

**28th Biennial National Conference of the Concrete Institute of Australia also host to the
3rd International Congress on Durability of Concrete (ICDC)
MONDAY 23 October 2017 - WEDNESDAY 25 October 2017
Adelaide Convention Centre**

Monday, 23 October 2017

Hall N

09:00	WELCOME - CONFERENCE CHAIR - Prof Julie MILLS				09:00
09:15	WELCOME ICDC - Mr Rodney PAULL & Dr Harald JUSTNES				09:15
09:30	WELCOME CIA NATIONAL PRESIDENT - Mr Michael VAN KOEVERDEN				09:30
09:45	"DISRUPTION AND TECHNOLOGY – IS THE CONSULTING/DESIGN/CONSTRUCTION INDUSTRY MOVING FORWARD QUICKLY ENOUGH?" KEY NOTE 1 - Ms Louise ADAMS				09:45
10:30	Morning Tea Break				10:30
11:00	Hall N : ICDC - Durability (Early Age Cracking) <i>Chairperson: Dr Anthea Airey</i>	Room L1 : Materials <i>Chairperson: Dr Warren South</i>	Room L2 : Structures <i>Chairperson: Dr Phillip Visintin</i>	Room L3 : Case Studies & Major Projects <i>Chairperson: Leo Noicos</i>	11:00
11:00	REVISION TO CIRIA C660 AND THE IMPLICATIONS FOR THE DESIGN FOR EARLY-AGE THERMAL CRACK CONTROL Dr Phillip BAMFORTH	HARNESSING DIGITAL IMAGE CORRELATION SYSTEM FOR ASSESSING FLEXURAL CHARACTERISTICS OF SFRC BASED ON WCA A/Prof Jacek KATZER	STRENGTH AND DUCTILITY OF HIGH-STRENGTH CONCRETE COLUMNS CONFINED WITH HIGH-STRENGTH STEEL TIES Prof Stephen FOSTER	INNOVATIVE USES FOR CONCRETE IN COMPLEX INFRASTRUCTURE REHABILITATION Mr Peter MARCHANT	11:00
11:20		THE PRODUCTION OF HIGH-QUALITY FLY ASHES BY USING CENTRIFUGAL MACHINE AND ITS APPLICATION TO PC AND PCA CONCRETE PRODUCTS Mr Shuzo URA	AXIAL LOAD-DEFORMATION BEHAVIOUR OF CFRP CONFINED CIRCULAR HOLLOW CONCRETE COLUMNS WITH INNER PVC TUBE Mr Hussamaldeen GOAIZ	SUPER HEAVY DUTY WHARF DESIGN - 100KPA AND BEYOND Mr Luke CAMPBELL	11:20
11:40	ALLOWABLE CRACK WIDTHS AND DESIGN FOR CRACK WIDTHS VERSUS AUSTRALIAN CODE MINIMUM REINFORCEMENT QUANTITIES Mr Frank PAPWORTH	FLEXURAL RESPONSES OF HYBRID HOOKED-END, SPIRAL STEEL AND SYNTHETIC FIBRE REINFORCED GEOPOLYMER COMPOSITES Mr Musaad Zaheer Nazir KHAN	AN EXPERIMENTAL STUDY ON SELF-CENTRING SEGMENTAL PRECAST RUBBERIZED CONCRETE COLUMNS Dr Reza HASSANLI	ADELAIDE CONVENTION CENTRE PLENARY BUILDING Mr Tom WALLENT	11:40
12:00	EARLY-AGE CRACKING IN CONCRETE STRUCTURES: MECHANISMS, ASSESSMENT AND CONTROL Dr Vinh DAO	INSIGHT OF FLY ASH BY CHARACTERIZATION OF INDIVIDUAL PARTICLES: INTERRELATIONS AMONG OXIDES AND NEW POTENTIAL CLASSIFICATION Dr Taehwan KIM	NUMERICAL AND ANALYTICAL INVESTIGATION OF LOAD TRANSFER THROUGH ECCENTRIC COLUMNS WITH DIFFERENT CROSS SECTIONS Dr Damith MOHOTTI	THE SUNSHINE COAST UNIVERSITY HOSPITAL STRUCTURAL CASE STUDY Mr Eric GROENEWALD	12:00
12:20	EARLY AGE CRACK CONTROL WITH CONSTRUCTION PERFORMANCE FEEDBACK FOLLOWED BY GATEWAY WA CONCRETE BRIDGES EARLY AGE CRACK CONTROL AND CONSTRUCTION PERFORMANCE FEEDBACK Mr Rodney PAULL	ASSESSMENT OF THE PERFORMANCE OF NEW SUPPLEMENTARY CEMENTITIOUS MATERIALS FROM LITHIUM PRODUCTION RESIDUES Mr Robert MUNN	LOAD BEARING CAPACITY OF THREE-SIDED RESTRAINED RC WALLS Mr Nhat Minh HO	ADELAIDE MEDICAL AND NURSING SCHOOLS PROJECT CASE STUDY Mr Peter JAMESON	12:20
12:40	Z7/06 CONCRETE CRACKING & CRACK CONTROL - LAUNCH OVERVIEW Prof Ian GILBERT	RESIDUAL FLEXURAL AND INDIRECT TENSILE STRENGTHS OF HEAT-TREATED SF-HSC Dr Hau Yan LEUNG		SYDNEY METRO NORTHWEST Dr Radu BLIUC	12:40
13:00	Lunch Break				13:00
14:00	Hall N : ICDC - Durability <i>Chairperson: Mr Frank Papworth</i>	Room L1 : Materials <i>Chairperson: Tony Mignone</i>	Room L2 : Structures <i>Chairperson: A/Prof Gianluca Ranzi</i>	Room L3 : Case Studies & Major Projects <i>Chairperson: Adrian Spencer</i>	14:00
14:00	PETROGRAPHIC CHARACTERISATION OF ALKALI-SILICA REACTION IN CONCRETE: AN INDUSTRY PERSPECTIVE WITH CASE STUDIES Mr Kenneth SPRING	CHARACTERISATION OF AUTOGENOUS SHRINKAGE IN AUSTRALIAN CONCRETE Prof Ian GILBERT	NEW DESIGN GUIDELINES FOR FASTENERS TO CONCRETE IN AUSTRALIA Dr Jessey LEE	A CASE STUDY OF WEBB DOCK BERTH 4&5 REMEDIATION – FROM INVESTIGATION TO DESIGN AND CONSTRUCTION Mr Nicholas CRITCHLEY	14:00
14:20	EVALUATION OF ALKALI SILICA REACTION IN FLY ASH CONCRETE USING AN ACCELERATED PERFORMANCE TEST METHOD Dr Anne HEISIG	PROPOSED RECOMMENDED PRACTICE ON CORES AND NDT FOR STRENGTH ASSESSMENT OF EXISTING CONCRETE STRUCTURES – A REPLACEMENT FOR CIA Z11 Mr Jonathon DYSON	HIGH STRENGTH REINFORCEMENT – A BOOST FOR HIGH RISE STRUCTURES Mr Torsten VOSS	CONCRETE RESPONDING TO THE NEEDS OF NEW HOSPITAL BUILDINGS: PROJECT SHOWCASE Mr David KENNEDY, Mr Tom WALLENT, Mr James TREZONA	14:20
14:40	KINETIC BASED APPROACH FOR ALKALI SILICA REACTION-COMPARISON OF LABORATORY AND FIELD TESTS Dr Nadarajah GOWRIPALAN	EVALUATION OF CONCRETE STRENGTH REDUCTION DUE TO OVER COMPACTION A/Prof Muhammad HADI, Dr Warren SOUTH	EFFECTIVENESS OF VERTICAL STEEL REINFORCING BARS TO REINFORCED CONCRETE MASONRY WALLS UNDER COMPRESSION Mr Jake RING	CONCRETE DESIGN FOR THE NEW ROYAL ADELAIDE HOSPITAL Mr Mark GOBOLOS	14:40
15:00	ASSESSMENT OF TEST METHODS FOR ASR AGGREGATE REACTIVITY Mr Wing Fung HA HAU	PROPERTIES ON HYDRATION SETTING OF THE CALCIUM ALUMINATE BASED SLAG BEING SOLID BY THE AIR RAPID COOLING METHOD USING AIR Dr Sunmi CHOI	PROPOSED RECOMMENDED PRACTICE ON UPV AND UPE MEASUREMENT FOR CONCRETE STRENGTH AND DEFECT ASSESSMENT Mr Reuben BARNES	LOW-CARBON POST-TENSIONED CONCRETE Dr Redmond LLOYD	15:00
15:20	ROLE OF SCM COMPOSITION IN ITS EFFICACY TO MITIGATE ALKALI-SILICA REACTION Ms Marie Joshua TAPAS	SORPTIVITY AND CHLORIDE PERMEABILITY OF CONCRETE USING FERRONICKEL SLAG AS FINE AGGREGATE Mr Ashish Kumer SAHA	MODELING THE EFFECT OF ASR ON THE PERFORMANCE OF REINFORCED CONCRETE BEAMS BY USING ELASTO-PLASTIC MEMBRANE ELEMENTS Dr Emre ERKMEN	478 GEORGE STREET, SYDNEY Mr Phillip LATHOURAKIS	15:20
15:40	Afternoon Tea Break				15:40
16:10	ICDC & Durability <i>Chairperson: Mr Rodney Paull</i> "FIB MODEL CODE 2020 - DURABILITY IMPLICATIONS" - INVITED SPEAKER - Dr Stuart MATTHEWS				16:10

16:40	<i>Hall N : ICDC 7 Durability</i> <i>Chairperson: Tian Sing Ng</i>	<i>Room L1 : Materials</i> <i>Chairperson: Bruce Perry</i>	<i>Room L2 : Repairs & Retrofitting</i> <i>Chairperson: Nicholas Zizikos</i>	<i>Room L3 : Innovations</i> <i>Chairperson: Con Komselis</i>	16:40
16:40	THE EFFECT OF CRYSTALLINE TECHNOLOGY ON DURABILITY OF THE CONCRETE EXPOSED TO AGGRESSIVE ENVIRONMENTAL CONDITIONS Dr Farhad NABA VI	PORE NETWORK STRUCTURE AND SIMULATED WATER PERMEABILITY OF PORTLAND CEMENT-CARBON NANOTUBE NANOCOMPOSITES USING X-RAY COMPUTED MICROTOMOGRAPHY Dr Alastair MACLEOD	MICROWAVE NON-DESTRUCTIVE TESTING OF CONCRETE: A COMPARISON OF TWO-PORT AND ONE-PORT MEASUREMENT TECHNIQUES Mr Alireza A. CHINIFORUSH	DEVELOPMENT AND COMMERCIALISATION OF LOW CARBON, LOW SHRINKAGE, HIGHLY DURABLE ENVISIA® CONCRETE Mr Jason CHANDLER	16:40
17:00	LESSONS LEARNED FROM TEN YEARS OF DURABILITY PLANNING ON CONCRETE STRUCTURES – WHAT'S WORKING, AND WHAT COULD BE DONE BETTER ON MAJOR PROJECTS. Mr Marton MAROSSZEKY	ACCURACY OF POROSITY ESTIMATION OF POROUS CONCRETE USING RADIO-ISOTOPE METHOD Ms Zizhe WANG	FACTORS WITH SIGNIFICANT NEGATIVE INFLUENCE ON THE QUALITY AND DURABILITY OF FIBRE REINFORCED POLYMER (FRP) COMPOSITE STRENGTHENING OF CONCRETE STRUCTURES Mr Fred ANDREWS-PHAEDONOS	PHYSICO-CHEMICAL ANALYSIS ON PHASE IN NAOH ACTIVATED FA-GGBS-SF GEOPOLYMER Dr Takeshi YAMAMOTO	17:00
17:20	DURABILITY PROBLEM OF MILITARY AIRFIELD RIGID PAVEMENTS DUE TO COMBINED INFLUENCE OF CHEMICAL OIL SPILLS AND REPEATED THERMAL SHOCKS FROM JET FIGHTER EXHAUST Dr Safat AL-DEEN	FUNDAMENTAL STUDY ON THE SELF-HEALING OF CEMENTITIOUS MATERIALS BY SUPPLY OF CA ²⁺ AND CO ₃ ²⁻ IONS UNDER THE CONTROL OF TEMPERATURE AND PH Miss Risa SENGOKU	INFLUENCE OF BOND DETERIORATION ON INTERMEDIATE CRACK DEBONDING FAILURES OF FRP-STRENGTHENED REINFORCED CONCRETE BEAMS A/Prof Rebecca GRAVINA	EFFECT OF COMBINED MIXING MATERIALS TO FLY ASH AND CURING CONDITIONS ON PHYSICAL PROPERTIES OF NAOH ACTIVATED GEOPOLYMER Dr Michio KIKUCHI	17:20
17:40	CONDITION AND REMAINING LIFE ASSESSMENT OF THE WANDOO B CONCRETE GRAVITY STRUCTURE Mr Andrew PEEK, Mr Colin O'BRIEN	RESEARCH INTO LOW TEMPERATURE-RISE AND ANTI-CRACKING MASS CONCRETE Mr Guoyou LI	PERFORMANCE OF CFRP RETROFIT OVER EPOXY AND MINERAL BONDERS Dr T.g SUNTHARAVADIVEL		17:40
18:30 - 20:30	Exhibition Hall Welcome Reception				18:30 - 20:30

Program as at 26 September 2017

28th Biennial National Conference of the Concrete Institute of Australia also host to the

Tuesday, 24 October 2017

Hall N

Chairperson: A/Prof Rebecca Gravina

09:00	"EXTRAORDINARY POSSIBILITIES FOR CONCRETE STRUCTURES" - KEY NOTE 2 - Prof Tim IBELL				09:00
09:45	"ECO-EFFICIENT CEMENTS: POTENTIAL SOLUTIONS FOR A LOW CO ₂ , ECO-EFFICIENT CEMENT BASED MATERIALS INDUSTRY" KEY NOTE 3 - Dr Karen SCRIVENER				09:45
10:30	Morning Tea Break				10:30
11:00	<i>Hall N : ICDC - Durability (Design Life)</i> <i>Chairperson: Sue Freitag</i>	<i>Room L1 : Materials</i> <i>Chairperson: Tony Thomas</i>	<i>Room L2 : Structures</i> <i>Chairperson: A/Prof Rebecca Gravina</i>	<i>Room L3 : Innovations</i> <i>Chairperson: Mr John Woodside</i>	11:00
11:00	MODEL CODE 2020 Dr Stuart MATTHEWS	INITIAL DEVELOPMENT OF BROWN COAL FLY ASH GEOPOLYMER CONCRETE BRICKS Mr Muhamed KHODR	STEEL FIBRE CONCRETE PAVEMENTS: THINNER & MORE DURABLE Dr Tian Sing NG	CONTROL OF CEMENTITIOUS COMPOSITE SURFACE BRIGHTNESS AND CONTRAST BY EFFLORESCENCE AND ITS APPLICATION TO ARCHITECTURAL SURFACE DESIGN Prof Takahisa OKAMOTO	11:00
11:20	DURABILITY DESIGN AND SERVICE LIFE: ENGINEERING AND LEGAL PERSPECTIVES Mr Rick KREECK, Mr Cameron SCHOLES	PERFORMANCE EVALUATION OF GEOPOLYMER AGAINST IN SITU AGGRESSIVE SEWER ENVIRONMENT Mr Hammad Anis KHAN	REFINED METHODS FOR ANALYSIS OF DEFLECTIONS; PRACTICAL APPLICATION OF RECENT RESEARCH Mr Doug JENKINS	TESTING POST-INSTALLED CHEMICAL ANCHORS TO TS101 APPENDIX B IN AUSTRALIAN CONCRETE SUBSTRATES Mr Andrew COUMAROS	11:20
11:40	DURABILITY ASSURANCE EXPERIENCES ON A MAJOR ROAD UPGRADE INFRASTRUCTURE PROJECT Mr Warren GREEN	THE EFFECT OF BORON IONS IN FLY ASH-BASED GEOPOLYMERS AND ALKALI ACTIVATED SLAG Mr Ali BAGHERI	INFLUENCE OF REBAR DIAMETER IN CONCRETE CRACKING STUDIED USING A DISCRETE CRACK APPROACH Mr Marcelo CARVALHO	INNOVATIVE PREFABRICATED CONCRETE CONSTRUCTION IN HIGH-RISE BUILDINGS Mr Shan KUMAR	11:40
12:00	EVALUATION OF SERVICE LIFE OF REINFORCED CONCRETE STRUCTURES SUBJECTED TO COMBINED EFFECTS OF ASR AND SUBSEQUENT CORROSION Dr Shami NEJADI	THE EFFECT OF ALKALI CONCENTRATION AND THE BINDER COMPOSITION ON THE ALKALI LEACHING IN GEOPOLYMER BINDERS Mr Mahdi BABAEI	HEAVYWEIGHT CONCRETE MIX DELIVERS A KNOCKOUT FOR NEW NUCLEAR MEDICINE PROCESSING FACILITY Mr Douglas FLETCHER	MODERNIZATION OF CONSTRUCTION: MATERIALS TESTING AND APPLICATION WITH 3D PRINTING Dr Didier LOOTENS	12:00
12:20	EFFECT OF EXPOSURE ZONE CHANGES ON CONCRETE SERVICE LIFE PREDICTIONS OF SWIMMING POOLS Dr Anthea AIREY	SUSCEPTIBILITY OF GEOPOLYMER CONCRETE TO ALKALI AGGREGATE REACTIVITY (AAR) Mr Chandani TENNAKOON	A HYGRO-THERMO-CHEMICAL-MECHANICAL MODEL FOR THE SHRINKAGE PREDICTION IN COMPOSITE STEEL-CONCRETE FLOORS Prof Gianluca RANZI	STRUCTURAL APPLICATION OF STEEL FIBRES REINFORCED CONCRETE WITH AND WITHOUT CONVENTIONAL REINFORCEMENT Dr Tian Sing NG	12:20
12:40	OPTIMIZING DESIGN FOR SUSTAINABLE CONSTRUCTION THROUGH IMPROVED UNDERSTANDING OF IN-SITU STRENGTH Dr Phillip BAMFORTH		THE LONG-TERM TENSION STIFFENING BEHAVIOUR OF FIBRE REINFORCED CONCRETE AND APPLICATIONS TO THE SERVICEABILITY LIMIT STATE Mr Alexander STURM		12:40
13:00	Lunch Break				13:00
14:00	<i>Hall N : ICDC - Durability</i> <i>Chairperson: Dr Daksh Baweja</i>	<i>Room L1 : Materials</i> <i>Chairperson: Dr Reza Hassanli</i>	<i>Room L2 : Repairs & Retrofitting</i> <i>Chairperson: Prof Vute Sirivivatnanon</i>	<i>Room L3 : Innovations</i> <i>Chairperson: Calum Wheeler</i>	14:00
14:00	PLANNING AND SPECIFYING FOR HIGH PERFORMANCE STRUCTURES - AND A CLOSER LOOK AT SOME CRITICAL CONCRETING PROCESSES Mr Stuart CURTIS	THE MECHANICAL PROPERTIES OF REACTIVE POWDER CONCRETE CONTAINING WASTE STEEL FIBRE RECOVERED FROM WASTE TYRES A/Prof Muhammad HADI	STUDY ON THE INHIBITION MECHANISM OF LITHIUM NITRITE FOR NEUTRALIZATION Mr Takashi KUBOTA	BRINGING COLLABORATIVE RESEARCH SOLUTIONS TO THE CONCRETE INDUSTRY: AUSTRALIAN CENTRE FOR INFRASTRUCTURE DURABILITY (ACID) Prof Frank COLLINS	14:00
14:20	DURABILITY PROPERTIES OF ENVISIA® - A LOWER CARBON CONCRETE Mr David HOCKING	TENSILE STRENGTH OF REACTIVE POWDER CONCRETE Mr Hussamaldeen GOAIZ	NUMERICAL ANALYSIS OF REINFORCED CONCRETE BEAMS STRENGTHENED WITH HIGH PERFORMANCE FIBRE REINFORCED CEMENTITIOUS COMPOSITES Dr Xiaoshan LIN	A REVIEW OF CONCRETE SEALANTS AGAINST CHLORIDE INGRESS Mr Dilanka Madushan Govinna GOVINNAGE DON	14:20
14:40	SPECTRAL ANALYSIS OF SURFACE WAVES AS A TOOL IN UNDERSTANDING EPOXY JOINTS Miss Rebecca NEWBY	BEHAVIOUR OF SQUARE HSC COLUMNS REINFORCED WITH STEEL EQUAL ANGLE (SEA) SECTIONS UNDER AXIAL COMPRESSION A/Prof Muhammad HADI	MODELLING OF NSM CFRP STRIPS EMBEDDED IN CONCRETE AFTER EXPOSURE TO ELEVATED TEMPERATURE USING CEMENT-BASED ADHESIVES Mr Awad JADOOE	FINE CRUSHED AGGREGATE AS PARTIAL REPLACEMENT OF NATURAL SAND IN CEMENT MORTARS Mr Dammika Piyumpath KATUKURUNDA WELLALA	14:40
15:00	THE DURABILITY OF THE MORTAR USING CAO:2AL2O3 IN CHLORIDE ATTACKED ENVIRONMENT Mr Masataka USHIRO	HIGH STRENGTH RUBBERISED CONCRETE INCORPORATING SILICA FUME Dr Mohamed ELCHALAKANI	CORROSION OF REINFORCED CONCRETE PRISMS CONTAMINATED BY CHLORIDES - PROPAGATION PHASE AND PREDICTION Dr Veronique BOUTELLER	DURABILITY OF CONCRETE WITH ARTIFICIAL AGGREGATES FROM RETURNED CONCRETE Dr Giorgio FERRARI	15:00
15:20	COMPARISON OF DURABILITY AS MEASURED BY ELECTRICAL RESISTIVITY AND MIP Ms Caitlin TIBBETTS, Dr Christopher FERRARO	COMBINATION OF GUAR GUM DERIVATIVES AND SUPERPLASTICIZERS, IMPACT ON PROPERTIES OF PORTLAND CEMENT-PASTES Dr Alexandre GOVIN	COMBINED EFFECT OF SILICATE BASED SURFACE PENETRANTS AND CALCIUM BASED REACTION MATERIAL FOR CONCRETE Dr Hirotaka HAZEHARA	THE EFFECT OF SIKALOW-VISCOFUME ON THE RHEOLOGICAL AND HARDENED PROPERTIES OF HIGH PERFORMANCE CONCRETE Mr Greg LANGTON	15:20
15:40	Afternoon Tea Break				15:40
16:10	<i>Hall N</i> <i>Chairperson: Michael van Koeverden</i> "CHALLENGING CONCRETE CONSTRUCTION PROJECTS IN THE USA" - INVITED SPEAKER - Mr Mike SCHNEIDER				16:10

16:40	Hall N : ICDC - Durability	Room L1 : Materials	Room L2 : Repair; Retrofit & Construction	Room L3 : Precast Concrete	16:40
	<i>Chairperson: Harald Justnes</i>	<i>Chairperson: Michael Booy</i>	<i>Chairperson: Peter Jamieson</i>	<i>Chairperson: Loreto Taglienti</i>	
16:40	"POST CRACKING BEHAVIOUR OF STEEL FIBRE REINFORCED CONCRETE: FROM MATERIAL TO STRUCTURE" (CIA 2017 NATIONAL BURSARY WINNER) Dr Ali AMIN	SLN FERRONICKEL SLAG : A DURABLE AND SUSTAINABLE MATERIAL FOR THE CONSTRUCTION INDUSTRY IN THE PACIFIC REGION Mr Frederic MARTIN	AN EXPERIMENTAL INVESTIGATION OF SQUARE COLUMNS CIRCULARIZATION USING FRP-CONFINED CRUMB RUBBER CONCRETE Dr Osama YOUSSEF	BEHAVIOUR OF COMPOSITE LOAD-CARRYING PRECAST CONCRETE SANDWICH PANELS Dr Ehab HAMED	16:40
17:00	LIMITATIONS OF PERFORMANCE-BASED SPECIFICATIONS FOR PREDICTING SERVICE LIFE - INFLUENCE OF CURING AND CRACKING BEHAVIOUR AT LOW WATER/BINDER RATIOS Mr Stuart CURTIS	HYDRATION KINETICS OF THE HIGH PERFORMANCE ULTRA LIGHTWEIGHT CEMENT COMPOSITES Dr Xuemei LIU	BACK TO BASICS IN APPLYING LEAN PRINCIPLES TO CONCRETE CONSTRUCTION Dr Anne GARDNER	DESIGN AND ERECTION OF PREFABRICATED (PRECAST) CONCRETE IN AUSTRALIA- WHY IS IT SO POORLY IMPLEMENTED! Mr John WOODSIDE	17:00
17:20	MODELLING DURABILITY OF CONCRETE BELOW GROUND Dr Norwood HARRISON	UTILISATION OF RICE HUSK ASH AS A PARTIAL REPLACEMENT FOR CEMENT IN SELF-CONSOLIDATING CONCRETE Prof Yan ZHUGE	A STUDY FOR OPTIMUM JOINT SPACING IN ROLLER COMPACTED CONCRETE PAVEMENT Mr Tetsya SOK	UNDERGROUND RAIL STATIONS OF STRUCTURAL PRECAST. DESIGN CONSIDERATIONS Dr Radu BLIUC	17:20
17:40	INFLUENCE OF PORE SIZE, STRUCTURE AND DISTRIBUTION ON THE PROPERTIES OF POROUS CONCRETE: A REVIEW Prof Yan ZHUGE		A PROPOSED RECOMMENDED PRACTICE ON MATURITY MEASUREMENT FOR IN-SITU STRENGTH ASSESSMENT AS A MEANS TO INDICATE TIMES FOR CURING CESSATION, STRESSING, STRIPPING AND LOADING Mr Frank PAPWORTH	OPTIMISING STEAM CURING FOR PRECAST PRESTRESSED CONCRETE GIRDERS Dr Daksh BAWEJA, Mr Zachariah ARNEIL	17:40
19:00 - 23:00	Panorama Ballroom Awards for Excellence Gala Dinner				19:30 - 23:00

Program as at 26 September 2017

**28th Biennial National Conference of the Concrete Institute of Australia also host to the
Wednesday, 25 October 2017**

Hall N

Chairperson: Mark Gobolos

09:00	"SEISMIC DESIGN IN AUSTRALIA POST CHRISTCHURCH" - KEY NOTE 4 - Mr Peter MCBEAN, Prof Des BULL				09:00
09:45	"RECOGNISING THE DIFFERENT FORMS OF SULFATE ATTACK FOR PROVISION OF SULFATE RESISTANT CONCRETE" - KEY NOTE 5 - Prof Doug HOOTON				09:45
10:30	Morning Tea Break				10:30
11:00	<i>Hall N : ICDC - Durability (Chloride Modelling)</i>	<i>Room L1 : Materials</i>	<i>Room L2 : Structures</i>	<i>Room L3 : Environmental</i>	11:00
	<i>Chairperson: Mr Rodney Paull</i>	<i>Chairperson: Prof Jay Sanjayan</i>	<i>Chairperson: Tom Vincent</i>	<i>Chairperson: Ben O'Connor</i>	
11:00	LINEAR PROPAGATION MODELS OF DETERIORATION PROCESS OF CONCRETE Prof Carmen ANDRADE, Mr Warren GREEN*	UNPRECEDENTED THICKNESS REDUCTIONS - TWISTED STEEL MICRO REBAR IN PAVEMENTS Mr Luke PINKERTON	CONTROL OF RANDOM CRACKING IN CONCRETE RESIDENTIAL PAVEMENTS Mr Eric LUME	AUTOGENOUS SHRINKAGE OF DIFFERENT BINDER SYSTEMS IN PORTLAND CEMENT-BASED AND GEOPOLYMER PASTES AND CONCRETE Mr Amin NOUSHINI, Dr James ALDRED	11:00
11:20	NATIONAL AND INTERNATIONAL CODE BASED DETERMINISTIC AND FULL PROBABILISTIC MODELLING TO DESCRIBE RELIABILITY OF VARIOUS AUSTRALASIAN MARINE STRUCTURES Mr Frank PAPPWORTH**	THE EFFECT OF USING WASTE GLASS POWDER AS CEMENT REPLACEMENT IN CONCRETE Miss Nafisa TAMANNA	PERFORMANCE OF STEEL FIBRE REINFORCED CONCRETE IN RESISTING BLAST LOAD Dr Withit PANSUK	A METHOD OF UNCERTAINTY ANALYSIS FOR LIFE CYCLE EMBODIED CO ₂ -E OF BUILDING AND STRUCTURAL MATERIALS IN AUSTRALIA Mr Mehdi ROBATI	11:20
11:40	OBSERVED MISUNDERSTANDING IN PRACTICE REGARDING MODEL OF CHLORIDE INGRESS INTO CONCRETE STRUCTURES Dr Joost GULIKERS	STRESS-STRAIN CURVE OF CONCRETE MADE OF THE COLD-BONDED FLY ASH AGGREGATE Mr Daniel RAHME	CONCRETE DESIGN FOR THE O-BAHN CITY ACCESS PROJECT Mr Matthew CROSBIE	EFFECTS OF MIX CONSTITUENTS ON EMBODIED ENERGY INDICES OF CEMENT MORTARS Mr Max MCKINLEY, Mr Kirk VESSALAS	11:40
12:00	MULTI-PHASE MODELLING OF MULTI-SPECIES TRANSPORT IN CEMENT BASED MATERIALS: A "DOUBLE-MULTI" MODEL A/Prof Qing-Feng LIU	AN EXPERIMENTAL STUDY ON FLEXURAL AND SHEAR BEHAVIOUR OF REINFORCED CRUMBED RUBBER CONCRETE (CRC) BEAMS Miss Agampodi Shayani Malruwani MENDIS	RECTANGULAR CONCRETE COLUMNS REINFORCED WITH GLASS FIBRE-REINFORCED POLYMER (GFRP) REBARS SUBJECTED TO CONCENTRIC AND ECCENTRIC AXIAL LOADING Dr Mohamed ELCHALAKANI	BROOME WHARF EXTENSION OF LIFE PROJECT Mr Ben MCFARLANE	12:00
12:20	MODELLING OF CHLORIDE ION TRANSPORT IN SLAG BLENDED CEMENTITIOUS MATERIALS: INFLUENCE OF TORTUOSITY AND SURFACE ELECTRICAL PROPERTIES Dr Elakneswaran YOGARAJAH	ADVANCES IN CONCRETE RHEOLOGY Mr Gary BOON	A CASE FOR DEVELOPMENT OF A DESIGN GUIDE FOR HEAVILY - LOADED CONCRETE CONTAINER PAVEMENTS Mr Anthony DAVIS	SALT FROST SCALING OF CONCRETE - EFFECT OF GLUE SPALLING Mr Matthias MUELLER	12:20
12:40	CHLORIDE DIFFUSION AND CHLORIDE BINDING CAPACITY OF GEOPOLYMER CONCRETE WITH LOW, MODERATE AND HIGH CALCIUM CONTENTS Mr Amin NOUSHINI, Dr James ALDRED	EFFECT OF RUN-OF-STATION FLY ASH AND OTHER SCMS ON VARIOUS PROPERTIES OF CONCRETE Mr Farzad MOGHADDAM	PULL-OUT STRENGTH OF CAST-IN HEADED ANCHORS IN PREFABRICATED CONCRETE ELEMENTS Mr Fariborz MOEINADDINI		12:40
13:00	Lunch Break				13:00
14:00	<i>Hall N : ICDC - Durability</i>	<i>Room L1 : Materials</i>	<i>Room L2 : History of concrete & Special Interests</i>	<i>Room L3 : Innovations</i>	14:00
	<i>Chairperson: Prof Frank Collins</i>	<i>Chairperson: David Cockburn</i>	<i>Chairperson: Gareth Weldon</i>	<i>Chairperson: Ralph Belperio</i>	
14:00	MICROSTRUCTURE PROPERTIES OF CARBONATED CEMENT PASTE Mr Vineet SHAH	FLUIDITY ASSESSMENT OF GROUTING MORTAR BY RHEOLOGICAL PROPERTIES Miss Ailifeila AIERKEN	THE USE OF HIGH FLUIDITY CONCRETES FOR THE TARBAN CREEK BRIDGE REHABILITATION Mr Huber MADRIO	A NEW ERA FOR DISPOSAL OF WET WASTE CONCRETE Mr Donald THOMAS	14:00
14:20	ALKALI-CARBONATE REACTION IN CONCRETE - NEED FOR FURTHER INVESTIGATION IN AUSTRALIA Mr Ion DUMITRU	INFLUENCE OF HIGH-SO ₃ CLINKER ON CEMENT PHYSICAL PROPERTIES Mr Makio YAMASHITA	NEW DEVELOPMENTS IN CONCRETE PIPE SPECIFICATION Mr Andrew RUFFLES	LATEST DEVELOPMENTS IN ADMIXTURE TECHNOLOGY Mr Bruno D'SOUZA	14:20
14:40	INFLUENCE OF PORE SIZE, STRUCTURE AND DISTRIBUTION ON THE PROPERTIES OF POROUS CONCRETE: A REVIEW A/Prof Yan ZHUGE	DESIGN OF SHOTCRETE FOR A SOIL NAIL WALL USING NON-LINEAR FINITE ELEMENT ANALYSIS Mr Daniel PRUDENCIO, Mr David BROWN	THE HISTORY OF REINFORCED CONCRETE DESIGN FROM THE LATE 60S TO 2000S IN AUSTRALIA Mr John WOODSIDE	ABANDONMENT OF BERESFIELD WATER INFRASTRUCTURE WITH AN INNOVATIVE CEMENT GROUT Mr James O'GRADY	14:40
15:00	MECHANICAL AND DURABILITY PROPERTIES OF A CONCRETE USING MAGNESIUM SILICATE HYDRATE BINDER SYSTEM Dr Allan SCOTT	REACTIVE AGGREGATES' RESPONSE IN LOW CALCIUM FLY ASH GEOPOLYMER CONCRETE Dr Didar Singh CHEEMA	GUIDE TO HISTORICAL REINFORCEMENT Mr Scott MUNTER	SHRINKAGE PROPERTIES OF ULTRA-HIGH PERFORMANCE CONCRETE (UHPC): AN EXPERIMENTAL STUDY Mr Tianyu XIE	15:00
15:20	MECHANICAL PROPERTIES AND DURABILITY CHARACTERISTICS OF REACTIVE POWDER CONCRETE DEVELOPED USING FINE QUARTZ SAND Prof Shamsad AHMAD			HEALTH MONITORING OF CONCRETE USING ULTRASONIC IMAGING Prof Abhijit MUKHERJEE	15:20
15:40	Afternoon Tea Break				15:40
	Hall N				
	<i>Chairperson: Mr Tom Benn</i>				
16:10 -	CONFERENCE CHAIR				16:10 -
16:45	PAST PRESIDENT - THANK YOU				16:45
	CHAIR - ICDC				
	INVITATION TO 2019				

* Warren Green will present this paper on behalf of Professor Andrade. This paper has previously been presented at ACA Brian Cherry International Concrete Symposium, July 2017, Melbourne.

** This paper has been presented in the fib Symposium, Nov 2016 - Cape Town, 'Performance-based approaches for concrete structures'.

Program as at 26 September 2017