

**Concrete Institute of Australia's Biennial National Conference 2023**  
**SUNDAY 10 September 2023 - WEDNESDAY 13 September 2023**  
**Perth Convention Exhibition Centre**

**Monday, 11 September 2023**

<b>07:30</b>	Registration Open				<b>07:30</b>
<b>Plenary Room (Meeting Rooms 1-3)</b>					
<b>08:45</b> - <b>09:15</b>	Opening Ceremony & Welcome to Country				<b>08:45</b> - <b>09:15</b>
<b>09:15</b> - <b>10:00</b>	<b>Keynote Presentation</b> Future concrete solutions: Improving resilience and sustainability in the built environment. <b>Romilly MADEW, Engineers Australia</b>				<b>09:15</b> - <b>10:00</b>
<b>10:00</b> - <b>10:30</b>	<b>MORNING TEA &amp; EXHIBITION BREAK</b>				<b>10:00</b> - <b>10:30</b>
<b>Room</b>	<b>Meeting Room 1</b>	<b>Meeting Room 2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 1A: Sustainability</b>	<b>Session 1B: Concrete Materials</b>	<b>Session 1C: Concrete Design</b>	<b>Session 1D: Case Studies</b>	<b>Session</b>
<b>10:30</b> - <b>10:50</b>	54: Options and Barriers to the Use of Sustainable Concrete <b>David MCDONALD</b>	135: Characterisations of mine tailings to explore their potential beneficiation into cementitious materials <b>Zuobang YAO</b>	161: Increase in longitudinal steel reinforcement to account for shear in RC beam design to AS3600 <b>Sorn VIMONSATIT</b>	226: Modern Methods of Construction-HIEX-MLC Case Study <b>Shan SHANMUGANANTHAKUMAR, Atreyu DE LACY, Troy AULD</b>	<b>10:30</b> - <b>10:50</b>
<b>10:50</b> - <b>11:10</b>	108: The circular economy: implications for bridges <b>John HILTON</b>	84: Long-term durability assessment of concrete with finer cements <b>Ion DUMITRU</b>	29: Economic and Environmental Assessment of Post-tensioned Composite Slab Systems: a Comparative Study <b>Phuoc Tho DINH, Jeung-Hwan DOH</b>	CROSS-AUS: Towards Safer Concrete Structures <b>John WOODSIDE</b>	<b>10:50</b> - <b>11:10</b>
<b>11:10</b> - <b>11:30</b>		229: Effect of Lithium Slag on the Durability Performance of Concrete <b>Md. Tanvir Ehsan AMIN</b>	227: Punching Shear design to AS5100.5:2017 Amendment 2 <b>Peter STATTON</b>	152: Cathodic Protection Installation Within an Operational Container Terminal – Brotherson Dock Life Extension: A Case Study <b>Oliver GASIOR, Blane MCGUINNESS</b>	<b>11:10</b> - <b>11:30</b>
<b>11:30</b> - <b>11:50</b>	251: Utilising Innovative Admixtures to Treat Returned Fresh Concrete <b>Luke CURRAN</b>	80: Opportunities and challenges for coal combustion products with a Circular Economy <b>Craig HEIDRICH</b>	60: The Impact of Confinement and Time Effects on the Calculated Squash Load of Concrete Columns Reinforced with High Strength Steels <b>Anthony NG</b>	148: Design of Electrified Railway Viaducts <b>Satyajit DATAR, James RAJESH</b>	<b>11:30</b> - <b>11:50</b>
<b>11:50</b> - <b>12:10</b>	150: Design and Detailing for Resilience and Sustainability of Concrete Structures <b>Scott MUNTER</b>	48: study On the Properties Of Concrete Using Large Amounts Of Fly Ash And Clinker Fine Aggregate <b>Tomoya OJIMA</b>	274: Joint Design and Construction for Industrial Ground Floors <b>Arslan AWAN</b>	279: Using nanotechnology to improve concrete admixture for a lower carbon footprint <b>Nam LE</b>	<b>11:50</b> - <b>12:10</b>
<b>12:10</b> - <b>12:30</b>	191: Recycled Concrete Aggregate as a Sustainable Construction Material: Engineering and Environmental Consideration <b>Youli LIN</b>	236: The use of magnesium oxide as an additive in concrete <b>John TUXWORTH</b>	312: Reducing carbon emissions in 3D concrete printing <b>Arun ARUNOTHAYAN</b>	239: Concrete Modular Systems for High-rise Buildings - the best practice <b>Priyan MENDIS</b>	<b>12:10</b> - <b>12:30</b>

12:30 - 13:30	<b>LUNCH &amp; EXHIBITION BREAK</b>				12:30 - 13:30
Room	Meeting Room 1	Meeting Room 2	Meeting Room 3	Meeting Room 8	Room
Session	Session 2A: Sustainability	Session 2B: Concrete Materials	Session 2C: Concrete Design	Session 2D: Repair and Retrofit	Session
13:30 - 13:50	79: Low Carbon Concrete Pavement innovation: Coal Combustion Products, rigid and flexible pavement application <b>Craig HEIDRICH</b>	116: Dynamic response of rubberized F-shape barrier subjected to lateral impact <b>Xin LYU</b>	111: Safety in Design: How the concrete designer can stay afloat in a sea of legal & commercial & reputational risk. <b>Geoff FLETCHER</b>	286: Hay St Art Deco Heritage Concrete; Project Enablers of Restoration and Adaptive Re-use <b>Anthea AIREY</b>	13:30 - 13:50
13:50 - 14:10	319: Enabling beneficial use of DBS in concrete application under Circular Economy <b>Mauricio OLIVARES</b>	51: Corrosion Behavior of Steel In Low Calcium Fly Ash Geopolymer Concrete After 10 Years Severe Exposure In Buried Environment <b>Didar CHEEMA</b>	66: How do we teach undergraduates and graduates to design concrete <b>John WOODSIDE</b>	133: Assessing the carbon footprint of concrete repair <b>Greg VAN ROOYEN</b>	13:50 - 14:10
14:10 - 14:30	238: Decarbonisation of Concrete Industry through Innovative Technologies <b>Priyan MENDIS</b>	202: Effect of end-of-life tyre shred content on acoustic and mechanical properties of rubberized concrete <b>Roshan JAYATHILAKAGE</b>	142: Aspects of modelling and design of tall reinforced concrete buildings in seismic areas according to Eurocode <b>Alexander TRAYKOV</b>	67: Electrochemical Chloride Extraction: Re-injecting Sustainability into the Australian Market <b>Troy PALMER</b>	14:10 - 14:30
14:30 - 14:50	156: Exploring the Potential for Developing Economical and Sustainable Cemented Paste Backfill using Mine Wastes <b>Iman AL-DAMAD, Taehwan KIM</b>	215: Concrete incorporating waste oyster shells for artificial reefs <b>Madhwanthi RUPASINGHE</b>	91: Design of fasteners under fatigue loading in Australia <b>Tilak POKHAREL</b>	43: Factors Causing Premature Peeling of Repair Materials and Key Considerations for Appropriate Repair Methods of Concrete Pavements <b>Yuya KATO</b>	14:30 - 14:50
14:50 - 15:10	176: Mineral and crystallographic study of aluminosilicate gel in lithium slag geopolymer <b>Usman JAVED</b>	Water Leakage in Concrete Balconies & Roof tops – Do we need to treat concrete as the primary water resisting element? <b>Shan KUMAR</b>	61: Testing Program to evaluate seismic performance of ETA-approved mechanical anchors used in concrete filled metal deck applications <b>Curtis FOGELBERG</b>	110: Blast strengthening of an historic congress building <b>John TUXWORTH</b>	14:50 - 15:10

15:10 - 15:40	<b>AFTERNOON TEA &amp; EXHIBITION BREAK</b>				15:10 - 15:40
<b>Meeting Rooms 1-2</b>					
15:40 - 16:10	<b>Invited Speaker Session</b> 317: How Standards Are Rising to the Digitisation of the Construction World <b>Adam STINGEMORE, Standards Australia</b>				15:40 - 16:10
<b>Room</b>	<b>Meeting Room 1-2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 3A: Alkali Activated and Geopolymer</b>	<b>Session 3B: Durability</b>	<b>Session 3C: Standards &amp; Codes</b>	<b>Session 3D: Digital Innovation</b>	<b>Session</b>
16:10 - 16:30	35: Impact Performance of BFRP-reinforced Precast Segmental Beams Made of Geopolymer and Portland Cement Concrete <b>Duong TRAN</b>	128: New Northbound Bridge Over Shoalhaven River at Nowra - Concrete Design <b>Peter BOESCH</b>	102: Design for Shear and Torsion <b>Douglas JENKINS</b>	182: Experimental Insight on Flow Induced Particle Migration During Concrete Pumping <b>Xiangyu XIE, Xuemei LIU</b>	16:10 - 16:30
16:30 - 16:50	24: Experimental Study on Waste Glass Cullet as Fine Aggregates in Geopolymer Concrete <b>Hong Lich DINH</b>	144: Impact on Durability of Carbon Dioxide used as a Concrete Admixture <b>Dan ROWLEY</b>	257: Design guidelines for the serviceability limit state of composite steel-concrete structures <b>Gianluca RANZI</b>	72: Current research on 3D concrete printing technology and pilot construction projects in Thailand <b>Ganchai TANAPORNRAWEKIT</b>	16:30 - 16:50
16:50 - 17:10	214: Engineering properties of EFC geopolymer for tunneling applications <b>Ivan CLARKE</b>	<i>(sponsored by Fosroc)</i> 155: Using Carbon Nanotube enriched liquid additive technology to improve concrete durability and design life, contributing as a sustainable solution. <b>Tasha EAGLE</b>	92: Durability of post- installed fasteners <b>Tilak POKHAREL</b>	70: Improve CNN-based Crack Segmentation Using Weighting Strategies <b>Quang Du NGUYEN</b>	16:50 - 17:10
17:10 - 17:30	12: Hydrolytic stability of geopolymer: A review <b>Morteza TAHMASEBI YAMCHELOU</b>	250: Comparing concrete blocks exposed to 20 years of real environments with laboratory experiments <b>Mickael SAILLIO</b>	27: Assessment of International Code Practice on the Contribution of Post-tensioning Towards Integrity Reinforcement <b>Antonio HIRSCH BLANCO</b>	87: Potential Energy Saving by Using 3D Printed Lightweight Concrete Walls of a House in Australia <b>Alireza KASHANI</b>	17:10 - 17:30
17:30 - 17:50	6: The Performance Evaluation of Alkali Activated Materials (AAMs) <b>Eddy Mohd Fairuz MOHD YUSSLEE</b>	47: Mechanical And Durability Behaviour Of Seawater And Sea-sand Ultra-high Performance Concrete Under Wetting-drying Cycles. <b>Shameer SALEH</b>	55: Footpath and Cycleway (Non-Highway Pavements) – Best Practice Design and Construction Methods <b>Kipp RICHTER</b>	179: Digitalisation of reinforcing steel supply chain in construction <b>Lee BRANKLEY, Ladin CAMCI</b>	17:30 - 17:50
18:00	<b>WELCOME RECEPTION</b>				18:00

**Concrete Institute of Australia's Biennial National Conference 2023**  
**SUNDAY 10 September 2023 - WEDNESDAY 13 September 2023**  
**Perth Convention Exhibition Centre**

**Tuesday, 12 September 2023**

<b>07:30</b>	Registration Open				<b>07:30</b>
	<b>Meeting Room 8</b>				
<b>07:30</b> - <b>08:30</b>	<p>5 CIA NEXGen panellists representing the design, construction, supply, client, and academic/research sectors will discuss how they found their pathway, what they love about concrete, and their expectations for the concrete industry into the future.</p> <p><b>CIA NEXGen Forum - the future of concrete in Australia</b> <i>(Sponsored by SmartCrete)</i></p>				<b>07:30</b> - <b>08:30</b>
<b>08:30</b>	Day Briefing & Introduction				<b>08:30</b>
	<b>Plenary Room (Meeting Rooms 1-3)</b>				
<b>08:45</b> - <b>09:30</b>	<p><b>Keynote Presentation</b> 314: Bringing circular economy principles into the mainstream design, construction &amp; decommissioning practices for concrete structures <b>Dr.ir. Agnieszka Bigaj-van Vliet (Netherlands)</b></p>				<b>08:45</b> - <b>09:30</b>
<b>09:30</b> - <b>10:15</b>	<p><b>Keynote Presentation</b> 315: Conservation and interventions of concrete structures and international standardization <b>Professor Tamon UEDA (Japan)</b></p>				<b>09:30</b> - <b>10:15</b>
<b>10:15</b> - <b>10:45</b>	<b>MORNING TEA &amp; EXHIBITION BREAK</b>				<b>10:15</b> - <b>10:45</b>
<b>Room</b>	<b>Meeting Room 1-2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 4A: Sustainability</b>	<b>Session 4B: Concrete Materials</b>	<b>Session 4C: Concrete Properties</b>	<b>Session 4D: Case Studies</b>	<b>Session</b>
<b>10:45</b> - <b>11:05</b>	211: Review of the embodied carbon of Australian concreting materials <b>Indira VASIKOVA</b>	313: Use of Composites as Reinforcement to Concrete <b>Antonio NANNI</b>	201: Effect of alkali-activator solution-to-binder ratio on fresh and hardened mortar characteristics of low calcium geopolymer mortar for concrete sewer rehabilitation <b>Piumika Waswani ARIYADASA</b>	162: Reuse of a 50-year-old building core in a new 50 storey concrete building development <b>Daksh BAWEJA</b>	<b>10:45</b> - <b>11:05</b>
<b>11:05</b> - <b>11:25</b>	26: Carbonation and its role in improving the sustainability of concrete production <b>Marie Joshua TAPAS</b>	25: Limestone Calcined Clay Cement (LC3): A review of properties and performance in comparison to conventional binder systems <b>Paul THOMAS</b>	134: Concrete heat of hydration – Issues with use of C766 for Australian cements, use of multidimensional thermal modelling and value of using of cooling pipes. <b>Inam KHAN</b>	31: mount Street Bridge Cable Stay Replacement <b>Peter VERBUYST</b>	<b>11:05</b> - <b>11:25</b>
<b>11:25</b> - <b>11:45</b>	38: Australian Clays as a Supplementary Cementitious Material <b>Emily CANDIA</b>	56: Investigation of admixtures and water uptake of lightweight aggregate effect on the rheological behaviour of mortar mixes for 3D printing <b>Carolina MACIEL RANGEL</b>	180: CCAA Data Collecting Program for Autogenous Shrinkage in Concrete - How a Quality and Realistic Data Collection is being Produced for Australian Concretes <b>Jason NAIRN</b>	105: Case Study - Rawdon Island Bridge Remediation Project <b>Jarrad DUFFY, Garon DEUTSCH</b>	<b>11:25</b> - <b>11:45</b>

<b>11:45</b> - <b>12:05</b>	45: study On The Properties Of Mortar Using Ordinary Portland Cement Clinker As Fine Aggregate <b>Tayuto KIKUCHI</b>	120: Mechanical properties and crackclosing performance of shape memory alloy (SMA) fibre-reinforced concrete <b>Panwei DU</b>	126: GRAPHENE OXIDE INCORPORATED SMART CONCRETE: ITS PERFORMANCE AND APPLICABILITY IN CONCRETE APPLICATIONS <b>Isuri FONSEKA</b>	231: Armadale Road to North Lake Road Bridge Project <b>James DE BURGH</b>	<b>11:45</b> - <b>12:05</b>
<b>12:05</b> - <b>12:25</b>	196: Continuing development of sustainable supplementary cementitious materials from lithium aluminosilicates <b>Bob MUNN</b>	32: Thermolectric concrete and its potential as a new energy harvesting technology <b>Carlos ZAPATA</b>	249: Long term effects of increased limestone mineral additions on compressive strength of concrete <b>Tom BENN</b>	109: How to select the most suitable concrete coating solutions in the water and wastewater industry <b>Jorge MELLADO</b>	<b>12:05</b> - <b>12:25</b>
<b>12:25</b> - <b>12:45</b>	172: Design of a CO2-reduced 3D concrete mixture using circular (clay-based) building materials <b>Naomi VAN HIERDEN</b>	190: Chloride diffusion resistance of limestone calcined clay cement (LC3) concrete based on calcined clay reactivity <b>Quang Dieu NGUYEN</b>	75: Developing a Chloride Penetration Model for Recycled Aggregate Concrete Using the Automatic Regression Technique <b>Emadaldin MOHAMMADI GOLAFSHANI</b>	148: Design of Electrified Railway Viaducts <b>Satyajit DATAR, James RAJESH</b>	<b>12:25</b> - <b>12:45</b>
<b>12:45</b> - <b>13:30</b>	<b>LUNCH &amp; EXHIBITION BREAK</b>				<b>12:45</b> - <b>13:30</b>
<b>Room</b>	<b>Meeting Room 1-2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 5A: Sustainability</b>	<b>Session 5B: Durability</b>	<b>Session 5C: Concrete Materials &amp; Properties</b>	<b>Session 5D: Precast, Prefabricated and Modular Concrete</b>	<b>Session</b>
<b>13:30</b> - <b>13:50</b>	183: Sustainable Concrete for Footpaths on Glenroy Level Crossing Project <b>Tim WARREN, Addison KAYE</b>	106: Formal Durability Planning: Past, Present and Future <b>Rodney PAULL</b>	136: Investigations on water penetration and autogenous healing of cracked concrete <b>Reza HASSANI</b>	160: Designing prefabricated concrete cladding and pavers for the Sydney Opera House 2007-2022 <b>John WOODSIDE</b>	<b>13:30</b> - <b>13:50</b>
<b>13:50</b> - <b>14:10</b>	219: Hemp fibres: a novel sustainable curing agent for concrete <b>Rahnum Tasnuva NAZMUL</b>	11: Adequacy of waterproofing methods and concrete cover against chloride-induced corrosion to find service life of the slab <b>Saugat HUMAGAIN</b>	234: Influence of metakaolin and marble powder as partial replacement of cement on some properties of self-compacting mortar <b>Sorn VIMONSATIT</b>	256: Water proofing for large prestressed precast potable water concrete tanks <b>Md. Zayedur RAHMAN</b>	<b>13:50</b> - <b>14:10</b>
<b>14:10</b> - <b>14:30</b>	232: Recycled fibres in textile-reinforced concrete combined with building component activation <b>Vanessa OVERHAGE</b>	85: A new approach to building more durable structures. <b>Alireza BIPARVA</b>	266: Opportunities in Australia for the use of coal combustion products in construction materials <b>Weena LOKUGE</b>	40: The Effect of Heat-Accelerated Curing on the Durability of Precast Concrete <b>Stephen RAE</b>	<b>14:10</b> - <b>14:30</b>
<b>14:30</b> - <b>14:50</b>	242: Premixed Concrete Made with Photovoltaic Derived Glass Fines (SolarCrete) <b>Massoud SOFI</b>	273: Catalyst Technology for Increasing the Durability of Concrete <b>Benjamin RAMSAY</b>	17: Life-cycle assessment of sustainable concrete containing recycled waste materials <b>Alvaro AMEZQUITA VACA</b>	261: Innovative solutions for moment resisting precast concrete connections for framed structures. <b>Sid DAHER</b>	<b>14:30</b> - <b>14:50</b>

<b>14:50</b> - <b>15:10</b>	117: Improved Sustainability in Bridge Design through the use of Factory Produced Pretensioned, Prestressed Concrete Girder and Beam Elements <b>Duncan FRENCH, Zachariah ARNEIL</b>	14: From Transparency To Impact: Findings From The Development Of Australia's First Carbon Neutral Ready-mix Concrete And Environmental Product Declaration <b>Evan SMITH</b>	171: Application of particle packing theory on mortar and the effect on mortar properties <b>Zhe SONG</b>	112: Design and testing of flat slab construction incorporating innovative recycled plastic ROBOVOID void formers <b>Jessey LEE</b>	<b>14:50</b> - <b>15:10</b>
<b>15:10</b> - <b>15:40</b>	<b>AFTERNOON TEA &amp; EXHIBITION BREAK</b>				<b>15:10</b> - <b>15:40</b>
<b>Meeting Rooms 1-2</b>					
<b>15:40</b> - <b>16:10</b>	<b>Invited Speaker Session</b> 318: Resilient design of RC Structures in Australia and other regions of lower seismicity <b>Emeritus Professor John Wilson (Swinburne University)</b>				<b>15:40</b> - <b>16:10</b>
<b>Room</b>	<b>Meeting Room 1-2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 6A: Alkali Activated</b>	<b>Session 6B: Durability</b>	<b>Session 6C: Standards &amp; Codes</b>	<b>Session 6D: Seismic</b>	<b>Session</b>
<b>16:10</b> - <b>16:30</b>	280: Mode I fracture energy of fly ash-based geopolymer concrete <b>Trijon KARMOKAR</b>	71: Durability Loss in Concrete Due to ASRDEF, The Role of Aggregate Reactivity in Deleterious Def <b>Liam MARTIN</b>	233: Creating Reliability in concrete structures—the case for using execution plans <b>Marton MAROSSZEKY</b>	124: Low-Velocity Impact Resistance of Graphene Oxide (GO) Incorporated Concrete Composite Beams <b>Isuri FONSEKA</b>	<b>16:10</b> - <b>16:30</b>
<b>16:30</b> - <b>16:50</b>	39: Foamed geopolymer for wastewater treatment: an efficient solution for heavy metal Zn(II) ions removal <b>Ailar HAJIMOHAMMADI</b>	163: Guidelines to prevent expansive delayed ettringite formation in Australian concrete structures <b>Yogesh Kumar RAMU</b>	154: CCAA Cement Proficiency Testing Program - An Overview of How the Industry has Improved their Testing Proficiency <b>Jason NAIRN</b>	63: Seismic category C1 and C2 tests on channel bolts installed in anchor channels <b>Martin CUNNINGHAM</b>	<b>16:30</b> - <b>16:50</b>
<b>16:50</b> - <b>17:10</b>	44: Developing the Mix Design of Geopolymer Concrete Combining the Absolute Volume Method and the Particle Packing Method <b>Arpitha B J</b>	18: Comparison of ASR Mitigating Effects of Ca2+ with Three Different Test Methods <b>Frank ONG</b>	115: Concrete Technology and Durability in TMR – Past, Present, and Future <b>Wayne ROBERTS</b>	123: Investigation of failure mechanisms of post-tensioned concrete flatplate structures <b>Ziyang JIAO</b>	<b>16:50</b> - <b>17:10</b>
<b>17:10</b> - <b>17:30</b>	65: Fresh, hardened, and microstructural properties of self-compacting alkali-activated concrete cured at ambient temperatures <b>Safat AL-DEEN</b>	97: Comparison of accelerated test methods for ASR reactivity testing <b>Brendan BOYD-WEETMAN</b>	177: Conformity Assessment Model for the supply and Installation of Post-Tensioning Systems in Concrete Structures in Australia and New Zealand <b>Peter Tonkin</b>	16: Connection and Bracing System tested to allow for seismic design parameters in Australia <b>Curtis FOGELBERG</b>	<b>17:10</b> - <b>17:30</b>
<b>19:00</b>	<b>CONFERENCE DINNER</b>				<b>19:00</b>

**Concrete Institute of Australia's Biennial National Conference 2023**  
**SUNDAY 10 September 2023 - WEDNESDAY 13 September 2023**  
**Perth Convention Exhibition Centre**

**Wednesday, 13 September 2023**

<b>07:30</b>	Registration Open						<b>07:30</b>
<b>Plenary Room (Meeting Rooms 1-3)</b>							
<b>08:30</b> - <b>09:15</b>	<b>Keynote Presentation</b> 320: Concrete Digital Fabrication and Sustainability <b>Dr Tim WANGLER (Switzerland)</b>						<b>08:30</b> - <b>09:15</b>
<b>09:15</b> - <b>10:00</b>	<b>Keynote Presentation</b> 316: Overcoming the Barriers to More Sustainable Concrete <b>Professor Doug HOOTON (Canada)</b>						<b>09:15</b> - <b>10:00</b>
<b>10:00</b> - <b>10:30</b>	<b>MORNING TEA &amp; EXHIBITION BREAK</b>						<b>10:00</b> - <b>10:30</b>
<b>10:30</b> - <b>12:30</b>	<b>TRADE DAY SESSION</b>						<b>10:30</b> - <b>12:30</b>
<b>Room</b>	<b>Meeting Room 1</b>	<b>Meeting Room 2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>	
<b>Session</b>	<b>Session 7A: Sustainability</b>	<b>Session 7B: Durability</b>	<b>Session 7C: HPC &amp; Reinforcement</b>	<b>Session 7E: Concrete Forums</b>	<b>Session 7D: Inspection and Testing</b>	<b>Session</b>	
<b>10:30</b> - <b>10:50</b>	50: Sustainability benefits of concrete maturity assessment. <b>James ALDRED</b>	23: Limit state modelling for carbonation induced corrosion. The effect of the climate change and low CO <sub>2</sub> - binders on the servicelife. <b>Jeanette VISSER</b>	138: A Model for the Calculation of Shear Crack Widths for Beams Constructed using High Strength Steel Stirrups <b>Stephen FOSTER</b>	<b>Construction Forum</b>  Breaking Down Barriers in Sustainable Construction covering Indigenous Participation in Construction, Women in Construction, and Government Policy  <i>Nicole Lockwood, Deputy Chairperson, Infrastructure WA (IWA)</i>  <i>Racquel Kerr, Djaara/Boonwurrung, Aboriginal &amp; Stakeholder Engagement Advisor - WA, GHD WA</i>  <i>Sophie Bond, WA Co-Vice President, NAWIC</i>	165: Guidance on the Proof Testing of Post-Installed Anchors in Concrete <b>Ramey OTHMAN</b>	<b>10:30</b> - <b>10:50</b>	
<b>10:50</b> - <b>11:10</b>	22: Waste-based concrete mix design for road infrastructure applications using Artificial Intelligence. <b>Jianbin YANG, Rebecca GRAVINA</b>		125: Comparative study of current standards for fire resistance of ultra- high performance concrete beams <b>Jiacheng YANG, Jeung-Hwan DOH</b>		46: Common errors in installation of postinstalled fasteners <b>Jessey LEE</b>	<b>10:50</b> - <b>11:10</b>	
<b>11:10</b> - <b>11:30</b>	208: Pathways to nett zero <b>Douglas JENKINS</b>	129: Modelling for improved durability design - Background to critical chloride level establishment and proposal for further refinement. <b>Frank PAPWORTH</b>	181: Assessing the evolution of zero-stress temperature of high- performance concrete from early ages <b>Vinh DAO</b>		114: Investigation and Management of Bridges with ASR in QLD <b>Wayne ROBERTS</b>	<b>11:10</b> - <b>11:30</b>	

11:30 - 11:50	264: Role of structural design optimisations in reduction of up front embodied carbon <b>Mahdi BABAEE</b>	151: A numerical model to predict the elastic modulus of ASR-affected concrete using Artificial Neural Network <b>Mehdi HABIBAGAH, Shami NEJADI</b>	271: Performance of high-strength steel reinforcing bars under low-velocity impact <b>Amin HEIDARPOUR</b>	<b>Sustainability Forum</b> <i>(Sponsored by SmartCrete)</i>  Facilitated by: <b>Clare TUBOLETS, CEO, SmartCrete</b>	326: Important Aspects of Testing Existing Structures to Prevent Failure of Repairs <b>Jessie RATCLIFFE</b>	11:30 - 11:50
11:50 - 12:10	255: EKOPipe – the development of a low carbon steel reinforced concrete pipe. <b>Adrian CAHILL</b>	170: How Chloride Diffusion Test Results Reflect on Chloride Diffusion Modelling <b>Daksh BAWEJA, Thomas BENN</b>	277: Design of raft foundations with SFRC/combined reinforcement <b>Philipp GUIRGUIS</b>		210: State of the Art: The Value of Processed GPR Data in Concrete Inspection <b>Reuben BARNES</b>	11:50 - 12:10
12:10 - 12:30	178: Embodied carbon over the life cycle of reinforcing steels: Carbon emissions associated with Modules A1-A3 Product stage and A4-A5 Construction stage <b>Ladin CAMCI</b>	10: Comparison of Full Probabilistic Modelling and Deemed to Satisfy Requirements for Concrete Carbonation Induced Corrosion <b>Herman JONG</b>	287: Development of a novel generation of grade IV GFRP bars (70GPa) <b>Omar ALAJARMEH</b>		153: Use of Thermography to Detect Concrete Delamination and Water Leakage Defects <b>Johnny AU</b>	12:10 - 12:30
<b>Meeting Room 1</b>						
12:30 - 13:00	<b>Invited Speaker Session</b> <i>(Sponsored by BG&amp;E)</i> 321: Towards More Sustainable Concrete: Recent Activities Within ACI and ASTM to Achieve Carbon Neutral Concrete <b>Professor Larry SUTTER</b>					12:30 - 13:00
13:00 - 14:00	<b>LUNCH &amp; EXHIBITION BREAK</b>					13:00 - 14:00
14:00 - 15:30	<b>TRADE DAY SESSION</b>					14:00 - 15:30
<b>Room</b>	<b>Meeting Room 1</b>	<b>Meeting Room 2</b>	<b>Meeting Room 3</b>	<b>Meeting Room 7</b>	<b>Meeting Room 8</b>	<b>Room</b>
<b>Session</b>	<b>Session 8A: Sustainability</b>	<b>Session 8B: Durability</b>	<b>Session 8C: Infrastructure</b>	<b>Session 8E: fib and ACI Updates</b>	<b>Session 8D: Asset Maintenance</b>	<b>Session</b>
14:00 - 14:20	207: ECOTERA™ - High Performance Sustainable Concrete <b>Dean MADERO, Ashok AGARWAL</b>	188: Resistance to chloride and CO2 ingress of concrete made with carbonated / uncarbonated recycled concrete aggregates <b>Vute SIRIVIVATNANON</b>	Role of Infrastructure Bodies driving Project Delivery Reform, including reference to Infrastructure Western Australia, Infrastructure Net Zero and Infrastructure Australia <b>Nicole LOCKWOOD</b>	<b>fib &amp; ACI Forum</b> fib Model Code 2020 Final Draft contents overview with: <b>Dr.ir. Agnieszka Bigaj-van Vliet</b>  <b>Prof Tamon Ueda</b>  ACI 321 Durability Code progress review and contents overview with: <b>Prof Larry Sutter Prof Doug Hooton</b>   ACI Overview <b>Antonio Nanni</b>	204: How Industry 4.0 is Influencing Concrete Investigations <b>Reuben BARNES</b>	14:00 - 14:20
14:20 - 14:40	74: Multi-Objective Optimization of Calcination Process Fuel Input for Lowering Carbon Footprint <b>Harish SRIVASTAVA</b>	272: Durability of Steel Reinforced Concrete Pipe in Below Ground Conditions <b>Peter SLEEP</b>	99: Creep of Geopolymer and Alkali Activated Binder Concrete: Comparison with OPC Concrete and Design Codes <b>Stephen FOSTER</b>		200: Management of aging concrete cooling towers during low carbon transition <b>Robert REIS Heidi GOEBEL</b>	14:20 - 14:40
14:40 - 15:00	118: Optimizing Prestressed Concrete Mix designs for Lower Carbon Emissions <b>Duncan FRENCH</b>	30: Sustainable Resilience – The Impact of Hydrogel Technology on Concrete Infrastructure Service Life <b>Douglas HAMLIN, Brendan STEAD</b>	Emerging opportunities and challenges for natural and manufactured pozzolans: an Australian Perspective <b>Craig HEIDRICH</b>		42: the Latest Developments In The Management Of Cathodic Protection Systems <b>Atef CHEAITANI</b>	14:40 - 15:00



<b>15:00</b> - <b>15:20</b>	147: The innovation process and its importance for the uptake of lower carbon concretes <b>Jason CHANDLER</b>	230: Effects of corrosion on the behaviour of short reinforced concrete T-beams exposed to high temperatures <b>Saugat HUMAGAIN</b>	131: Torsional behaviour of GFRP-reinforced concrete pontoon decks with and without an edge cutout <b>Xian YANG</b>	<b>CIA Durability Updates</b>  CIA Z7/05 Durability Modelling Reinforcement Corrosion in Concrete Structures with: <b>Frank Papworth</b> <b>Rodney Paull</b>  CIA Durability Committee Update for 2024 Actions	209: Forensic investigation & recommendations for aging public swimming pool infrastructure <b>John TUXWORTH</b>	<b>15:00</b> - <b>15:20</b>
<b>15:20</b> - <b>15:50</b>	<b>AFTERNOON TEA &amp; EXHIBITION BREAK</b>					<b>15:20</b> - <b>15:50</b>
<b>Meeting Room 1-3</b>						
<b>15:50</b> - <b>16:10</b>	<b>CLOSING CEREMONY</b> Remarks from Concrete 2023 Chair and handing over to Concrete 2025					<b>15:50</b> - <b>16:10</b>