

World Engineers Convention 2019
WEDNESDAY 20 November 2019 - FRIDAY 22 November 2019
Melbourne Convention and Exhibition Centre

As at 06 September 2019

Wednesday, 20 November 2019

Plenary Session

08:00	Opening Ceremony including Marlene Kanga, President, WFE0, Trish White, Chair, Engineers Australia, Peter McIntyre, CEO, Engineers Australia
09:00	Citizen-led "Senseable" Cities Carlo RATTI
09:45	Panel discussion - Engineering Liveable Cities Collette BURKE, Carlo RATTI, Paul O'NEILL, Marco ASSORATI
10:45	Morning Tea and Poster Viewing
11:15	Keynote 3
11:50	Panel discussion - The Diversity Imperative Susan FREEMAN-GREENE, Krishna BODANAPU

	Mini Oral Session A	Mini Oral Session B
	Mini Oral Session Theme 3: Fostering diversity and inclusion	Mini Oral Session Theme 4: Preparing the next generation of engineers 1
12:45	530: Monash Engineering: Our Gender Diversity Journey George SIMON, Elizabeth CROFT	452: STEAM without Hot Air: Commentary on educating creative engineers Mark DYER
12:50	184: What got us this far, won't get us where we need to go next Rob LYNCH, Danielle ROCHE	146: Experiential Learning and its Impact on Graduate Attributes and Employability Ismah ZABALAWI
12:55	402: To increase diversity we need to stop thinking like engineers Felicity FUREY	524: Creating transformative change in engineering: goal setting, policies, and actions Elizabeth CROFT
13:00	351: Diversity and Inclusion for Engineers Stephen IRELAND	271: How to overcome challenges for preparing engineers for future and introduce strategies for p-STEM skills Sandeep JADHAV
13:05	63: The Tipping Point Benita HUSBAND	518: Applying Project Based Learning in Engineering Subjects at La Trobe University Daniel HOOK
13:10		603: Reengineer the engineering education system Varan KARUNAKARAN

	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Room I	Room J	Room K
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	Modelling and simulation 1	Innovation and disruption 1	A changing profession	Education system/framework of tomorrow 1	Governance and risk leadership	Natural disaster risk management	Energy and sustainable practices	Smart cities	Transport systems - rail	Capacity building (Indigenous focus)	Engineers Australia Special Sessions
13:30	189: Acoustic Assessment for the Caulfield to Dandenong Level Crossing Removal Project Arvind DEVAIGAMANI	418: Developing uptake of Digital Engineering (DE) in Australia through industry-led research into practice approach Ammar SHEMERY	205: What The Global SKA Project Teaches Us About The Future Of Engineering And The Skills Needed To Thrive Shandip ABIEWICKREMA, Antony SCHINCKEL	56: Inspiring The Next Generation Of Stem Leaders Jessica KAHL	92: Should the Victorian Government cool the plant? The application of due diligence in legislation Gaye FRANCIS, Richard ROBINSON	78: Climate Change and Critical Infrastructure Resilience for Community Functionality Vikas MUJUMDAR	598: African energy market: a golden investment opportunity Mustafa SHEHU	280: Digital Engineering a Progressive and Sustainable City Jonathan HOWE	210: Inland Rail – Changing the Freight Rail Supply Chain in Australia Georgia GOOSSE	33: Aboriginal Design in Transport Infrastructure: Empowering Communities Through The Inclusion Of Cultural Design Knowledge Into Project Solutions Michael HRODEK	
13:47	166: Improved customer experience in self service webportal for the land and building development industry Aiana DUNCKER	36: Connecting Engineering Design through to Asset Sustainment: Digital Asset Visualisation and Information Systems Anthony ROE	358: Professionalising Fire Safety Engineering – The Warren Centre Research on Reform of Fire Safety Regulation and Practice Peter JOHNSTON	108: Educating Engineers for the challenges of sustainable and responsible engineering Graeme GWILLIAM	133: Quantitative climate change risk and resilience of Victorian public hospitals and ambulance stations Tieran HUMPHREYS, Rohan HAMDEN	338: Tsunami Early Warning System – India's Success Story Ashish BASA	502: Energy Revolution – New Opportunity for Women's Leadership Rumeil LI	379: Enhancing Liveability Through Community-Centric Approaches To Asset Management And Affordable Digital Tools Vivienne IWORY	171: Curbing congestion and air pollution in Chinese cities with Light Rail Transit Mathieu VOISIN	42: Enabling Aboriginal participation in engineering education and employment David CRUICKSHANKS-BOYD	
14:04	199: Sustainable Pavement Management Practices in the Green Triangle Paul ROBINSON, Emma MILLER-OLSEN	91: Industry / End user / University collaboration for sustainable railway products Stephen WEBSTER, Alan BURNS	299: Can we trust engineers to design infrastructure? Kylie COCHRANE	228: Sustainable Development Literacy In Engineering Degrees at LPUV Eduardo YENRELL VIDAL	453: 50 Shades of Risk: A tool identify, categorise, and diagnose waterway value and risks Glenn BROWNING	613: Japan's Science and Technology Community's Activities Towards the Promotion of SDGs Kenichi TSUKAHARA	571: Quantitative scenario toward zero carbon power generation system Koichi YAMADA	449: Unleashing The Data to Optimize the Building Performance Anthony YOW	283: Urban high-speed rail helps Australia's megalopolis Peter STASINOPOULOS, Jeff MORAN	213: Engineering Aid Australia - a vision to empower indigenous participation in Australia's engineering workforce and the story of its success Merv LINDSAY	
14:21	305: Improving Engagement with Interactive Engineering Models Robbie MARSHALL, Aaron GILBOY	536: From Precious Lumps of Metal to Constants of Nature Ilya BUDOVSKY	299: Can we trust engineers to design infrastructure? Kylie COCHRANE	254: Engineers Australia Student Practicum Working Group: Recommendations for Sustainable Engineering Practicum Jordan BUTLER, Sally MALE	669: Risk Leadership – It's Not Working But Why? Santosh THERAKAM	632: Flood forecast technological platforms: an adaptive response to extreme events Jose WEBER	601: Women in the energy sector: planning for the future Valerie AGBERGABA	451: City Infrastructures Mark DYER	208: Rolling Stock Wheel Waste Management Mohamed AWADALLA	288: Designing an on-Country Engineering Education Experience in Collaboration with the Gurdiyana Community at Budj Bim Juliana Kays PRPIC	
14:38	179: Residual Life Assessment for Wind Turbine Structures Robert KILGOUR	87: Engineering the transition to sustainability William GRACE	291: Developing a creative response-the future engineer: Skilled in maths, art and creativity Eamonn MADDEN	682: Stakeholders involved in assessing and addressing multi-sector, cumulative impacts on Australia's marine environment, and that, the world's coasts – Are engineers adequately represented? Sarah WATSON, Elizabeth HARRISON	662: The effects of the 26/05/19 Laganas Earthquake on the Persian Jungle Jorge ALVA HURTADO	620: Closure process design for conversion of green electricity to product of nitric acid Jiahua ZHU, Sulan XIA	350: Metro Tunnel Project – transforming the face of Melbourne Tim GOBBELL	369: System Integration and Arbitrage Opportunities on Metro David VAN BERGEN	131: Aboriginal Design in Transport Infrastructure: Empowering Communities by Including Cultural Design Knowledge into Project Solutions Alan MURRAY		
14:55	354: Smart Next Generation Transport Pavements Jayantha KODAKARA	313: The Sustainable Goal for Engineering Amy LEZALA	403: Foundations and Horizons: The Critical Role of International Coursework to Engage Students in Engineering for the 21st Century Cheryl DESHA	683: Climate resilient infrastructure in a city environment Davide STRONATI	636: Research and Practice of Resilient Smart Grid Based on Hainan Island in China Haoyong CHEN	456: Victorian Digital Asset Strategy Collette BURKE	207: Inland Rail – Driving Sustainability through Metrics that Matter Georgina GOOSSE	614: A Case Study in Leveraging Local Expertise to Deliver a Complex Remediation Project William RODGER			
15:12	90: Planning for Flying Cars Christopher DALITZ	399: Why engineers of the future will be philosophers Felicity FUREY	537: Professionalising Humanitarian Engineering in Australia Jeremy SMITH	667: Boxing Day Earthquake of 2004 – Impact on Sri Lanka Sarith ABAYAKOON	645: The development of innovative technology at ZJU for the treatment of heterogeneous solid waste Jiahua YAN	264: Towards a Smart Connected Precinct Hai VU	666: Digital Systems - Delivering Sustainable & Transformational Rail Systems Technology Solutions to meet customer needs Mark SMITH	197: Diversity in Design: Applying Inclusive Solutions to Melbourne's Infrastructure Boom Andreas BEZZINA			

	Artificial Intelligence	Innovation and disruption 2	Career Pathways	Education system/framework of tomorrow 2	Alternative energy	Sustainable cities	Women in engineering	Sustainable energy resources 1	Engineering a sustainable future 1	Sustainable assets and utilities 1	Ethics
16:00	371: Optimising Chiller Energy Consumption through Machine Learning Luke MCKENZIE, Jack HIGGINS	398: Beijing Water Cube gets smart. The adoption of a "BIM + IoT + Analytics" digital platform transforms an iconic venue. Jacky CHAN	143: Engineers on Boards: Your opportunity to make a difference Stacey DANIEL	37: Motivation, Capability and Inclusion: Key Ingredients in engineering for Sustainable Development Nick BROWN	232: Renewable Carbon for Energy Storage Jessica ALLEN	619: Smart Solutions for Enhanced Quality of Life Satyanarayanan RATHORE	172: The Aspect of Women Engineers in Myanmar Khin Sandar TUN	348: Renewable Energy in Remote Asia-Pacific: Context Matters Lachlan MCLEOD	188: Technical solutions in the Desert Rose House, a state-of-the-art, net-zero energy efficiency house designed, built and operated by students Clayton MCDOWELL	139: Potential Sources of Site Waste on Australian Project Peter RUNDLE	574: Anti-Bribery Standards, Systems and Strategies for Optimising Engineering Projects Delivery Martin MANKIWA
16:17	4: Artificial Intelligence, the Emerging Needs for Human Factors Engineering, Risk Management and Stakeholder Engagement Michael ERKINE	569: Driving towards driverless Roger CRUICKSHANK	183: A Career Pathway – What Does it Look Like? Madeline LAURENSEN	274: An integrated hardware, software and training platform for teaching primary students Engineering and STEM subjects Julian DINGDALE, Damien GEORGE	366: The future bioenergy potential of Australia Lucinda HIRTH	474: Infrastructure for Sustainable Cities Reginald VACHON	434: The Altyal Engineer Ian THOMAS	551: Long Term Assessment of Standalone PV Systems for Rural Communities Saeed ODEH	544: There is no such thing as an infrastructure project: focusing on people and places Graham POINTER	589: Best practicable environmental options for concrete demolition arising Andrew WHYTE	46: Advanced Ethics for Professional Engineers David THEIL
16:34	278: Amplifying Business Performance Through the Application of Machine Learning and the Building IoT Slaven MARUSIC, Matt GURR	267: Infrastructure planning for current and future automated vehicles Julian MARR	428: The Knowledge Machine Needs Oiling Alan GARRARD	448: Engineering in the Curriculum Jessica SAUTNER	117: Cut Carbon – Cut Cost – the Carbon Portal Lucinda HIRTH	411: Developing Innovative Solutions Thomas COSTABLE	508: From Participation to Ownership – Status of Entrepreneurship for Women Engineers in Africa Hema VALLABH	16: Engineering Dense Hydrogen Based Energy Systems Simon BRINK	142: AI Applications in Railway Operations and Rolling Stock Maintenance Planning Harry LI	635: Lessons learned from the risk communication to the public after the Fukushima Daiichi Nuclear Power Plant Accident Takahiko KONO	83: Teaching Professional Ethics to Construction Students Ashem SHRESTHA
16:51	218: Accelerating a neural network with optimised memory management using CUDA Sterling RAMROACH	525: Managed Motorways - Science for Optimisation Henrik ZURLINDEN, Matthew HALL	156: Time for engineers to be heroes Melanie DE GOEA, Dominic DE GOEA	236: Reimagining Engineering Education and Training in a Dynamically Evolving Technoscape – A case of the machine domain Asli KATARIA	24: Ammonia - Carbon Free Fuel and Energy Carrier John MOTT	109: Green Infrastructure Anaia LOPEZ	565: European Strategy for Gender Equity in Engineering and culture changes in Poland Lidia ZAKOWSKA	32: Ericsson's 1833 "Catalyst" Engine Revisited Noel BARTON	335: Sustainability, it's better engineering Ainsley SIMPSON	224: The LERJAC Project: Capturing Cement's CO2 Applications Jana BERRY	15: 'Governing' – Managing Ethical Challenges Throughout Your Career Stephen HOWE
17:08	168: High Risk Electrical Training in Virtual Reality Mark SPLITTERBER	479: New mobility and the door-to-door aviation experience Mark BOONE	285: The Aging Workforce in the Future of Engineering: Roles or Resources? Michelle OPPERT	636: Making a Difference with STEM Education Shelley WALDON	185: Identifying cost-optimal mixes of power production technologies for very-low greenhouse-gas electricity supply in the Australian National Electricity Market Benjamin HEARD	682: The Global Infrastructure Report: An Aid for Decision making in Achieving the Sustainable Development Goals Martin VAN VEELDEN	485: An Examination of Bias in the Engineering Workplace in India Stacey DELVECCHO	279: The effect of biochar type and biochar re-use in high solids anaerobic digestion Mathu NDREN	555: Appropriate Materials and Technologies to Enhance Thermal Comfort in Disaster Prone Areas Kaitlan FINN, Sabina SAXENA	382: Recycling cigarette butts in bitumen for flexible pavements Md Tareq RAHMAN	475: Integrity in engineering leadership Anthony BARRY
17:25	483: Implementation of Functional Safety Management, Cost-Saving or Gold Plating Arsham AHMADI	23: Automation – case studies in transformative disruption in design engineering Milos PELKAN	585: Evolving risk analysis: moving on from heat matrices Astrid KAUFFMAN	484: Changing the language of who 'belongs' in engineering Anne GARDNER	643: Cleaner Energy in New Zealand Tania WILLIAMS	657: Future World Vision: Infrastructure Reimagined. Brett PHILLIPS	668: Women in Engineering in Mongolia Ariunbolor PURVEE	310: Wave Energy – Unlocking the Potential Hayden MARCOLLO	630: Design for Mass Production and Dissemination of Clean Cookstoves in Developing Countries Jana BERRY	201: Innovative Lightweight Materials for Engineering Applications Paul WAMBUSA	
17:42		359: Creating sustainable public transport for a growing city with a rail-over solution Jamie GREEN	503: Implications of Governance Obligations being Embedded within Construction Contractors' Tendering Procedures Stephen UROGHART	251: Teaching Coding to First Year Engineering Students Through the Internet of Things Helen FAIRWEATHER	361: A fast low cost transition to a net zero carbon economy Peter FARLEY	681: Sustainable Management of Community Infrastructure in Smart Cities Chris CHAMPION	683: Diversity and Inclusion at Chevron Nancy GROSSMAN	333: Lessons from "Very Remote" Australia: How three projects successfully utilise solar PV and Battery Energy Storage Systems in different ways Lachlan MCLEOD	363: Connection To Country: How the Engineering Sector can Achieve More by Learning From Indigenous Communities and Collaborative Design Approaches Kim AWKORTHY, Melanie AUDREY	406: Towards more Sustainable Bridges Toni PAPE	

Legend	Engineers Australia	Theme 1: How new technology and innovations are reshaping engineering (SDG 1, 6, 7, 9, 12, 13, 14, 15)	Theme 2: Engineering for humanity: responsive design for greater liveability (SDG 1, 2, 3, 4, 10, 11, 12)	Theme 3: Fostering diversity and inclusion (SDG 4, 5, 10, 16, 17)	Theme 4: Preparing the next generation of engineers (SDG 4, 17)	Theme 5: Engineering leadership, governance and influence (SDG 1, 4, 5, 8, 12, 13, 16, 17)	Theme 6: Our changing climate: mitigation, resilience and adaptation (SDG 3, 6, 7, 10, 13, 14, 15)	World Federation of Engineering Organizations (WFEO)	Updated on 9 September 2019 and is subject to change.
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As at 06 September 2019

Thursday, 21 November 2019

Priority Session

The Importance of Purpose in Preparing to Meet Gen Engineers?
Meredith WESTAFER, John SUKKAAR, Felicity FUREY

Keynote 6

Morning Tea and Poster Viewing

Panel discussion - Engineering Education: the paradigm shift to engineer the future

Keynote 8

Mini Oral Session C		Mini Oral Session D	
Mini Oral Session Multi Theme		Mini Oral Session Multi Theme	
12:45	413: Curbing accelerated deterioration of structures built in corrosive environments Hilary Reagan OJWANG	553: A Systems of Systems view of the Sustainable Development Goals Jawahir BHALLA	
12:50	424: Acceleration of electrification program in Kenya Nicholas Kibet BUNDUOCHI	352: Participatory Scoping and Feasibility Assessments to Develop Appropriate Engineering Briefs Heidi MICHAEL	
12:55	35: The Flood Resilient Homes Program - empowering residents to live through floods Ouswata PERERA	48: The future of engineering - an Australian perspective Nick FLEMING	
13:00	676: Sand Scarcity, Hidden in Plain Site Jadyn PEATTIE	412: Deepening sustainability competencies in engineering graduates: meet steps for global standards Cheryl DESHA	
13:05	126: Assessing the resilience of strata buildings to tropical cyclones in North Queensland Geoff BOUGHTON	665: Insufficient experienced engineers to meet naval shipbuilding demands Ian IRVING	
13:10	320: Innovation as a disruptive force in Maritime Sustainment Liz PINCHES	444: Spatial-temporal characteristics of shopping activities of migrant workers in Nanjing Qianyun Ji	

Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Room I	Room J	Room K
Modelling and simulation 2	Innovation and disruption 3	Transformative models 1	Future workforce	Innovation	Innovative technology	Energy and sustainable practices	Sustainable energy resources	Engineering a sustainable future (population growth, biodiversity, ecosystems)	General SDG	Capacity building (gender focus)
13:30	217: Influences of Geological Characteristics on the Construction of Tunnels Mohammed Hsain PEERUN, Dornika Ek Leong ONG	375: A Virtual Power Plant Solution for High Penetration PV in Australia Scott WATTS	542: Developing a virtual team to embed Safe System: lessons learnt Ewan COULSON	269: Creativity, Innovation and the Future of Engineering David CROPLEY	325: Use of Sea Sand Seawater Concrete for Efficient and Sustainable Building Practices Tanzel DRONOV	605: Guiding AI to Benefit Humanity and the Environment Ka GONG	489: Transforming the World and Wasted Organic Materials Samuel GROSSMAN	365: Renewable Energy Mega-Hub Creates New Export Industry for Australia Peter LONG	447: The Circular Economy in the Built Environment Joyanne MANNING	282: Engineering Redefined: investigating the gender diversity challenge with a strength-based approach Ailsan STOKLEY, Nicola BROWN
13:47	191: Full-field deformation measurement of membrane structures using unmanned aerial vehicle assisted photogrammetry Chiu WING	546: Case Study: DEMAS Deployment to the Oranau Microgrid Lea UCH	527: Engineering a State to Prosperity: Western Australia's World Class Engineering Achievements Mark BUSH	158: Less design, more consulting: the future of engineering Dominic DE GIOIA, Melaine DE GIOIA	129: Strengthening a building by adding a cap-walk - Case study of the Gibson Street Centre Seismic Retrofit Project Scott KELLY	483: AI ethics and policies to support diversity Raine ESSIGMADJE	59: Options for the energy storage of renewable energy Daniel FAVRAT	303: Remanufacture For Sustainable Practice Beate WOLF	592: Engineering for the Future - Temauku Land Development Study, Kibali Manh TRAN	45: "Seeking High-Performing Female STEM Academic" - Women-only Recruitment - Should you or shouldn't you? Peter ASHMAN
14:04	174: An impact attenuation surfacing test to analyse the dynamic behaviour of gravel and geotextile sand surface Haeil HAYATI	404: Delivering Sustainable Water Infrastructure Bruce BOYDEN	227: Developing and Implementing Sustainable Business Strategies and Delivering Sustainable Projects Sarah Jane STEWART	190: How engineers turned intrapreneurs can lead social innovation Myles COKER	431: Investigation and testing of Glass Fibre-Reinforced Polymer (GFRP) shear connectors for use in structurally composite concrete sandwich wall panels Kamal KRISHNA	624: Big Data and Engineering Innovation: Infrastructure Practices Jing PENG	72: Energy Storage in Power Utilities as an emerging opportunity in Africa Ready? Ariel Mutegzi MBAE	523: A decentralised hydrogen supply chain for all: Leight Leveraging cross sectoral knowledge to create a more sustainable Australia Henry SWINER	54: The Engineering of Happiness (3H) Tito CUEVA	533: Factors Influencing Female Students' Participation in the Engineering Profession Glennys GORICANE
14:21	127: Transformers: Metering, Heating, and Harmonics Michael LARSON	316: Enhancing the interface between polypyrrole fibres and cement using graphene oxide Xupai YAO	237: The Well-being of Future Generations Act: How Legislation is Driving Sustainable Development in the Built Environment in Wales Kara BRUSSEN	220: The Future Workforce is Fluid Neo Neo ONG	552: Lifelines in the Pacific: how two port projects in the South Pacific are contributing to the Sustainable Development Goals (SDGs) Joanna BULDESK	519: Industrial 3D Printing - Debunking the Myths Stacey DELVECCHIO	390: Experimental Validation and Dynamic Simulation of Rotor Faults in Induction Motors Ajay Kumar PURVEE	461: Steving Towards Net Zero by 2030 through a Campus-Wide "Energy" Living-Laboratory Jacob JASSENAK	64: Construction of Public Facilities for Japan's Aging Society with Declining Birthrate Kayoko YAMAMOTO	497: The Sensitivity of Organisational Gender Ratios to Cognitive Bias Mark TONER
14:38	113: Reliability Engineering - an essential engineering discipline of the modern world Allen TAM	134: A workplace that leads to innovation case study: Concor tower Arthur PSALTS	337: Connecting the workforce of the future Lisa CLARSON, Jennifer CHARLEWORTH	253: Engineering for Humans Michael O'BRIEN, Duane SERFORTEIN	473: Developing a multi-based coastal defence strategy for Australia Rebecca MORRIS	621: Data, AI and Decision-making Jie LU	427: Transformation from Electric Grid to Utility - Telecom Grid for affordable Internet Access and Economic Growth in Developing Countries Eric WANJALA	226: Design Using Novel Materials for Sustainable Heating and Cooling Adam JAFFE	70: Poison or Panacea? The role of infrastructure providers and owners in Offsets Garth REES	64: Attracting High School Girls to Coding, Computing and Engineering using Electronic Textiles Bernardo LEON DE LA BARRA
14:55	618: A Rail Case Study: Documents to Database Lauren THOMPSON	7: Comparison study for the dynamic analysis for underground tunnels subjected to internal explosions using UHPC instead of conventional RC Mahmoud ALJOMAHMED	494: Setting up infrastructure projects for success Steve BURDON, James SMITHERS	219: Looking at the Past and Present for the Future of Engineering Anker BRODERSEN	377: Great Ocean Road Drone Drainage Catchment Analysis Wayne PERRETT	628: Principles & Design Guidance for Responsible AI Eric CHANG	584: Improving Energy Access in Africa through Efficient Appliances - Prospects and Challenges Essel Ben HAGAN	135: Frequency Stability Management by Battery Energy Storage Services in an Electricity Market with High Penetration of Renewable Generation Gustavo CHAMUSCA DE AZEVEDO	96: Why our Major Projects will be a driving force to achieving SDGs Charlie JEWKES	44: Women in STEM Careers - A Leadership Development Program for Undergraduate Students Claudia SZABO
15:12		331: Delivering Value through Innovation James GLASTONBURY	242: Defence climate and security policy - a frame to rethink sustainable defence behaviour Ian CUMMING	99: How our Future Leaders will solve Tomorrow's Problems Stuart COOK		661: Indoor environment and energy consumption in dwellings before and after refurbishment in Slovakia Dusan PETRAS		440: Indigenous Languages matter for development, peace building and reconciliation - WSP's role as a global engineering professional services firm in providing and protecting the rights of Indigenous Peoples Julia CARPENTER	520: Gender equality for graduate engineers in Iraq Wael ABULMAJEED	245: How To Speed Up Change And Create Gender Balance Organisations Gwalia BURROWEES
Modelling and simulation 3	Innovation and disruption 4	Ethical behaviour and obligations	Blended learning and interdisciplinary	Energy efficiency	Education	Water	Green infrastructure	Environmental sustainability	Engineers Australia	Biomedical Technologies for sustainable development
16:00	120: Strategy to assess the aerodynamic performance of the Golden Gate Bridge during planned seismic and wind retrofit programs Guy LAROSE	421: 1565 Paths to Net-Zero Energy - Genetic Algorithms for Energy Optimization Jared STOCK	612: Creating Standards in Ethics and AI Greg ADAMSON	302: Engineering-in-Practice Techniques to Create Sustainable Engineering and Engineering-based Commercial Outcomes Michael WEST	347: Designing Commercial Buildings in a Decarbonised Grid Scenario Kriston SYMONS	608: Engineering Regulatory Policies for Engineering Professionals in Africa Yashin BRUMOHAN	685: Mitigating the impacts of droughts: Unconventional Resources (Desalination) Ignacio GONZALEZ-CASTELAO MARTINEZ-PEJUELA	336: Melbourne 2050: Foresight for Driving Change Samantha PEART, Anne KOVACHEWICH	28: Groundwater Impact Assessment And Mitigation For Rail Trenches Proposed in A Sensitive Location Tony CAUCH	687: Biomedical Technologies for Sustaining Good Cardiovascular System Health (SDG1) Shankar KRISHNAN
16:15										689: SDG3: Health Technology in the Prevention and Management of Diabetes James GOH
16:17	547: Maritime Applications of Corrosion Prognostic Health Management Principles Aaron SUDHOLZ	175: On-site Chlorine Generation Powered by Solar Energy - a Sustainable Water Disinfection Solution for Difficult and Remote Sites Christopher PFE-MARTIN	261: Storytelling and Ethical Leadership - Developing Narrative Skills to Manage Change Peter WELLS	295: Solar Cars Are Developing the Next Generation of Engineers Saamul BASHAR	477: Adelaide Desalination Plant: process improvements in operation Javier ARTAL	85: The Impact of the 4th Industrial Revolution on Engineering Education - The Need of a Brave Paradigm Change Michael E. AUER	625: Managing Flood Risk: Practices in China Jing PENG	397: Global lessons learned from green infrastructure requirements in city planning systems Joan KO	492: Humanitarian and Sustainable Engineering Through "The Lens of a Biomedical Engineer" Ashrith KUMAR	688: A Portable System to Diagnose Chagas' Disease Eric LACIAR
16:30										686: A Portable System to Diagnose Chagas' Disease Eric LACIAR
16:34										686: Internet of Things in medicine and healthcare: Challenges and applications Rafko MAGJAREVIC
16:45	192: Using data-driven accessibility metrics to reshape the planning of new public transport lines Rafiq MORSHEDI	329: How satellite imagery and data analytics are disrupting ground deformation monitoring in cities Eric AUDIGE	506: What to do when things go wrong? - The Reasonable Response of an Engineer in Modern Infrastructure Delivery (PPP, Alliance, PMO) Mario VLASICH	594: Humanitarian engineering education feedback and the risk of doing more harm than good Cris BIRZER	132: Climate change adaptation and mitigation: a Mediterranean climate-adapted train station Pablo SEPULVEDA CORRADO	564: Achieving Global Engineering Education Standards J-p. MOOREN	75: Flood and drought management: Challenges for civil engineering Tomas Angel SANCHO MARCO	53: Sustainable bridges: why not? John HILTON	469: Emerging contaminants - challenges and opportunities for engineers in a context of uncertainty and risk Michele BRUCE	687: Location, location, location - Geographers hold the key to achieving a sustainable world John RENARD
16:49										687: Location, location, location - Geographers hold the key to achieving a sustainable world John RENARD
16:51										687: Location, location, location - Geographers hold the key to achieving a sustainable world John RENARD
17:00	301: Enhancing Asset Management Skill for Next Generation Bridge Engineers Suprava SETUNGE	152: Rookies to Dares - A Case Study on the Piloting of BIM for TMR Stuart COOK	112: Technical and Regulatory Failures Driving Higher Electricity Prices in Western Australia - Case Study Steve DAVIDSON	194: Right Way, Wrong Way, Better Way - Modelling cultural sensitivity to engineering graduates Brad BOWN	119: Microgrids and their Application for Airports and Public Transit Ruby HEARD	544: Empowerment leading: A 7-Phase Model to secure an effective International Knowledge Transfer in Applied Sciences Jürgen KRETSCHMANN	202: Analysis of water distribution systems in urban China through system dynamics approach Jiangping WU	222: Giving Waste Plastic a New Life Darren LOMMAN	85: A green and sustainable electro-catalization process: utilizing carbon dioxide gas as source of carbon Wiley Y. H. LIEW	672: Transforming the Project Lifecycle through Geospatial Technologies Tim LEBMON
17:00										672: Transforming the Project Lifecycle through Geospatial Technologies Tim LEBMON
17:06										673: Location, location, location - Geographers hold the key to achieving a sustainable world John RENARD
17:08										673: Location, location, location - Geographers hold the key to achieving a sustainable world John RENARD
17:15	626: Big data and design flood estimation James BALL	55: A Construct for the Merit and Social Reaction to New Technology Phillip CAMPBELL	173: The Impact of IT project management upon engineering infrastructure project management Stephen MCGRATH	549: Teaching environmental sustainability to engineers: an upside down approach Kate O'BRIEN	422: Sustainable Development: Convergence and Innovation in Engineering Education and Practice Yvette PEARSON	629: Water and Rivers of the Future Joaquim Manuel VELOSO POÇAS MARTINS	243: Energy Assessment of a Dwelling with PV Green Roof Design Saad ODEH	360: Utilization of Energy Value of Cigarette Butts Halemu KURMUS		673: Opportunities & Challenges in Utilising Spatial Infrastructure and Analytics Zaffar Saifi MOHAMED GHOUSE
17:23										673: Opportunities & Challenges in Utilising Spatial Infrastructure and Analytics Zaffar Saifi MOHAMED GHOUSE
17:25	27: A review of modelling practice in a gauged urban catchment under ASGS16 Daniel WOOD	640: What is relevant, a passing led, lake or truly "disappears"? Vaughan ROBERTSON	384: From Pro Bono Projects to Shared Value Partnerships - How Strategic Dedication of Pro Bono Resources can Support Social Value Creation Processes and Improved Livelihoods Kim AIZWORTHY, Malaine AUDREY	103: Training Effectiveness for Next-Gen Engineers Peter CEBON	609: Addressing SDG 4, Quality Education, by Expanding Global Quality Assurance Partnerships Michael MULLIGAN	307: The Green Retaining Wall Zachary WONG, Scott CARNE	140: Holistic approach to Human Comfort Mike SOLLGO			673: Opportunities & Challenges in Utilising Spatial Infrastructure and Analytics Zaffar Saifi MOHAMED GHOUSE
17:42										673: Opportunities & Challenges in Utilising Spatial Infrastructure and Analytics Zaffar Saifi MOHAMED GHOUSE
17:45		400: Australia's Economic Crossroads Opportunity from Innovation to Commercialisation Grant SCOTT	572: Complexity Emergence and Chase a leaders approach to system thinking, three case studies examined Edward TOSHER	437: Enhancing Experience of Learning Engineering Mechanics with Blended and Experiential Components Nicholas HARTOS	273: Design and Implementation of Engineering Education Knowledge Service Platform HuJun TIAN, Jian GUAN	367: The investigation of limestone calcined clay cement: A review Hao SUI				Q & A

Legend	Theme 1: How new technology and innovations are reshaping engineering (SDG 1, 6, 7, 9, 12, 13, 14, 15)	Theme 2: Engineering for humanity: responsive design for greater livability (SDG 1, 2, 3, 4, 10, 11, 12)	Theme 3: Fostering diversity and inclusion (SDG 4, 5, 10, 16, 17)	Theme 4: Preparing the next generation of engineers (SDG 4, 17)	Theme 5: Engineering leadership, governance and influence (SDG 1, 4, 5, 8, 12, 13, 16, 17)	Theme 6: Our changing climate: mitigation, resilience and adaptation (SDG 3, 6, 7, 10, 13, 14, 15)	World Federation of Engineering Organizations (WFEO)
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Friday, 22 November 2019	
08:30	Plenary Session
08:30	Scale Up! - exploring the challenges of scaling up to meet the dream of an electric planet - Dr Alan Finkel, Chief Scientist Australia
09:10	Why we need to understand events, wise predictions of engineering James TREVELYAN FEAUST
09:25	Shaping the engineering discipline for the future Eleanor HUNTINGTON HOWEFAUST
09:40	Revolutionising recycling to redirect waste into production Vivian SAKARWALLA HOWEFAUST
09:55	Keynote 11
10:30	Morning Tea and Poster viewing

	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Room I	Room J	Room K	
	Innovation and disruption 5	High School student program : 11:00-11:30	Governance	Nature of leadership	Preparation for practice	Disaster risk management	Smart Farming	Transport systems - sustainability	Sustainable assets and utilities 2	Engineering a career	Engineers Australia	
11:00	641: Technology to empower engineers with better insight into systems assessment Stephen WITHERDEN	Where could a career in engineering take you? Anything is possible. Meredit WESTAFER, Alex BAITCH, Michael MYERS, Jillian KIRBY, Richard HOPKINS, Michael NORTON, Hannah BROWN, Aislinn SCHEIDT	10: Coping with Disruption: A Change Management Approach Sam DURLAND	240: Taming Mega Projects: Delivering fast paced, large scale and complex projects William SMITH	480: Increasing Student Exposure to Professional Practice via a Cooperative Education Program Julia LAMBORN	491: Preparing the emergency management sector to climate change: example from Queensland, Australia Fahim TONBOY	476: Smart Irrigation: Proximal Soil Moisture Sensing for Real-Time Water Delivery Control Xiaodong WU	198: Restoration Of The 114 Year Old Heritage Timber Truss Bridge At Barham Sam WELIE	340: Engineering for Humanity - Sustainability of Wash, Sanitation and Hygiene (WASH) in Con's Bazar Rohingya Refugee Camps Camille BACHET	429: EWB Australia's School Outreach Program: Redefining The E in STEM For A More Diverse Future Shelore Anna CAIN		
11:17	634: Frontier Technologies in Aid and Development - The pathway to scalable implementation. Roshika MOHAN		52: Influencing and improving governance of public transportation projects Lauree BOWMAN	47: Why practical engineering solutions are an under-recognised yet pivotal key to societal progress Nick FLEMING	111: TRIZ thinking heuristics to nurture future generations creative engineers Iveta BELSKI	19: Aerodynamically shaped cyclone shelters for Queensland John HOLMES	287: Engineering Innovations in support of the Blue Economy and Sustainable Development Goals Andrew MAROUCHOUS	259: Sustainable Re-use of Sydney Tunnel Spoil Jonathan BUTTOK, Ben REAFORD	123: Australian Indigenous Sustainable Engineering Realisation and Recognition Bill JORDAN	234: Diversifying Diversity: LGBT Representation in STEM Industries Matthew TENDAR, Daniel LUKES		
11:34	293: A Cost Effective Recycled Glass Technology Supvee SETUNGE		2: Restructuring an organization's Asset Management System Michael SCHULZER	330: Engineering for Social Impact Requires Re-Thinking Engineering Leadership Jennifer TURNER	562: The Power of an Hour and Inspiring the next generation of STEM professionals David PONTING	128: Global Wildlife Protection: a Proposal for an International Standard Avian Wildlife Fighting Aircraft Fleet and Satellite Early-Warning System Graham DORRINGTON	51: Using Genetics Engineering to Increase Crop Production and Nutritional Diversity Eliot JONES	346: Comparison of Energy Savings using 25kV Static Frequency Converter system for Traction Power Stephen GOH	275: Asset Management Empowering Sustainable Communities Anna GIBBS	499: Paradoxes to be met on the road to a diverse and inclusive workforce Kara O'BRIEN	Engineers Nail Climate Risk (Sustainable Engineering Society and the Environmental College) Lara HARLAND, Steve POSSELT, Geoff HURST, Geoff EBBS	
11:51	512: Recent Trends in Advanced Applications of Emerging 2D Nanomaterials in Construction Materials Sherry QIANHUI ZHANG		12: How to increase the chance of project success Tim ELLIS	118: Building Global Partnerships Through Emerging Technical Leaders in the Electricity Sector Bee OPATSIWAN	389: Accelerating Change and the Role of Future Engineers Craig MATKINS	124: Cyclone resilience modelling and the development of new insurance coverage programs for housing in Fiji Geoff BOUGHTON	114: Data Quality in Engineering Asset Management - creating & maintaining a foundation for data analytics Allen TAM	296: Testing of Existing Fibre Reinforced Polymer Strengthened Bridges - Are We There Yet? Steven HEFFERNAN, Latha SATYAMURTHY	231: Sustainable Asset Management Andrew JONES	648: Galvanising a profession to truly embrace diversity Briant BISSONS		
12:06	127: Abstract - Effect of boron addition to steels and recommended practice for welding Sasanka BIRBA		368: How To Effectively Lead From The Middle James IOUJ	647: Building trust and negotiating stakeholder confidence Helen DAVIDSON	649: The Wonder Project - Inspiring kids into engineering, particularly those that wouldn't normally choose it Bridget BRISSON	25: Green square: Enabling urban renewal through effective flood risk management Anwarul REEDY	177: On-demand Public Transport: utilizing data analysis to overcome transport challenges Ernest WONG, Matthew VOSSIN	372: Investigating the Diffusion Mechanism of Light Petroleum Solvents from Buried Seals Using a Non-Destructive Method Aris TAMANNA	281: Timber - The Human Material and a Case for Wetland Quentin JACKSON	211: Balancing Act - The art of controlling your work-life structure Kathleen BOSELEY		
12:25	498: Enhanced performance of concrete with use of Carbon Nanotube reinforced liquid additive Tasha EAGLE		178: Breaking Up is Hard To Do My Experience Selling Part Of The Jacobs Business And Learning To Lead Through A Divestment Helen FORSTER	528: Forging global engineering standards Elizabeth TAYLOR	141: Integrating RRM process within design to improve overall reliability in sustainability projects Shyam BADAN	263: Improving Resilience of Wastewater Systems to Earthquakes - Case Study: Wellington Region Philip MCFARLANE	355: How defying 'space' digitally enables the journey toward reaching the United Nations sustainable development goals Christopher QUINN	190: Influencing Design and Improving Accessibility through Pedestrian Simulation Modelling Sarah ZHANG	341: Creating a Sustainable Future: Sink or Swim Michael HANBURY	388: Addressing Gender Diversity within Australia's Suburb Engineering Sector Sarah WATSON		
12:42	516: Offshore development in the Argentinean Sea: Stimulated Self-Buff of Submarine Pipelines Gustavo Fabian ACOSTA		482: Driving Innovation Through Small Business Blake BOULTON	441: Public Debate and Leadership in the Transport Sector Shelore RAM	151: Building Resilience in Indian Slum Communities with Energy-Efficient Products Amy FORBETH	297: Optimising Wind Farm Performance through Well-Engineered Visualisations David BOWLY	97: Capability Building with Road Authorities Kevin BEER	690: Leveraging experience to create sustainable assets. Using the design phase to make smart decisions that will influence the long term life and sustainability of our assets John EWERS	522: Diversity and Inclusion in Engineering Through Community Partnerships Kara SELVATHAN, Daniel LEA			
12:59	Mini Oral Session E		Mini Oral Session F									
13:15	560: Engineer - Leader of the Modern World Wijayakumara Sarathchandra WEERASINGHE		332: The Influence of Modern Farming Practices and Climate Effects On Designing A New Future Across the Cornubian Physiognam Jonathan ROBERTS									Young engineers - what does a future engineering workforce look like? Nicole BROWN, Isabel DUFFY, Oswald KHAN, Mathias SINCH KURKELA
13:20	22: Raising the Bar on Leadership in the Engineering, Building and Construction Industry Natasia GADOURC		353: Assessment of the viability and benefits of using vegetable oil fuels and of more fundamental ways to offset the increasing fossil fuel demand Ian THOMAS									
13:25	587: Engineering Leadership for Organisational Excellence within Australian Organisations using Lean Six Sigma Methodology Sandeep JADHAV, Khushi JADHAV	319: Predictive and operational analytics tools for the Adelaide metropolitan water distribution network Amin DURKORIC										
13:30	526: Mentoring the future workforce: Industry perceptions of supervising students Rosalee GOLDSMITH	212: Investigative Study of Geothermal Power System Configurations in Fiji John P.J. MO, Naveed DEO										
13:35	89: Transitioning from Student Engineer to Emerging Professional Gerry WOPMAN											
13:40	50: Welcome to Sarajevo - Gas Engineering in a War Zone Andrew JONES											
	Innovation and disruption 6	Robotics, cyber security and the Internet of Things	Transformative models 2	Industry-education collaboration	Resilience	Sustainable water management practices	Transport systems - road	Transport systems - future	Sustainable assets and utilities 3	Capacity Building (inclusion focus)	Engineers Australia	
14:00	357: Signalling the Layout - Automatic Design of the Optimum ETCS L2 track Sections Ihu SIN	216: FibreOptic Embedded fibre optic sensing for low-cost, high resolution monitoring in bridges and for commercial systems Dusan STOJKOVIC, Ajay RAJAGANAN	101: The Regenerative Economy: A Systems Approach to Sustainability David RICE	176: Industry and Education Collaboration in Empowering the Careers of Indigenous Students Gerrit FRYAN, Casey DWYER	223: Climate Change: Evaluating vulnerabilities and enhancing the resilience of the built environment Mira WILLIAMS	148: Hybrid Water Systems: Realising their Benefits with Ultrasonic Smart Metering Martin ANDA	102: Improving Road Safety with Safe System Assessments Kevin BEER	559: Streets of the future - the Movement and Place approach to New Mobility Ray MARSHLAND	344: The Biodigger: An AI in One Technology Improving People's Lives in Cambodia Heidi MICHAEL	255: Three key elements to diversify the future workforce Annabeta DAO		
14:17	531: How new technologies can improve the Melbourne Tram Network Alan CROSBY	317: The Connected Site: How to digitally design an I18 construction program Matthew BOYLE, David BURPHY	385: Infrastructure Sustainability Rating Tools - exploring opportunities for the engineering profession based on international research Lee DAVIES, Sienna LONG	38: The power of partnerships: increasing female participation in engineering Lee DAVIES, Sienna LONG	58: Infrastructure Resilience: Resilience Engineering Mitigates Natural and Anthropogenic Hazards Chris QUINN	100: Urban Waterways Renewal Project - A Leading Western Australian Demonstration Project in Water Sensitive Urban Design Ajay BHANDARI	318: The Great Ocean Road - Heritage Management and Road Maintenance John TUNN, James MILLER, OLSEN	416: Bridging the gap between policy & deployment: Liveable cities through connected mobility and innovation Scott BENJAMIN	76: Achieving the UN Sustainable Development Goals: productivity and engineering practice improvements James TREVELYAN FEAUST	458: Inclusive Culture for Building Greater Capacity and Outcomes Collette BURKE		
14:34	415: Case study: Optus stadium (Perth) - the implementation of open and digital design in delivering state-of-the-art stadium Clayton RIDGLE	487: Guiding Students with "Remote Hands" for Electronic Troubleshooting in Undergraduate Units Bina CHANDRASEKHARAN	535: Charting the Leadership of Organisational Change Greg MCMANION	57: Industry education - creating better engineers for a sustainable future Tina KERIN, Stuart CHUA	308: Resilience in the new Sustainability Paul O'CONNELL	93: Strengthening Resilience: An Application of Rapid Urban Flood Modelling to Urban Strategic City Scale Flood Management Elena SHAFRANOVA	541: zero2050 - a planning framework to achieve zero road trauma by 2050 Wayne MOON	29: Present Technology - Future Public Transport Richard LAU	252: Integrating sustainable infrastructure into new urban developments Carol BOTTLE	137: Developing Multicultural Teams for Optimal Performance and Maintaining Heterogeneity Peter RINDLE	Technology: the end of Civil Engineering? (Civil College Study) Anker BRODERSEN, Lukas GENTLE, Kelly MASLIN, Jeff SHARP	
14:51	40: Impact of REFCO (Burrhole Mitigation Technology) on 20 Customers Abrar AZIZ	410: The power of Digital Earth: Developing affordable remote immersive collaboration spaces for data access and engagement in emergency management Cheryl OCKA	195: Engineering a sustainable world: decision making for public infrastructure investments Angela REEDY	110: Developing the next generation of innovative leaders through OEP Cordelia BELOMILYA, Victoria HARITOS	130: Building multi-generational infrastructure to meet community needs Susanna REMERSWAAL	304: Design of energy generation systems for water use efficiency Sudheep NAIR	300: Can a Road Maintenance Project Contribute to Sustainable Development Goals? Melli Harina KRAMADIBRATA	18: Roadless to Dams: Bicycles and B-Doubles Co-Exist Fran SATYA, Stuart COOK	145: The Australian Minerals Industry Experience - SDGs in Action Rashika MOHAN	166: Developing education and employment pathways for individuals on the autism spectrum through a strength-based STEM program Robert WILLIAMSON		
15:08	512: How Open Data Innovation Helps Engineer a Sustainable World Bernadine FERNZ	637: Digital manufacturing transformation: integration of virtual reality and robotics for safer industrial operations Amin SHAMSUZZOHA	189: An Engineering Solution to Assist the Elimination of Trachoma from Australia Peter ROGERS	138: Industry Implementation of Aboriginal Cultural Heritage Education Programs Xavier HOLLIS, Tom GOLOFRINCH	61: Engineering for a Future Ready City Richard PALMER	654: What water treatment become can remote Australia Elizabeth HOVENDER	570: Urban Midway Safety and Traffic State Elizabeth HOVENDER	468: Overhead Wiring (OHV) Quality and Innovation applied on the Elevated Railway Kyan LWIN	529: Sustainability in Design - a toolkit for innovation Emma DACE, Deenan WAGNER	20: From safety through wellbeing to inclusion Mary-Ellen FEENEY		
15:25	445: A green foundation for offshore wind energy - helical piles Yanqi HU		420: The Engineering Bill of Materials - It's Contribution To Water Society (how rodent science led me to develop a general framework for complex problem solving) Jane MACMASTER	265: On Effective Collaboration Between Universities and Industry Barak ALUTIVA	272: Pymont Bridge Remediation: Putting Sustainable Engineering into Practice Sof FRENCH, Robert POWER	339: Small-scale Wastewater Treatment Technologies for Challenging Environments Shona FITZGERALD	203: Integrated High-Speed Turnout Jaroslav DYDICH, Jack PAB	457: Sustainable Victorian Assets Collette BURKE	215: How happy and diverse teams deliver sustainable business Sajid MAQDOOL, David COLLETT			
15:30											Mechanical College Board Presentation Danielle ROBERTS, Michael WEST, Edmund ANG, Finn MCLELLAN	
15:42	308: Australia's First Circular Water Flange 1 Orders Kathie LANGDON, Ais Barrett		646: Bringing engineering to life - to support an inclusive, modern, influential and diverse profession we have transformed Susan FREEMAN-GREENE	327: Industry-education partnerships in support of developing the workforce of the future Barrett FERRIS	134: Perth Children's Hospital - Designing it for the kids Pratik SHRESTHA, Declan BARRETT	241: Integrated water management - a regional approach Carol BOYLE	230: Diversifying Skills for David SOUBUTTS	450: Urban Narratives for City Infrastructures Mark DYER				
16:00												

Legend	Engineers Australia	Theme 1: How new technology and innovations are reshaping engineering (SDG 1, 6, 7, 8, 12, 13, 14, 16)	Theme 2: Engineering for humanity: responsive design for greater livability (SDG 1, 2, 3, 4, 10, 11, 15)	Theme 3: Fostering diversity and inclusion (SDG 4, 5, 10, 16, 17)	Theme 4: Preparing the next generation of engineers (SDG 4, 7)	Theme 5: Engineering leadership, governance and influence (SDG 1, 4, 5, 8, 12, 13, 16, 17)	Theme 6: Our changing climate: mitigation, resilience and adaptation (SDG 3, 7, 11, 13, 14, 15)	Host: Federation of Engineering Organizations (FEOC)	Updated on 9 September 2019 and is subject to change.
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