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| | **Monday, 09 September 2019** | | | |
| **09:00** | ***Opening Ceremony*** | | | |
| **09:45** | ***Keynote Presentation 1: Anne Ellis***<br>"The Innovation Imperative" | | | |
| **10:30** | **Morning Tea Break** | | | |
| **11:00** | ***New Concrete Materials*** | ***Concrete Materials for D&C*** | ***Standards & Codes*** | ***Case Studies*** |
| **11:00** | Invited Speaker - **Andreas Tselibidis**, BASF (USA), "Engineering the impossible - building a sustainable future" | 29: Features, benefits and challenges of air entrained pavement concrete mixes using fly ash<br>**Mr Bruce PERRY** | 83: Introducing the revised CIA Recommended Practice Z11 on in situ concrete strength assessment<br>**Mr Jonathon DYSON** | 64: Case study of structural performance of low-grade profiled-steel reinforced CRC composite slabs<br>**Miss Ou YI** |
| **11:20** | | 59: The use of a proprietary geopolymer concrete in sewer infrastructure applications<br>**Mr Thomas GLASBY** | 97: From Cylinders to Cores - What does it mean for design?<br>**Dr David MCDONALD** | 112: Interaction of variable fly ash with superplasticisers<br>**Mr Scott STEVENSON** |
| **11:40** | 153: Effect of Geogrid Reinforcement on the Properties of Concrete<br>**A/Prof Muhammad HADI** | 93: Strength modelling of 3D-printed boron-based geopolymers via machine learning techniques<br>**Dr Ali BAGHERI** | 43: Performance of fasteners in thin concrete shells<br>**Dr Tilak POKHAREL** | 90: The Design of the Parramatta Road Ventilation Facility, WestConnex, Sydney, Australia<br>**Mr John MERRICK** |
| **12:00** | | | | |
| **12:00** | 175: Behaviour of reinforced crumbed rubber concrete beams under various structural loads<br>**Dr Safat AL-DEEN** | 137: Achieving Superior Abrasion-Erosion Resistance for Enhanced Durability<br>**Mr Alireza BIPARVA** | 186: Response of reinforced concrete shear walls with various detailing of reinforcement<br>**Prof Manicka DHANASEKAR** | 75: Investigating the effects of polymer and steel fibres in the concrete parking lots on mechanical properties and total costs<br>**Mr Reza BANI ARDALAN** |
| **12:20** | 38: Reinforced Crumb Rubber Concrete for Residential Construction<br>**Prof Julie MILLS** | 213: Mechanical properties of paste and concrete containing slag, seawater and sea sand<br>**Dr Y.I. LI** | 180: Recent Updates in Australian Standard Methods of Testing Concrete<br>**Mr Bob MUNN** | 141: Analyse and design of concrete elements in the cut and cover tunnels on WestConnex 1b under hydrocarbon fibres<br>**Mr Jarrod HITCHCOX** |
| **12:30** | | | | |
| **12:40** | 227: Blast and Impact Loading of Concrete: Extreme Cases<br>**Prof Alex REMENNIKOV** | 230: Emerging opportunities and challenges for natural and manufactured pozzolans: an Australian Perspective<br>**Mr Craig HEIDRICH** | 229: Concrete Drying Shrinkage - Test Methods and Specifications in Australia<br>**Mr Duy NGUYEN** | 217: Comparison of concrete drying rates in suspended slabs in a commercial building<br>**Dr Michael CHALLENOR** |
| **13:00** | **Lunch** | | | |
| **14:00** | ***Reinforcement & Prestressing Materials*** | ***Durability*** | ***Bridges*** | ***Construction*** |
| **14:00** | 17: Steel Fibre reinforced Concrete: Strengths, Weaknesses, Myths and Truths<br>**Prof Stephen FOSTER** | 174: Soft computing techniques for evaluation of elastic modulus of ASR affected concrete<br>**Dr Yang YU** | Invited Speaker - **Alessandro Palermo,** University of Canterbury (NZ), "The Morendi Bridge Collapse - Lessons Learnt" | 117: Effects of Elevated Temperature as a Means of Curing in Inkjet 3D Printed Mortar Specimens<br>**Mr Pshtiwan SHAKOR** |
| **14:20** | 120: Different Behaviours of Wire Mesh Confined Medium Strength Concrete under Axial Comression<br>**Ms Hua ZHAO** | 65: Different binders (OPC, CAC, GGBFS, Silica fume) for microbiologically induced corrosion resistant concrete: a mortar study<br>**Dr Danilo PASSALACQUA** | | 198: Ellenbrook Water Tank<br>**Dr James DE BURGH** |
| **14:40** | 135: Assessment of steel fibre orientation in self-compacting concrete slabs of different aspect ratios while pouring<br>**A/Prof Daniel DIAS-DA-COSTA** | 176: The durability of geopolymer mortar under the coupled effects of hydrocarbon oils and high thermal cycles<br>**Dr Safat AL-DEEN** | 5: Waterproofing of Concrete Bridge Decks<br>**Mr Fred ANDREWS-PHAEDONOS** | 124: Technology Breakthrough - the use of Telemetry for admixture management in Concrete Plants<br>**Mr Paul ROCKER, Mr Brad TALLON** |
| **15:00** | | | | |
| **15:00** | 54: Comparison of reinforcing bar couplers and associated regulations<br>**Mr Masoud HASHEMI** | 212: Durability - the Arabian Peninsula experience<br>**Mr Faiz KHAN** | 114: Laboratory verification of long-term performance of pre-tensioned concrete bridge girders affected by Alkali Silica Reaction (ASR)<br>**Dr Nadarajah GOWRIPALAN** | 152: The effect of admixtures on maturity calibrations<br>**Mr Daniel ROWLEY** |
| **15:20** | 23: CARES Sustainable Constructional Steel Certification Scheme<br>**Mr Lee BRANKLEY** | 140: Utilizing Petrography to Identify Deterioration Mechanisms in Hardened Concrete<br>**Mr Dan CUKIERSKI** | 34: Time-variant Reliability Assessment of RC Bridge Structures Based on a Bayesian Updated Chloride-induced Corrosion Model<br>**Mr Jahangir ALAM** | Quay Quarter Towers - John van Rooyen |
| **15:40** | **Afternoon Tea** | | | |
| **16:10** | ***Alkali-Activated Concretes*** | ***Durability*** | ***Standards & Codes*** | ***Structural Strengthening*** |
| **16:10** | 47: Effect of binder design on alkali-silica reaction in alkali-activated materials<br>**Dr Maxim KOVTUN** | 108: Assessment of ASR expansions using an ultra-accelerated test<br>**Mr Jinsong CAO** | 196: Reliability of extending AS1141.60.1 and 60.2 to determine ASR mitigation<br>**Prof Vute SIRIVIVATNANON** | 19: The 20-year history of sustainable structural solutions using FRP strengthening of concrete structures in Australia<br>**Mr Andrew SARKADY** |
| **16:30** | 179: Continuing Development of New Supplementary Cementitious Materials from Lithium Production Residues<br>**Mr Bob MUNN** | 106: Investigation of aggregate alkali thresholds in mortars incoporating fly ash through AMBT expansion and phase analysis<br>**Mr Brendan BOYD-WEETMAN** | 183: Design for Serviceability With the New Australian Concrete Codes<br>**Mr Doug JENKINS** | 62: Bringing Concrete to Life: Harnessing Biological Processes for Building Resilient Ports and Coastal Infrastructure<br>**Dr Ido SELLA, Dr Shimrit PERKOL-FINKEL** |
| **16:50** | 13: Workability and fresh properties of a low CO2 footprint concrete<br>**Dr Andras FEHERVARI** | 147: Influence of Alkali Concentration on the Alkali Silica Reaction (ASR) Behavior of Aggregates<br>**Ms Elsie NSIAH-BAAFI** | 156: Correct Specification of Fibre Reinforced Concrete<br>**Mr Todd CLARKE** | 177: Behavior of Circular RC Columns Strengthened with RPC Jacketing and FRP Wrapping under Concentric and Eccentric Axial Loads<br>**A/Prof Muhammad HADI** |
| **17:10** | 157: Hydration study of ternary magnesium-silicate-carbonate system<br>**Dr Vineet SHAH** | 173: Mechanical properties of ASR affected concrete: a review<br>**Mr Thuc Nhu NGUYEN** | 32: Bond performance of chemical anchors in high strength concrete<br>**Dr Jessey LEE** | 215: Re-purposing of the AMP Centre at 50 Bridge Street Sydney<br>**Mr Matthew OBST** |
| **17:30** | ***Forum: "Concrete – An Industry Ripe for Disruption"*** | | | |
| **18:30** | ***Welcome Reception*** | | | |
| **20:30** | | | | |


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| | **Tuesday, 10 September 2019** | | | |
| 09:00 | ***Keynote Presentation 2: Prof Christoph Gehlen***<br>Performance-Based Durability Design and Assessment of Structural Concrete Members | | | |
| 09:45 | ***Keynote Presentation 3: Michelle Wilson***<br>Standard Specifications for Concrete | | | |
| 10:30 | **Morning Tea Break** | | | |
| 11:00 | ***Durability*** | ***Alkali-Activated Concretes*** | ***Modelling & Design*** | ***Case Studies*** |
| 11:00 | 195: Durability Design Early-age Crack Control - Concrete Restraint from Site Monitoring<br>**Mr Rodney PAULL** | 104: Performance-based specification for geopolymer concrete in chloride environments<br>**A/Prof Arnaud CASTEL** | 194: WHAM: a simple and transparent non-linear sectional analysis tool for RC walls and building cores<br>**Dr Scott MENEGON** | Invited Speaker - **Jeffrey Coleman**, Coleman Law Firm (USA), "When is a crack a defect, and when is it acceptable?" |
| 11:20 | 105: Effectiveness of End Product Assessment in Ensuring Good Quality and Durable Concrete<br>**Dr Radheshyam KHATRI** | 44: Application of geopolymer concrete for precast application: a review<br>**Ms Sumita DANGOL** | 55: Numerical Study on the Structural Behaviour of a Geopolymer Prestressed Concrete Beam<br>**Mr Kamal NEUPANE** | |
| 11:40 | 70: Durability predictions of precast concrete using performance-based testing<br>**Dr James MACKECHNIE** | 223: Effect of fineness and dosage of fly ash on selected properties of mortars<br>**Dr Farzad MOGHADDAM** | 162: A New Journey of Concrete Design with Scaling Relations: From Nano to Macro<br>**A/Prof Vanissorn VIMONSATIT** | 88: The Design of the Underwood Road Ventilation Facility, WestConnex, Sydney Australia<br>**Mr John MERRICK** |
| 12:00 | | | | |
| 12:00 | 92: Relationship between delayed ettringite formation and expansion in mortars using low alkali content cements<br>**Mr Yogesh Kumar RAMU** | 68: High-Temperature Properties of Geopolymer Concrete<br>**Dr Zhu PAN** | 201: A simplified analytical model for predicting structural response to blast loading<br>**Dr Indunil GALHENA** | 91: Minimising the risk of joint spalling at the Martha Cove Boatyard<br>**Ms Kate STORER** |
| 12:20 | 96: Thirty Years of DEF - An overview<br>**Dr David MCDONALD** | 78: Strength optimization of clay based Geopolymer mortar<br>**Mr Morteza TAHMASEBI YAMCHELOU** | 52: A 3D numerical simulation model to identify optimal strategy to minimise the risk of early age thermal cracking of concrete<br>**A/Prof Ali Akbar NEZHAD** | 209: Development of the U-Trough - Mernda Rail Extension Project Case Study<br>**Mr Tim WARREN, Mr Liam INGRAM, Mr Javier SILLA** |
| 12:30 | | | | |
| 12:40 | 36: Effect of heat curing on strength and durability properties of concrete containing supplementary cementitious materials<br>**Mr Jason CHANDLER** | 103: Mechanical properties of hybrid OPC-geopolymer concrete<br>**Mrs Mahya ASKARIAN** | | 150: Trials of CP Systems for a Reinforced Concrete Wharf Structure<br>**Mr Dymock DIBB** |
| 13:00 | **Lunch** | | | |
| 14:00 | ***Reinforcement & Prestressing Materials*** | ***New Concrete Materials*** | ***Modelling & Design*** | ***Construction*** |
| 14:00 | 188: Guide to Historical Steel Reinforcement in Australia<br>**Mr Scott MUNTER** | 109: Carbon staining and its mitigation with admixtures<br>**Dr Craig HOGAN** | 154: Behaviour of Ultra-High Performance Geopolymer Concrete<br>**Prof Chengqing WU** | Invited Speaker - **Mike Schneide**r, Baker Concrete Construction (USA), "Challenging concrete construction case studies" |
| 14:20 | 122: Time Dependent Deformation of Fibre Reinforced Concrete Members Under Sustained Axial and Bending Load<br>**Mr Murray WATTS** | 84: Mechanical Properties of Geopolymer Coarse Aggregate Concrete<br>**Mr Charitha SENEVIRATNE** | 184: Modelling In-Situ Temperature Rise of Fly Ash based Concrete at Early Ages<br>**Dr Massoud SOFI** | |
| 14:40 | 7: Crack Width Reduction in Conventionally Reinforced Members Using Fibres<br>**Dr Erik BERNARD** | 138: Self-sensing behaviors of cementitious composites containing layer-distributed conductive rubber fibers<br>**Dr Wengui LI** | 132: A Plastic-Damage Model for Concrete under Cyclic Loads<br>**Mr Atila SARIKAYA** | 95: Innovative nanotechnology admixture for post tension concrete<br>**Mr Michael RACELA** |
| 15:00 | | | | |
| 15:00 | 128: Modification and dispersion of 2D hybrid graphene-based nanomaterial to enhance ordinary Portland cement paste<br>**Mr Junlin LIN** | 182: New Developments in Structural Form<br>**Mr Doug JENKINS** | 24: Sequentially linear analysis and sawtooth approximation in discrete crack models<br>**A/Prof Daniel DIAS-DA-COSTA** | 85: Who is the Erection Design Engineer?<br>**Mr Adam DAWSON** |
| 15:20 | 67: Mechanical Properties of Engineering Cementitious Composites Made with Hybrid Polyvinyl Alcohol Fibres and Basalt Fibres<br>**Prof Zhong TAO** | 121: INVESTIGATION ON THE INFLUENCE OF RUN-OF-STATION FLY ASH ON CONCRETE PAVEMENT CONSTRUCTION<br>**Dr Farzad MOGHADDAM** | 40: Verification of a novel load distribution model for anchor channels in the experimental virtual lab<br>**Mr Dustin KONERTZ** | 231: Contemporizing Concrete Pumping Standards AS 2550.15: Getting pumped safely!<br>**Mr Craig HEIDRICH** |
| 15:40 | **Afternoon Tea** | | | |
| 16:10 | ***Invited Speaker Presentation 1: Dr Larry Sutter*** | | | |
| 16:40 | ***Concrete Materials for Design and Construction*** | ***Durability*** | ***ACI Technical Committee Updates*** | ***Underground & Foundations*** |
| 16:40 | 126: Environmental Product Declarations a first for Readymix Concrete in Australia<br>**Mr Paul ROCKER** | 192: Chloride Durability and Future Maintenance of a 40+ Year Marine Structure<br>**Mr Warren GREEN** | ACI & CIA Updates, **John Glumb** (ACI) and David McDonald (CIA) | 18: Fundamental Mechanisms of Concrete Bleeding in Bored Piles<br>**Dr Martin LARISCH** |
| 17:00 | 125: Self-healing efficiency of encapsulated-based healing agent for cementitious materials<br>**Dr Wengui LI** | 123: Improving Corrosion Resistance of RC Beams Using Epoxy Treated Chopped Carbon Fibres<br>**Dr Riyadh AL-AMERI** | ACI & CIA: A Consultants View, **Rodney Paull** (CIA) and Larry Sutter (ACI) | 63: Design and construction of the permanent concrete lining of Sydney Metro's Victoria Cross Station cavern<br>**Mr Strath CLARKE** |
| 17:20 | 35: Mechanical Characteristics of Crumb Rubber Concrete for Practical Applications<br>**Dr Osama YOUSSF** | 37: Durability assessment of envisia and other highly durable concrete mixes<br>**Mr Jason CHANDLER** | ACI & CIA: An Academics View, **Gianluca Ranzi** (CIA) | 66: Integrity of Concrete in Bored Piles - A comparison of Thermal Integrity Profiling (TIP) and Cross-hole Sonic Logging (CSL)<br>**Mr Ross EVANS** |
| 17:30 | | | | |
| 17:40 | 219: Investigation of in-service deterioration of precast concrete panels<br>**Dr Ahmad SHAYAN** | 16: Evaluating the effects of Bleeding and Shrinkage Cracks on Concrete Performance<br>**Mr Ali AL-DUJAILI** | ACI & CIA: A Contractors View, **Mike Schneider** (ACI) | 199: Why watertight concrete structures in the Middle East leak - Common causal factors and possible solutions<br>**Dr Frank ALTMANN** |


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| | **Wednesday, 11 September 2019** | | | |
| **09:00** | ***Keynote Presentation 4: David Polkinghorne***<br>*Challenges experienced with the design and construction of concrete on major projects* | | | |
| **09:45** | ***Keynote Presentation 5: Em Prof Elizabeth Taylor, AO***<br>*The Future of Engineering Education* | | | |
| **10:30** | **Morning Tea Break** | | | |
| **11:00** | ***Durability*** | ***Concrete Materials for D&C*** | ***Seismic*** | ***Precast*** |
| **11:00** | 228: Understanding the Durability of Alkali-activated and Geopolymer Materials<br>**Mr Mahdi BABAEE** | 20: Investigating a new technology for long term protection of concrete assets in harsh environments<br>**Mr Andrew SARKADY** | 74: How the mass of a dropping hammer can influence on the damage scenario of a reinforced concrete beam<br>**Mrs Maryam NASIM** | 87: Bracing of Precast Elements on Early Age Low Strength Concrete - Gaps within current standards and how the industry has adapted<br>**Mr Vas HAITAS** |
| **11:20** | 110: Early-Age Crack Modelling in Concrete-Available Approaches in the Literature and Current Development of FIB TG8.8 WP6<br>**Dr Inam KHAN** | 146: Enhanced performance of concrete with use of Carbon Nanotube enriched liquid additive<br>**Dr Allan GODSK LARSEN** | 21: European seismic performance categories C1 and C2 for concrete anchors: A possible path also outside of Europe?<br>**Dr Philipp MAHRENHOLTZ** | 94: Innovative Prefabricated Concrete Construction-44 Level Student Accommodation Building in Melbourne<br>**Dr Shan KUMAR** |
| **11:40** | 107: Assessment of aggregate reactivity using slurry tests<br>**Dr Paul THOMAS** | 100: The development of wave shaped EMW absorbing concrete using 3D printing technology<br>**Mr Junbo SUN** | 42: Seismic prequalification and design of fasteners in Australia<br>**Dr Tilak POKHAREL** | 61: Testing of Prefabricated-Concrete Sandwich Panels made with Diagonal-Bar Shear Connectors<br>**Mr Qian HUANG** |
| **12:00** | | | | |
| **12:00** | 60: Experimental Investigation into the Mechanistic Role of SCM Composition in the Mitigation of ASR in Concrete<br>**Ms Marie Joshua TAPAS** | 189: Concrete confinement with textile reinforced cement for fire protection<br>**Prof Patrice HAMELIN** | 71: Design approach for transferring longitudinal loads in Anchor Channels for seismic conditions<br>**Mr Andreas BOOMKAMP** | 155: Durability Assessment of Self-Compacting Concrete in Comparison with Conventional Concrete in Precast Application<br>**Dr Amin NOUSHINI** |
| **12:20** | 12: A methodology for the experimental simulation of one-dimensional chloride diffusion in saturated cement paste<br>**Ms Vandana PADMANABHAN** | 133: Influence of the type of accelerators and organic fibers on the properties of ultra-high strength sprayed concrete<br>**Mr Kei SATO** | 72: Development of Alternative Systems to Improve the Seismic Performance of RC Wall-Type Apartments Through the Damage Control of Non-Bearing Wall<br>**Ms Kyo Young MOON** | 181: Recycling Foam Concrete as Lightweight Aggregates<br>**Dr Ailar HAJIMOHAMMADI** |
| **12:30** | | | | |
| **12:40** | 51: Precision of maturity based models used in numerical simulation of early age thermal cracking of concrete<br>**A/Prof Ali Akbar NEZHAD** | 127: Utilization of Pulverized bone (PB) and Waste Marble Powder (WMP) as Substitute of Cement in Mortar<br>**Mrs Zunaira NASEEM** | 3: Seismic Assessment of a Thin Singly Reinforced U-shaped Wall Specimen<br>**Dr Ryan HOULT** | 130: Innovations in prefabricated concrete in Australia over the past 60 years<br>**Mr John WOODSIDE** |
| **13:00** | **Lunch** | | | |
| **14:00** | ***Alkali Activated Concrete*** | ***Standards, Codes & Research Updates*** | ***Shrinkage, Creep, Shear & Torsion*** | ***Repair & Rehabilitation*** |
| **14:00** | 57: Quantification of the degree of reaction of glass powder<br>**Mr Mehdi MEJDI** | Smartcrete Update | 203: An experimental study on the shrinkage response of industrial pavements cast with Envisia and normal concrete<br>**Prof Gianluca RANZI** | 204: Concrete Pavements at 40 years: Retirement or just a Mid-life Crisis?<br>**Mr Justin MOSS** |
| **14:20** | 113: Assessing the Threshold Values of Corrosion Potential for Fly Ash/Slag based Geopolymer Concrete<br>**Ms Tran VU** | Nanocomm Update | 53: Shrinkage of high-performance concrete when using fine fillers<br>**Mr Saad BINHOWIMAL** | 143: Passive re-alkalisation of carbonated concrete to prolong the life of existing structures<br>**Dr Radheshyam KHATRI** |
| **14:40** | 169: Alkali-activated Slag Stabilisation of Swelling Clay<br>**Mr Van DOAN, Dr Zhu PAN** | AS3600 Update | 116: Key Factors Affecting Early-Age Thermal Cracking in Structures Made of High-Performance Concrete<br>**Mr G. Patrick Arosha DABARERA** | 134: Effect of rapid-set binder system containing various types of accelerators on heat evolution and selected fresh and hardened properties of mortar and concrete mixes<br>**Dr Farzad MOGHADDAM** |
| **15:00** | | | | |
| **15:00** | 172: Development on the use of brown coal fly ash as a cement alternative for geopolymer concrete application<br>**Mr Muhamed KHODR** | CIA Durability Guides | 50: Comparison of design approaches for punching shear reinforcement using Headed Studs<br>**Mr Sayed DAHER** | 216: Re-purposing the Adina Hotel at 171 George Street, Brisbane<br>**Mr James O'BRIEN** |
| **15:20** | **Afternoon Tea** | | | |
| **15:40** | ***Forum - "Concrete 2030 - Surviving the Disruption"*** | | | |
| **16:40** | ***Closing Ceremony - Remarks From Concrete 2019 Chair and Concrete 2021 Chair*** | | | |
| | | | | **As at 28 August 2019** |