saraceno “Cloud City Aalborg” Dr. F. Trubiano “Material health and human labor - Building ethical constructs for architecture and structures”				
09:45 – 10:15	Coffee Break				
10:15 – 12:15	Concurrent Technical Sessions ThM 1 to ThM 6				
ThM 1 - Auditorium 3.107	ThM 2 - Room 4.105	ThM 3 - Room 5.125	ThM 4 - Room 5.127	ThM 5 - Room 5	ThM 6 - Room 6
Mini-Symposium 1:1, Tools and Programs (1)	Special Session Radical Tectonics: Aiming for absolute sustainability in structures and architecture in a time of climate crisis (1)	General Session Special Structures	Special Session Resilient Built Environment and Communities, Pre- and Post Disaster	General Session The borderline between architecture and structural engineering	Special Session Infrastructure Design and Socio-Ecological Agency: The (side) effects of structures, systems and spaces
Chair(s): M. Rinke & M. Vrontissi	Chair(s): A. Beim, U. Meister & F. Trubiano	Chair(s): L. F. d. Santos	Chair(s): O. Iuorio & A. Melis	Chair(s): R. Pedreschi	Chair(s): G. de Block & D.B. Lannig
Detail Machines: Generating Design at Full-Scale** <i>T. Boling</i>	Reimagining low-carbon futures: architectural and ecological tradeoffs of mass timber for durable buildings** <i>M. Laboy</i>	Biomechanics-Driven Kinematics of Reconfigurable Linkage Structures <i>N. Georgiou & M.C. Phocas</i>	Semi-temporary post-earthquake settlements in Italian historical centers: performance-based guidelines and BIM simulations <i>S.R. Ermolli & G. Galluccio</i>	Evaluating profession-based vocabulary in teams of architecture and engineering designers <i>S. Bunt & N.C. Brown</i>	The social and ecological agency of infrastructure design <i>D.B. Lannig & G. de Block</i>
Material Based Design. A Teaching Methodology for an Introductory Making Course in Architecture Education <i>A.O. Tellini & M. Rinke</i>	An Urban Sink – Case Study of an (Im)material Metabolism of Buildings <i>K. Usto, M.F. Hvejsel & C. Brunsgaard</i>	The Deployable Tectonic: Mechanization and mobility in architecture** <i>C. McCoy & T. Duffy</i>	Future scenarios for housing (re)settlements in Ecuador** <i>O. Iuorio & M. Russo</i>	Design and construction of a ribbed concrete slab based on isostatic lines <i>P. Vejrum & M.S. Jensen</i>	Towards ethical mobility behavior: the socio-ecological potentiality of ambiance-based mobility infrastructure design <i>C. Pelgrims</i>
Methods of Collaboration in Full Scale Projects <i>U. Meister & C. Rist-Stadelmann</i>	The Construction Material Pyramid – ‘Upfront impacts’ as a methodical change in architectural design <i>P. Munch-Petersen & A. Beim</i>	Life Cycle Inventory analysis for resource-efficient structural steel nodes: metal 3D printing or traditional manufacturing? <i>M. Chierici, F. Berto, A. Kanyilmaz & C.A. Castiglioni</i>	A Min-Max Protocol for Adaptive Refugee Housing <i>E. Mark, N. Cheng, D. Golczewski, I. Chen & M. Zad</i>	Conceptual design of structures as a meeting point between architects and engineers. An original example from Switzerland <i>S. Miccoli & R. Guidotti</i>	Recalibrating socio-ecological agency in post-war housing schemes. Experimenting with green infrastructure in The Netherlands (1960-1970s)** <i>B. Notteboom & I. van Hellemond</i>
Constructing a 1:1 Curriculum on the Arabian Peninsula <i>M. Hughes</i>	Radical Tectonics – a multi-scalar approach to material circularity through community empowerment, building re-use, and material regeneration** <i>A. Beim, U. Meister & F. Trubiano</i>	BladeBridge - Design and Construction of a Pedestrian Bridge using Decommissioned Wind Turbine Blades <i>Z. Zhang, K. Ruane, A. Huynh, A. McDonald, P. Leahy, A. Alshannaq, T.R. Gentry, A. Nagle & L.C. Bank</i>	Architecture for Coral Restoration: Using Clay-Based Digital Fabrication to Overcome Bottlenecks to Coral Larval Propagation <i>A. Crawford, A. Humanes, G. Caldwell, J. Guest & E. van der Steeg</i>	Three arches for a roof – case study of a multi-disciplinary design process** <i>T. Devriese, M.V.D. Driessche & J. Belis</i>	The promise within the mess of temporary uses <i>T. Vestermann</i>
A Pedagogy of Digital Materiality - Integrated Design and Robotic Fabrication Projects of the Master of Advanced Studies in Architecture and Digital Fabrication** <i>D. Jenny, H. Mayer, P. Aejmelaeus-Lindström, F. Gramazio & M. Kohler</i>		Mitigation of seismic risk on high-rise buildings using rocking cores <i>F. Mollaioli, G. Angelucci & M. De Angelis</i>	Lessons from Skopje 1963-2020: How to build back better? <i>T. Mihajlovska & M. Petrova</i>	Framing a computational tool for early conceptual structural design <i>J. Corneliusen, S. Deleuran, P.H. Kirkegaard & V. Beatini</i>	Kulkransporet as transformed infrastructure <i>R.C. Bach & L.B. Jespersen</i>
		Towards Artificial Ossification for Bone-inspired Technical Structures <i>R. Starke, I. Vukorep, K. Frommelt, A. Melcher & T. Hinze</i>	Adaptive Aluminum Tensegrity Structure as a Bike Parking Canopy <i>A. Sychterz</i>	How can we design gridshells with customised and unconventional connectors? <i>M. Luczkowski, S.M. Haakonsen, S.H. Dyvik & J.H. Mork</i>	

Thursday Afternoon (ThA), July 07, 2022

12:15 – 13:15 Lunch Break

13:15 – 14:35 Concurrent Technical Sessions ThA 1 to ThA 6

ThA 1 - Auditorium 3.107	ThA 2 - Room 4.105	ThA 3 - Room 5.125	ThA 4 - Room 5.127	ThA 5 - Room 5	ThA 6 - Room 6	Associated Event
Mini-Symposium 1:1, Tools and Programs (2)	Special Session Radical Tectonics: Aiming for absolute sustainability in structures and architecture in a time of climate crisis (2)	Special Session Towards a Robotic Structuralism	General Session Timber structures	Special Session Low-carbon Low-waste Structures	Special Session The Architecture and Structure of Human Wellbeing (1)	Associated Event Urban Walkshop
Chair(s): M. Rinke & M. Vrontissi	Chair(s): A. Beim, U. Meister & F. Trubiano	Chair(s): M.K. Kragh & R. Naboni	Chair(s): A. Meyboom	Chair(s): D. Parigi & C. Fivet	Chair(s): J. Holst & T.D.O. Tvedebrink	Chair(s): D.B. Lanng, T. Olsen, S.R. Borg, H. Vishway & A.L.J. Venkata
The Construction Studio; An integrated pedagogical approach to architecture education <i>I. Vrouwe & J. Kristek</i>	The Radical (re) Construction of Memory in the American South <i>D. Willkens & V. Noel</i>	What a carpenter can learn from 'Thingiverse'; how robots are already changing the craft of carpentry <i>W. Schwarzmann</i>	Investigations on shear-connections of timber-granite-composite structures <i>F. Walgenbach-Albat, T. Göckel, A. Laubach, G. Kusser, F. Miebach & J. Schaffitzel</i>	Multidimensional indicators for recyclability assessment of structural materials <i>M. Mayer</i>	An Eco-poetic Architect - the resonate presencing of material properties and environmental conditions in the case of Jørn Utzon <i>N.B. Andersen</i>	
Project-Based and Experiment-Based Learning of Structural Behaviour and Integrated Design Skills for Architecture Students <i>Ö. Acican & L. Luyten</i>	Radical Tactics for Mycelium Structures <i>J. Dessi-Olive, R. Bunrock & O. Olyan</i>	Enabling circularity in building construction: experiments with robotically assembled interlocking structures <i>L. Mangliár & M.M. Hudert</i>	Evolving timber school building design in Norway <i>E. Ratsou-Stæhr, L.D. Houck & T.K. Thiis</i>	Why current carbon metrics for buildings fail to show the benefits of timber reuse <i>D. Parigi, K. Kanafani & F.N. Rasmussen</i>	Tectonics of human well-being: Describing architecture in terms of constructed spatial gestures and their impact** <i>E. Sántha, M.F. Hvejsel & J.M. Entwistle</i>	
Structural models in architectural education: Experimental explorations between the physical and the digital realms <i>J.J. Castellon Gonzalez</i>		Computational Design and Robotic Fabrication of a Self-Supporting Acoustic Shell <i>P. Loh, G. Mirra, D. Leggett & A. Pugnale</i>	Mass timber buildings: the good, the bad and the ugly <i>A. Solarte & R. Couper</i>	Reducing the environmental impact of footbridges through smart under-deck cable-stayed systems <i>M.d.M. Corral & L. Todisco</i>	Evidence-based design as a process for designing a health supportive environment at care facilities for elderly with dementia <i>V.L. Lygum, N. Mathiasen, S. Grangaard, L. Sigbrand & A.K. Frandsen</i>	
From conceptual art to structural design, teaching structures for architects <i>E. Brito & R.F. Póvoas</i>		Robotic zip-bending of wood structures with programmable curvature** <i>R. Naboni, A. Kunic, D. Marino & H. Hajikarimian</i>	The design, development and construction of a digitally fabricated reciprocal timber structure <i>A. Dieste, R. Pedreschi & C. Nan</i>	Spherical harmonic shape descriptors of nodal force demands for quantifying spatial truss connection complexity** <i>K.L. Lee, R. Danhaive & C.T. Mueller</i>		

Thursday Evening (ThE), July 07, 2022

14:35 – 15:10 **Coffee Break**

15:10 – 16:50 **Concurrent Technical Sessions** ThE 1 to ThE 6

ThE 1 - Auditorium 3.107	ThE 2 - Room 4.105	ThE 3 - Room 5.125	ThE 4 - Room 5.127	ThE 5 - Room 5	ThE 6 - Room 6
Associated Event Integrated Eco-Design in Architecture, Granta Edupack Knowledge Exchange	Special Session Structures and Architecture of Refurbishment: Strategies and Techniques for the 21st Century	General Session The history of the relationship between architects and structural engineers	Special Session Integrated Informed Design Processes: Joining urban design, architecture, and engineering for a sustainable tomorrow	General Session Concrete and masonry structures	Special Session The Architecture and Structure of Human Wellbeing (2)
Chair(s): B. Ogwezi & F. Veer	Chair(s): J. Antuña, E.F. Forner & D. Theodossopoulos		Chair(s): A. Kamari, S. Pelsmakers & C. Bañón		Chair(s): J. Holst & T.D.O. Tvedebrink
	Tectonics of conservation technology** <i>D. Theodossopoulos</i>	Central Institute of Sciences building: the complexity of the synthesis <i>E.G. da Silva, J.M. Sánchez & J.C. de Vasconcellos</i>	Towards an Open Model for Integrated Planning of the Built Environment: Research Agenda <i>J. Ruge, J.R. Noennig, A. Bögle, J. Schiewe & M. Ballestrem</i>	A slim concrete skeleton within thick block masonry; multi-story building construction <i>N. Leimand</i>	Wellbeing at the office: an anthropological approach to POE <i>M. Rasmussen, J.M. Entwistle, M. Stender & S. Petersen</i>
	A study of relevant features for over-elevation as a strategy for urban renewal <i>M.P. Blasco & I. Cabrera i Fausto</i>	Expressing Structural Forces—Carlo Scarpa and his Collaboration with the engineer Carlo Maschietto <i>A.-C. Schultz</i>	Integrated Informed Design Processes: A mapping of building performance criteria in the Danish conventional design practice <i>M. Christiansen & A. Kamari</i>	Geometrical analysis of masonry structures for computational methods of design and form finding. the case study: Iranian YazdiBandi <i>T. Samipour & J.A. Diaz</i>	Tying architecture and homeostasis using affordances: An approach to well-being in the built environment <i>Z. Djebbara, A. Jelic & L.B. Fich</i>
	Design for Disassembly: Comparative Life Cycle Assessment of Two Wood-Frame Structural Systems <i>S. Silverstein</i>	Redefining structural art: a neuroaesthetics perspective on the art of structural design** <i>S. Wang, T. Kotnik & J. Schwartz</i>	A Blended Approach to Concept Transfer: Building Platform-based Design for Manufacture and Assembly (DfMA) <i>D. Maxwell & I. Kuzmanovska</i>	Dynamic response of masonry structure with the application of horizontal seismic band: shake table tests <i>S. Yadav, Y. Sieffert, F. Vieux-Champagne, P. Garnier, M. Hajmirbaba, L. Arléo & E. Créte</i>	Stories of Structures, Spaces and Bodies: Towards a Tectonics of Well-being** <i>T.D.O. Tvedebrink, A. Jelic & S. Robinson</i>
	HBIM: to Know to Model the Complexity, Cases History on Italian Cultural Heritage <i>A. Armanasco, V. Caspani, D. Foppoli, & M. Bellanova</i>	Searching for Shankland: The Career of Edward Clapp Shankland <i>M.S. Uihlein</i>		Exploration in how to streamline, lighten, reduce costs, and ease the environmental footprint of reinforced concrete slabs <i>A. Perez-Garcia & I. Lauwers</i>	How 4E Cognition Changes Architectural Education** <i>S. Robinson</i>
	Restoration of existing RC frame buildings with CLT panels: experimental and numerical study on innovative connection system <i>F. Boggian, A. Aloisio, M. Pellicciari, S. Sirotti & R. Tomasi</i>	Sydney Opera House: the strength of an idea <i>J. Rey-Rey</i>		1970: Accidents that changed the course of the Brazilian Heavy Construction industry <i>S.N. Alves & J.M. Sánchez</i>	
17:00 – 17:45	General Meeting International Association of Structures and Architecture Auditorium 3.107				
20:00 – 23:00	Gala Dinner The House of Music				

Friday Morning (FrM), July 08, 2022

09:00 – 17:00 **Conference Accreditation** ICSA2022 Desk – Foyer

09:00 – 10:15 **Keynote Lectures** Auditorium 3.107 Chair(s): Paulo Cruz and Marie Frier Hvejsel
Dr. P. Block “Re-defining structural art: Efficiency, economy, elegance, ecology, ethics”
L. Ney “Bridge design: An integrated approach in complex contexts”

10:15 – 10:45 **Coffe Break**

10:45 – 12:25 **Concurrent Technical Sessions** FrM 1 to FrM 6

FrM 1 - Auditorium 3.107	FrM 2 - Room 4.105	FrM 3 - Room 5.125	FrM 4 - Room 5.127	FrM 5 - Room 5	FrM 6 - Room 6
Mini-Symposium Materiality in Architecture and Building Design (1)	General Session The tectonic of architectural solutions (1)	Special Session Adaptive Building Envelopes (1)	Special Session The Future of Bridges: A roadmap towards circular and inclusive bridge design	General Session Ecology of structures and architecture (1)	Special Session Reimagining Bureaucracy: Challenging the structure and architecture of legal frameworks
Chair(s): O.P. Larsen & M.M. Hudert	Chair(s): P. Trovalusci	Chair(s): I.W. Foged & M.K. Kragh	Chair(s): J. Smits & M. Knight		Chair(s): H. Ejstrup & P. Munch-Petersen
Curious Constructions: Around Materials, Labor, And the Environment <i>D. Costanza</i>	Távora's house in Ofir: sustainability and vernacular knowledge <i>E. Fernandes</i>	Adaptive Hybrid Structure for Photovoltaic Shading Modules Integration <i>C. Palochi, M. Matheou & M.C. Phocas</i>	The Striatum arched bridge: Computational design and robotic fabrication of an unreinforced, 3D-concrete-printed, masonry bridge** <i>S. Bhooshan, V. Bhooshan, A. Dell'andice, J. Mege, P. Singer, J. Chu, T. Van Mele & P. Block</i>	Local tectonics. Danish architectural construction in historical environmental perspective <i>M. Lauring</i>	Certifying architecture <i>M.B. Jørgensen</i>
Exploration of various textures in ferro-cement panels <i>R. Schwaen</i>	Poetics of construction, material imagination, and place identity: Assessing the work of RCR Architects in the UAE <i>I.P. Curiel & S. Strum</i>	Geometric variety of scissor linkages according to loop geometry: A case study of a canopy design <i>B. Atamaz, Y. Akgün, F. Maden, C. Kavuncuo lu & Ö. Kilit</i>	Nature inclusive Bridge Design <i>J. Smits</i>	Architecture as Empathic Data Structure between Adjustable Hyperintelligence and Reasonable Indestructibility <i>N.-C. Fritsche</i>	The bumpy road to a sustainable building culture – an initial overview of the challenges in getting from innovative ideas to positive impact in construction <i>M. Thomassen & P. Munch-Petersen</i>
Material Practices: Exploring materiality and process <i>R. Pedreschi</i>	Living, Uninterrupted: The Positive Potential of Low Impact Construction** <i>T.M. Boake</i>	Optimisation of daylighting conditions through adaptive kinetic envelopes <i>M.Y. Jeong, M. Matheou & L. Blandini</i>	Varvsbron; Innovation in Bridge Design and Advanced SurfaceModelling <i>T. Gapinski & S. James</i>	Circularity of Place? An investigation of spatial gestures as circular principles <i>R.N. Andersen & M.F. Hvejsel</i>	Daylight conditions in housing – its role and priority in Danish Building regulations** <i>A.K. Frandsen, N. Mathiasen & L. Grønlund</i>
Towards customized textile profile preforms made from flax fibers and biobased resin for the design of biocomposite structures <i>P. Baszynski & H. Dahy</i>	The tectonic of single column roof structures <i>L. Slivnik</i>	Wood-Textile Thermal Active Envelopes** <i>I.W. Foged</i>	Re:Crete – Reuse of Concrete Elements in New Structures: a Footbridge Prototype <i>J. Brütting, J. Devènes, C. Küpfer, M.Bastien-Masse & C. Fivet</i>		Competitional Narratives and Architectural Outcomes <i>H. Ejstrup & J.S. Nielsen</i>

Friday Afternoon (FrA), July 08, 2022

12:25 – 13:30 **Lunch Break**

13:30 – 14:50 **Concurrent Technical Sessions** FrA 1 to FrA 6

FrA 1 - Auditorium 3.107	FrA 2 - Room 4.105	FrA 3 - Room 5.125	FrA 4 - Room 5.127	FrA 5 - Room 5	FrA 6 - Room 6
Mini-Symposium Materiality in Architecture and Building Design (2)	General Session The tectonic of architectural solutions (2)	Special Session Adaptive Building Envelopes (2)	Special Session Cellulose-Based Materials in Structures and Architecture	General Session Ecology of structures and architecture (2)	General Session Building Envelopes / Facades (1)
Chair(s): O.P. Larsen & M.M. Hudert	Chair(s): R. Povoas	Chair(s): I.W. Foged & M.K. Kragh	Chair(s): J. Latka & R. Bach		Chair(s): K. Dong
A robotically extruded sugar waste composite for a circular biomateriality in architecture <i>J. Meng, D. Alnaeb, A.K. Salmane, P. Devadass, M. Cruz & B. Parker</i>	Structural typologies and the architectural space - Studies of the relationship between structure and space by application of structural types to multistory buildings** <i>B.N Sandaker, B. Kleven & A.R. Wang</i>	Development and testing of real size smart material sun shading - R&D ADAPTEX <i>P.-R. Denz, N. Suwannapruk, P. Vongsingha, E.F. Waldhör, M. Schneider & C. Sauer</i>	Exploration of natural materials in additive manufacturing in architecture: use of cellulose-based pulps <i>T. Campos, P.J.S. Cruz & B. Figueiredo</i>	Structures and change – Tracing adaptability based on converted buildings** <i>M. Rinke & R. Pacquée</i>	Valuation of Modernist Envelope as Criteria for Architectural Intervention Aiming Energy Efficiency <i>J.M. Sánchez & C. Amorim</i>
Fiber Reinforced Timber – Designing Structural Beams for Sustainable Buildings with Enhanced Load-Bearing Capacity <i>M. Budig & D.S. Mlote</i>	The forgotten column at the Sydney Opera House <i>P. Tombesi, P. Stracchi & L. Cardellicchio</i>	Occupant-Oriented Adaptive Building Envelopes: A Hybrid Design Framework for Human, Material, Environment Synergies <i>V. Fragkia & I.W. Foged</i>	Preserving the environmental properties in paper-based architecture <i>A. Jasiolek</i>	The principles of combining facade loadbearing properties with the effects of sustainable passive shading <i>M. Blenkuš, A. Avguštin, F. Peharda & U. Žvan</i>	Façade Tiles in Hong Kong: From protective envelope on everyday buildings to the tileworks of the Cultural Centre and M+ Museum <i>R.S. Diederling, N. Tian & J.X. Zhu</i>
Composite adaptation: a holistic structural and architectural approach to small-scale building adaptation in cities <i>M. Anderson</i>	The constructive dimension. The influence of structural language in making architecture <i>P. Trovalusci & R. Panei</i>		Temporality in eternity – paper partitioning in an open building <i>J. Latka</i>	Why Urban Mining is Inevitable: Analyzing the Resource Consumption of Urban Structures <i>S. Weidner, R. Bechmann & W. Sobek</i>	Climate-Adaptive Façades: An Integral Approach for Urban Rainwater and Temperature Management <i>C. Eisenbarth, W. Haase, L. Blandini & W. Sobek</i>
					Revisiting the Analogy of the Building Envelope and the Skin: A Biomimetic Perspective <i>Z. Öztoprak</i>

Friday Evening (FrE), July 08, 2022

14:50 – 15:30 **Coffee Break**

15:30 – 16:30 **Concurrent Technical Sessions** FrE 1 to FrE 6

FrE 1 - Auditorium 3.107	FrE 2 - Room 4.105	FrE 3 - Room 5.125	FrE 4 - Room 5.127	FrE 5 - Room 5	FrE 6 - Room 6
Mini-Symposium Materiality in Architecture and Building Design (3)	General Session The tectonic of architectural solutions (3)	General Session Tall Buildings	General Session Emerging technologies		General Session Building Envelopes / Facades (2)
Chair(s): O.P. Larsen & M.M. Hudert	Chair(s): E. Fernandes		Chair(s): B. Figueiredo		Chair(s): R. T. Hellwig
Eloquent timber: Tacit qualities, telling materiality, and the inhabitants' voice** <i>U. Groba</i>	Classification of connections and joints in buildings for sustainability (CCJB-S): a provisional scheme <i>C. Escaleira, P.J.S. Cruz & R. Amoêda</i>	I LOVE TO GET HIGH: A Critique of the Materiality of Observation Spaces <i>T.M. Boake</i>	Automated robotics agents for assembly-aware design of shells <i>S. Wilcock, J.H. Boyle, M.R. Dogar & O. Iuorio</i>		Maintenance, Repair and Refurbishment of masonry façades to avoid severe seismic damages <i>M. Roik & S. Hine</i>
The structural geometry of a beam element from 4 torqued strips <i>G.H. Filz, S. Elmas & A. A. Markou</i>	Conveying Tradition through Tectonics: The Case of Kagawa Prefectural Office Building and Kiyomizu-dera Temple. <i>N.S. Yordanova</i>	Living among the clouds: From tower to texture <i>M. Petrova & T. Mihajlovska</i>	Life-cycle assessment of water-filled glass (WFG) <i>G. Cavana, M. Gutai & A.G. Kheybari</i>		Managing Complexity: Design Development of an Innovative Membrane based Double-Skin Envelope <i>K. Ku & M. Cimillo</i>
Material Value(s): Motivating the architectural application of waste wood** <i>X. Browne, O.P. Larsen, N.C. Friis & M.S. Kühn</i>		Skyscraper Collaboratory** <i>T. Fowler & K. Dong</i>	Embedding ornament: custom nozzle design in 3-D clay printing <i>Y.M. Wu, A. Kenny, I. Kim & D. Correa</i>		
16:30 – 17:00 Closing Ceremony Location					

* Are contributions accepted for the new Critical Practices research format. Critical Practices is a hybrid format employing the submission, exhibition, and presentation of physical prototypes as research output in combination with shorter reflection papers of three pages in an attempt at bridging research across academia and practice.

**Are contributions corresponding to papers published in the special issue 'Structures and Architecture – Joining Forces' of the new Springer journal Architecture, Structures and Construction. Based upon the review, by ICSA2022 International Scientific Committee of the abstracts submitted to ICSA2022 call for participation, approximately 50 authors were invited to submit the corresponding full papers through the Journal's Editorial Manager system strictly following the journal's peer-review process. Presentations marked ** represent the papers that were finally accepted for publication in the journal after having successfully completed this process.

Conference Network: (Available in the period 04.-09.07.2022)

Network: AAU-CONF-1

Code: naivxjn