	Wednesday 2 August 2017				
8.00am	Wednesday 2 August 2017 Registration Opens				
0.000	Boulevard Level, Brisbane Convention & Exhibition Centre Opening CHAIR: Joseph Mathew Asset Institute Australia				
	CHAIR: Joseph Mathew, Asset Institute, Australia Boulevard Auditorium Welcome Addresses				
9.00am	Adjunct Professor Joseph Mathew, Congress Chair, Asset Institute, Australia Professor Joe Amadi-Echendu, ISEAM Chair, University of Pretoria, South Africa Professor C W Lim, City University of Hong Kong, China (VETOMAC)				
	Professor Arun Sharma, Deputy Vice Chancellor, Queensland University of Technology Opening Address: The Lord Mayor Graham Quirk, Lord Mayor of Brisbane, Australia				
9.45am		Delivering Operational Effectiveness in Asset	y Platinum Sponsor Intensive Industries through Asset Intelligence Mainpac, Australia		
		Plen Sponsored	ary 1 by Mainpac		
10.10am	Alan Johnston, MIMOSA (Machinery Information Man	Intelligent Integration and Interoperabil agement Open Systems Architecture), & Standards Leader	pton, Mainpac, Australia lity of Critical Infrastructure and Assets rship Council, USA Jess B. Kozman, Professional Petroleur Auditorium	n Data Management (PPDM) Association, Singapore	
10.45am		Morning Tea	& Exhibition		
11.15am	Boulevard Concourse CONCURRENT SESSION 1 Wednesday				
	SESSION 1.1 Building Information Modelling	SESSION 1.2 Sustainability & Climate Change Adaptation of	SESSION 1.3 Intelligent & Automatic Fault Diagnosis & Prognosis	SESSION 1.4 Reliability Modelling & Maintenance Decision	
	Sponsored by Queensland University of Technology CHAIR: Robin Drogemuller, Queensland University of	CO-CHAIRS: Dr Fahim Tonmoy and Dr David Rissik,	1 CHAIR: Peter W. Tse, City University of Hong Kong,	CHAIR: Lin Ma, Queensland University of Technology,	
	Technology, Australia Boulevard Auditorium	NCCARF, Australia Boulevard Room 1	China Boulevard Room 2	Australia Boulevard Room 3	
11.15am	BIM, the Next Steps for Queensland, is it that Simple? LEAD SPEAKER: Andrew Curthoys, Department of	Adaptive Capacity of Australian infrastructure to future climate change risks	A Smart and Big-Data System for Predicting the Remaining Useful Life of Real Industrial Machines	Overhaul decision of repairable systems based on the power-law model fitted by a weighted parameter	
11.30am	Infrastructure, Local Government and Planning, Queensland, Australia	LEAD SPEAKER: David Singleton, Infrastructure Sustainability Council of Australia (ISCA), Australia	LEAD SPEAKER: Peter W. Tse, City University of Hong Kong, China	estimation method LEAD SPEAKER: Renyan Jiang, Changsha University of Science and Technology, Changsha, China	
	Innovation in BIM for Emergency Management and Response in High Risk Environments	Climate Change Impacts for Asset Managers Adjunct Professor David Hood, Long Future Foundation,	The feature analysis for fault diagnosis of rotating machine	Statistical analysis for wood poles using sound wood measurements data	
11.45am	Peter W Beven, Queensland University of Technology, Senior Advisor, Queensland Health, Australia	Australia	Hyeontak Yu, Byunghyun Ahn, Jungpil Noh, Hyomin Jeong and Byeongkeun Choi, GyeongSang National University,Republic of Korea	Allen Tam, Iris Kwan and Mark Halton, Relken Engineering, Australia	
	BIM in FM: The Real Deal		Centrifugal Compressor Diagnosis Using Kernel	Enablers and barriers of smart data-based asset	
12.00pm	Malcolm Foort, ZUUSE, Australia		PCA and Fuzzy Clustering X. Liang, F. Duan, D. Mba, B. Ian, Cranfield University, UK	management services in industrial business networks Toni Ahonen, Jyri Hanski, Helena Kortelainen, Teuvo Uusitalo, Matti Hyvärinen, Henri Vainio, Susanna Kunttu	
				and Kari Koskinen, VTT Technical Research Centre, Finland	
	Localization of Bluetooth Smart Equipped Assets Based on Building Information Models Mahtab Nezhadasl, Curtin University, Australia	Climate Change and Coastal Transport Infrastructure – How Do We Keep Australia Moving? Greg Fisk, BMT WBM, Australia	Automated and Predictive Monitoring and Diagnosis in the Energy and Natural Resources Sector Yvonne Power, IMPower Technologies, Australia	Optimal Group Preventive Maintenance Policy for Multiple Identical Leased Devices with Weibull Lifetime Distributions by Using Failure Rate	
12.15pm	Mantab Nezhaŭasi, Cultin University, Australia	Fahim Tonmoy and David Rissik, NCCARF, Australia	Tvonne rower, inrower rechnologies, Australia	Reduction Yu-Tzu Cheng, Ruey-Huei Yeh, Yu-Hong Chen and Wei- Chun Chen, National Taiwan University of Science and	
10.00	Applying the COBie approach to Linear Infrastructure Robin Drogemuller, Queensland University of Technology,			Technology, Taiwan	
12.30pm	Australia	Lunch 8	Exhibition		
12.45pm - 1.45pm		Boulevard Key	Concourse		
1.45pm		Professor Kerry Brown, Edith CHAIR: Joe Amadi-Echendu, U	derstanding the Management Element h Cowan University, Australia niversity of Pretoria, South Africa		
		CONCURREN	Auditorium NT SESSION 2 Jesday		
	SESSION 2.1 Governance & Planning 1	SESSION 2.2 Sustainability & Climate Change Adaptation of	SESSION 2.3 Intelligent & Automatic Fault Diagnosis & Prognosis	SESSION 2.4 Reliability Modelling & Maintenance Decision	
	CHAIR: Kerry Brown, Edith Cowan University	Infrastructure 2 CO-CHAIRS: Dr Fahim Tonmoy and Dr David Rissik, NCCARF, Australia	2 CHAIR: Peter W. Tse, City University of Hong Kong	Support 2 CHAIR: Ming Zuo, University of Alberta, Canada	
	Boulevard Auditorium The role of the board in Asset Management: An	Boulevard Room 1 Seawalls for coastal protection and climate change	Boulevard Room 2 Creating Smart Ways of Using Smart Technologies	Boulevard Room 3 Coordination between Maintenance and Production	
2.30pm	integrated approach to Governance	adaptation: A case study from the Gold Coast Rodger Tomlinson and Leslie Angus Jackson, Griffith Centre for Coastal Management, Australia	for Asset Management: Challenges, Opportunities, and Future Trends LEAD SPEAKER: Xiangyu Wang, Curtin University,	by means of Auction Mechanisms for Increased Efficiency of Production Systems Günther Prof. Dr.Ing. Schuh and Michael Kurz, FIR e. V.	
			Australia	an der RWTH Aachen / Institute for Industrial Management, Germany	
2.45pm				Integrated modelling and decision support of continuous production systems Samuel Patterson, Paul Hyland and Talara Berry, Queensland University of Technology & Synengco,	
	PANEL SESSION: Better than Best Practice SAMP	Adapting transport infrastructure to climate change:	Indirect ship hull condition monitoring using speed	Australia Joint Optimization of Preventive Maintenance and	
3.00pm	Strategic Asset Management Plans are at the forefront of these changes as they signal a shift from simply planning	Who bears the risk and responsibility? Samantha Hayes, Griffith University, Australia	and fuel consumption analysis Roar Adland, Pierre Cariou, Haiying Jia and Francois- Charles Wolff, Norwegian School of Economics (NHH),	Spare Parts Logistics for Multi-echelon Geographically Dispersed Systems Keren Wang and Dragan Djurdjanovic, University of	
	for asset acquisition and ongoing maintenance to a strategic view about determining the purpose and objectives of assets to support the objectives of the organisation. However, it is often unclear how to formulate		Norway Development of autonomous hammering test method for deteriorated concrete structures based	Texas at Austin, USA Assess the Inter-related Impacts of Carbon Taxation, Electric Power Costs and Solar PV Installation Using	
3.15pm	and develop SAMPs from a strategic perspective and to generate a long-term perspective for assets and service delivery through those assets.		on artificial intelligence and 3D positioning system Katsufumi Hashimoto, Tomoki Shiotani, Takahiro Nishida, Hideo Kumagai and Katsuhiko Kokubo, Kyoto	System Dynamics Modeling Amy Trappey and Charles Trappey, National Tsing Hua University, Taiwan	
	This Panel will discuss next generation examples and latest thinking about SAMPs.	Flood exposure and social vulnerability for	University, Japan Features analysis of vibration signal according to	Decision-Making in Asset Management under	
3.30pm	CONVENOR: Kerry Brown, ECU, Australia	prioritizing local adaptation of urban storm water systems Tanvir Ahmed, University of Sydney, Australia	crack and leakage of heat exchanger tube Jongmyeong Lee, Hyeontak Yu, Jeongmin Ha, Hyomin Jeong and Byeongkeun Choi, GyeongSang National	Regulatory Constraints Dragan Komljenovic, Georges Abdul-Nour and Jean- François Boudreau, Hydro Quebec Research Institute,	
	PANELISTS Monique Beedles, Teak Yew, Australia Alan Rosser, Queensland Rail, Australia Christine Ip, Queensland Treasury Corporation, Australia		University, Republic of Korea	Canada.	
3.45pm					
4.00pm -		Afterno	pon Tea		
4.30pm		Boulevard	Concourse		
	SESSION 3.1	Wedn SESSION 3.2	SESSION 3.3	SESSION 3.4	
	Governance & Planning 2	Sustainability & Climate Change Adaptation of Infrastructure 3	Intelligent & Automatic Fault Diagnosis & Prognosis 3	Reliability Modelling & Maintenance Decision Support 3	
	CHAIR: Kerry Brown, Edith Cowan University, Australia	CO-CHAIRS: Dr Fahim Tonmoy and Dr David Rissik, NCCARF, Australia	CHAIR: Peter W. Tse, City University of Hong Kong	CHAIR: Ming Zuo, University of Alberta, Canada	
	Boulevard Auditorium E-trademark registration services to improve process	Boulevard Room 1 Climate change adaptation of infrastructure and	Boulevard Room 2 MBVI (Model-based Voltage and Current) systems: a tool for optimizing Assot Management	Boulevard Room 3 Prodictive Models of Maintenance Needs for Rower	
4.30pm	performance and prevent trademark infringement LEAD SPEAKER: Amy Trappey, National Chiao Tung University, Taiwan	CoastAdapt tool LEAD SPEAKERS: Fahim Tonmoy and David Rissik, NCCARF, Australia	tool for optimising Asset Management Strategies? What they do, how they work and some case study examples	Predictive Models of Maintenance Needs for Power Distribution Wood Poles Using Machine Learning – A Conceptual Case Study	
			Geoff Walker, Artesis LLP, UK	Alexandre Cesa, Carla Boehl and Kecheng Shen, Curtin University, Australia	
4.45pm				Modelling the Effect of Time-dependent Covariates on the Failure Rate of Wind Turbines Feixiang Wu, Yifan Zhou and Jingjing Liu, Southeast	
	An approach to quantify assets value according to the	PANEL SESSION	Reciprocating compressor valve leakage detection	University, China Predictive modelling the Downer way	
5.00pm	ISO 55000 concept Vicente González-Prida Díaz, Adolfo Crespo Márquez, Antonio Guillén, Juan Francisco Gómez Fernández and	Increasing climate resiliency of Australia's infrastructure sector: Challenges and Opportunities	under varying load conditions Panagiotis Loukopoulos, George Zolkiewski, Ian Bennett, Suresh Sampath, Pericles Pilidis, Fang Duan	Phillipa O'Shea, Hui Chen and Hamish Featonby, Downer New Zealand, New Zealand	
	Antonio De La Fuente, University of Seville, Spain Investments Portfolio Optimal Planning Jerome Lonchampt, EDF, France	CONVENOR: Fahim Tonmoy, NCCARF	and David Mba, Cranfield University, UK	Configuring and Optimizing the Maintenance Support Resource Based on a double layer	
5.15pm		PANELISTS David Singleton, Infrastructure Sustainability Council of Australia (ISCA), Australia Rodger Tomlinson, Griffith Centre for Coastal		Algorithm, National University of Defence Technology Xiwen Wu, Bo Guo, Ping Jiang and Shiyu Gong, National	
	Value of Asset Management: Investigation into its	Management, Australia David Rissik, NCCARF, Australia Greg Fisk, NCCARF, Australia	Method to determine internal leakage of aircraft's	University of Defense Technology, China Theory of Testability Oriented Equipment Health	
5.30pm	determination and measurement Ernst Krauss and Carla Boehl, WA School of Mines, Curtin University, Australia		hydraulic servo Jouko Laitinen and Kari Koskinen, Tampere University of Technology, Finland	Management Shuming Yang, Xiaofei Zhang and Xiaoyu Wen, National Universtiy of Defense Technology, China	
	Tools to support value for money asset investment outcomes				
5.45pm	Lloyd Arnott, Aurecon, Australia				
6.00pm - 8.00pm		Welcome Reception Boulevard Concourse, Brisbane Convention & Exhibition Centre			
8:00pm - 9:00 pm	ISEAM Members' Briefing				

Thursday 3 August 2017

8.30am	Registration Opens Boulevard Level, Brisbane Convention & Exhibition Centre			
9.00am	Keynote The 4th Industry Revolution: Reflecting on the Opportunities, Barriers and Risk for Asset Management Professor Marco Macchi, Politecnico di Milano, Italy CHAIR: Helena Kortelainen, VTT Technical Research Centre, Finland Boulevard Auditorium			
	CONCURRENT SESSION 4 Thursday			
	SESSION 4.1	SESSION 4.2	SESSION 4.3	SESSION 4.4
	Public Assets	Maintenance Strategies	NDT & AE in Condition Monitoring 1 Sponsored by NMEMS	WORKSHOP: Long Future Sustainability for Asset Managers
	CHAIR: David Edgerton, APV Valuers and Asset Management, Australia	CHAIR: Moray Kidd, The University of Manchester, UK	CHAIR: Andy C.C. Tan, Universiti Teknologi Abdul Rahman, Malaysia	FACILITATORS: David Hood & Guy Lane, Long Future Foundation, Australia
	Boulevard Auditorium	Boulevard Room 1	Boulevard Room 2	Boulevard Room 3
9.45am	Insights into Queensland's Public Assets LEAD SPEAKER: Patrick Flemming, Queensland Audit Office (QAO), Australia	Maintenance Strategies for Next Generation Industry, LEAD SPEAKER: Moray Kidd, The University of Manchester, UK	Advanced NDT contributing performance evaluation of civil structures LEAD SPEAKER:Tomoki Shiotani, Kyoto University, Japan CO-AUTHORS: Takahiro Nishida, Katsufumi Hashimoto	ABSTRACT: Long Future Sustainability is a short intensive workshop that seeks to redefine sustainability in the light of current threats to life on Earth. It will empower Asset Managers with knowledge, passion and drive to deliver better outcomes that not only assist you in your business role but help transform society to a better world that we all deserve.
10.15am	Sustaining public assets for local communities – the role of innovation and partnerships LEAD SPEAKER: Roland McMillan, Local Government Association of Queensland, Australia	Maintenance Footprints Phillipa O'Shea, Downer, New Zealand	The design of a novel line-array type of laser source for non-contacted guided waves to inspect the integrity of plates Peter W. Tse and Jingming Chen, City University of	The workshop consists of three parts. Each part contains short presentations, interactive participant activities, videos, and some unique audio/visual content and music. Whether you are new to the conversation about
10.30am		NextGen Forward Works Programme Development and Management Phillipa O'Shea, Downer, New Zealand	Hong KongNovel nondestructive technique of internal deterioration in concrete deck with elastic wave approaches Kazuo Watabe, Hidefumi Takamine, Takahiro Nishida and Tomoki Shiotani, Toshiba Corp., Japan	sustainability, or not, this workshop has content that many people have never considered part of the dialogue about sustainability. Participating in Long Future Sustainability will help you: - Identify hidden and future risks to your organisation;
10.45am	Combining technologies to improve AM outcomes Gavin Chadbourn, Aurecon, Australia	Partners in maintenance – benefits and barriers in using partnering-based maintenance contracts Anders Ingwald and Mirka Kans, Linnaeus University, Sweden	Evaluation of condition and damage in reinforced concrete by elastic wave method Takeshi Watanabe, Hayato Fukutomi, Kohei Nishiyama, Akari Suzuki and Chikanori Hashiimoto, Tokushima University, Japan	 Learn about exciting new business opportunities; See new frameworks to apply to your products & services; See exciting – and sometimes scary – new ideas to share with collegues; and Gain new knowledge, passion and drive to contribute to a Long Future for life on Earth
11.00am	Land Bank for National Strategic Projects in Indonesia Rahayu Puspasari, Ministry of Finance, Republic of Indonesia	Configuration Management – Why Asset Management can't do without it Greg Wilcock and Peter Knights, University of Queensland, Australia	Quantification of valve severity in reciprocating compressor by using acoustic emission technique Hoi-Yin Sim, Rahizar Ramli, Ahmad-Saifizul Abdullah and Ming-Foong Soong, University of Malaya, Malaysia	Attendees will come away feeling that the world suddenly makes sense, confident that they have an edge over their competitors, and more than ever able to see the elephants in their own Board rooms.
11.15am - 11.45am	Sponsored by K2Fly			
	CONCURRENT SESSION 5 Thursday			
	SESSION 5.1			SESSION 5.4
	SESSION 5.1 Sustainable Property Assets	Thurs	sday	SESSION 5.4 WORKSHOP: Evaluating Data Management Maturity for Engineering Assets
		Thurs SESSION 5.2 Technology & Management – Smart maintenance /	sday SESSION 5.3	WORKSHOP: Evaluating Data Management Maturity
	Sustainable Property Assets	Thurs SESSION 5.2 Technology & Management – Smart maintenance / Digitalization 1	SESSION 5.3 NDT & AE in Condition Monitoring 2 CHAIR: Andy C.C. Tan, Universiti Tunku Abdul Rahman,	WORKSHOP: Evaluating Data Management Maturity for Engineering AssetsFACILITATOR: Jess B. Kozman, Professional Petroleum Data Management (PPDM) Association,
11.45am	Sustainable Property Assets CHAIR: Tony Brasier, PRDnationwide, Australia	Thurs SESSION 5.2 Technology & Management – Smart maintenance / Digitalization 1 CHAIR: Marco Macchi, Politecnico di Milano, Italy	SESSION 5.3 NDT & AE in Condition Monitoring 2 CHAIR: Andy C.C. Tan, Universiti Tunku Abdul Rahman, Malaysia Boulevard Room 2 Acoustic Emission technique for monitoring of common faults in diesel engines Andy C.C. Tan, University Tunku Abdul Rahman	 WORKSHOP: Evaluating Data Management Maturity for Engineering Assets FACILITATOR: Jess B. Kozman, Professional Petroleum Data Management (PPDM) Association, Singapore Boulevard Room 3 PREAMBLE: As asset-intensive industries recognize engineering asset data from critical infrastructure and facilities as a corporate asset, many find themselves unprepared to support projects that manage engineering asset data to support business intelligence or analytics. The goal of this workshop is to understand the elements of asset management capability maturity
11.45am 12.00pm	Sustainable Property Assets CHAIR: Tony Brasier, PRDnationwide, Australia Boulevard Auditorium Increasing Awareness and Adoption of Sustainability Features and Considerations in the Property Industry LEAD SPEAKER: Dr Diaswati Mardiasmo, PRDnationwide,	Thurs SESSION 5.2 Technology & Management – Smart maintenance / Digitalization 1 CHAIR: Marco Macchi, Politecnico di Milano, Italy Boulevard Room 1 Maintenance Analytics and Industrial Data Science LEAD SPEAKER: Professor Diego Galar, Luleå	SESSION 5.3 NDT & AE in Condition Monitoring 2 CHAIR: Andy C.C. Tan, Universiti Tunku Abdul Rahman, Malaysia Boulevard Room 2 Acoustic Emission technique for monitoring of common faults in diesel engines	 WORKSHOP: Evaluating Data Management Maturity for Engineering Assets FACILITATOR: Jess B. Kozman, Professional Petroleum Data Management (PPDM) Association, Singapore Boulevard Room 3 PREAMBLE: As asset-intensive industries recognize engineering asset data from critical infrastructure and facilities as a corporate asset, many find themselves unprepared to support projects that manage engineering asset data to support business intelligence or analytics. The goal of this workshop is to understand the elements of asset management capability maturity that are important in industries with a focus on efficient and safe operations. MOTIVATION: The workshop builds on work done at the Asset Institute at the Queensland University of Technology to develop a cross-industry Asset
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12.00pm 12.15pm 12.30pm	Sustainable Property Assets CHAIR: Tony Brasier, PRDnationwide, Australia Boulevard Auditorium Increasing Awareness and Adoption of Sustainability Features and Considerations in the Property Industry LEAD SPEAKER: Dr Diaswati Mardiasmo, PRDnationwide, Australia A Novel Approach to Sensor-less Daylight Harvesting in Commercial Office Buildings Brenden Harris, Fredon, Australia Sustainable Housing Toolkit Connie Susilawati, Wendy Miller, Queensland University of Technology and Asti Mardiasmo, PRD Nationwide, Australia Employee engagement culture in green buildings: The role of managers in managing human assets to drive financial outcomes Subha Parida and Kerry Brown, Edith Cowan University,	Thurs SESSION 5.2 Technology & Management – Smart maintenance / Digitalization 1 CHAIR: Marco Macchi, Politecnico di Milano, Italy Boulevard Room 1 Maintenance Analytics and Industrial Data Science LEAD SPEAKER: Professor Diego Galar, Luleå University of Technology, Sweden From asset provider to knowledge company - transformation in the digital era Helena Kortelainen, Jyri Hanski and Ari Happonen, VTT Technical Research Centre of Finland Repair and Overhaul Supply System Integrated Planning at Roy Hill Agata Guzek, Indrasen Naidoo and Carla Boehl, Maintenance, Roy Hill, Australia Data Quality in Asset Management – Creating and Maintaining a Foundation for data analytics	SESSION 5.3 NDT & AE in Condition Monitoring 2 CHAIR: Andy C.C. Tan, Universiti Tunku Abdul Rahman, Malaysia Boulevard Room 2 Acoustic Emission technique for monitoring of common faults in diesel engines Andy C.C. Tan, University Tunku Abdul Rahman Avoidance of Generator outage by vibration monitoring R.S. Maurya, NTPC Ltd, India Efficient Evaluation of Internal Concrete Damage of Steel Plate-Bonded RC Slabs Norihiko Ogura, CORE Institute of Technology Corp. Hitoshi Yatsumoto, Hanshin Expressway Company Ltd. Takahiro Nishida and Tomoki Shiotani, Kyoto University Feature analysis of ultrasound signal for diagnosis Jungpil Noh, Byunghyun Ahn, Donghee Park, Hyojung Kim and Byeongkeun Choi, Gyeongsang National University, Republic of Korea Ultrasonic Phased Array on Time-of-Flight Diffraction for Non-Destructive Testing via Numerical Modelling Tat-Hean Gan, Channa Nageswaran and Mario Kostan,	 WORKSHOP: Evaluating Data Management Maturity for Engineering Assets FACILITATOR: Jess B. Kozman, Professional Petroleum Data Management (PPDM) Association, Singapore Boulevard Room 3 PREAMBLE: As asset-intensive industries recognize engineering asset data from critical infrastructure and facilities as a corporate asset, many find themselves unprepared to support projects that manage engineering asset data to support business intelligence or analytics. The goal of this workshop is to understand the elements of asset management capability maturity that are important in industries with a focus on efficient and safe operations. MOTIVATION: The workshop builds on work done at the Asset Institute at the Queensland University of Technology to develop a cross-industry Asset Management Capability Maturity Model (AMCaMM), and applies survey and benchmarking techniques developed for analyzing information management capability and complexity in other asset-intensive industries over the last two decades. Participants will evaluate their own organization's capability maturity for the management of engineering asset data management, and the workshop facilitator will then lead an interactive workshop to learn how that evaluation can be used to benchmark against other organizations and industries, to select and define quick win projects for improving capability, to identify the best growth strategies for utilizing that data in support of business intelligence and analytics, and to find correlations with financial performance metrics that demonstrate the

2.15pm		Keynote Asset Management Through Life Estimation Professor Romuald Rzadkowski, Airforce Institute of Technology, Poland CHAIR: Chee Wah Lim, City University of Hong Kong, China Boulevard Auditorium				
	CONCURRENT SESSION 6 Thursday					
	SESSION 6.1	SESSION 6.2	SESSION 6.3	SESSION 6.4		
	Energy Assets 1	Technology & Management – Smart maintenance / Digitalization 2	Condition Monitoring of Machine Elements 1	WORKSHOP: Recognition of Engineering Asset Management Programmes at Higher Educational Institutions		
	CHAIR: Don Sands, Synengco, Australia	CHAIR: Marco Macchi, Politecnico di Milano, Italy	CHAIR: Robert B. Randall, University of New South Wales, Australia	CHAIR: Joe Amadi-Echendu, University of Pretoria, South Africa		
	Boulevard Auditorium	Boulevard Room 1	Boulevard Room 2	Boulevard Room 3		
00pm .15pm	Managing Electricity Assets in the 21st Century- Revolution Not Evolution LEAD SPEAKER: Stephen Saladine, Generator Property Management & Asset Institute, Australia	Deep Learning Paradigm for Asset Management LEAD SPEAKER: Nalinaksh Vyas, Indian Institute of Technology Kanpur & Technology Mission for Indian Railways, India	Use of cyclostationarity to detect changes in gear surface roughness using vibration measurements Xihao Zhang, Wade A. Smith, Pietro Borghesani, Zhongxiao Peng and Robert B. Randall, University of New South Wales, Australia Extracting the characteristic frequency of the weak fault signal of blade crack by using the underdetermined blind source separation algorithm based on SCA Hongkun Li, Changbo He and Xinwei Zhao, Dalian	PREAMBLE: The International Society for Engineerin Asset Management (ISEAM www.iseam.org) is a not for-economic-profit organisation with a primary objective to "pursue charitable purposes, in particula the advancement of science and the advancement o education with a focus in the specific area of scientific knowledge known as integrated engineering asset management". ISEAM is "dedicated to the development and recognition of Engineering Asset Management (EAM) as an integrated and important body of knowledge" through "liaising with national and international bodies to provide a global approach		
2000	Being Certain in Tomorrow's Uncertainty Ben Hayden, Stanwell, Australia	Forecast Model for Optimization of the Massive Forming Machine OEE Markus Ecker and Markus Hellfeier, SMS group GmbH,	University of Tehnology, China Research on the Effect of Meshing Impact on Noise Radiation in Planetary Gear Transmission Bau Heyun, Zhu Rupeng, Dai Lin, Li Fengbo, Nanjing University of Accemutica and Actempattica China	to" EAM. It is in this regard that ISEAM organises the WCEAM series, and particularly this 12th edition in conjunction with 13th VETOMAC 2017. This is the second instance of the workshop, and will include a presentation of the results of the survey conducted during the first workshop held in 2016.		
30pm		Germany	University of Aeronautics and Astronautics, China	MOTIVATION: Engineering asset management		
.45pm	Analysing an Industrial Safety Process through Process Mining: A Case Study Anastasiia Pika, Arthur H.M. Ter Hofstede, Robert K. Perrons, Georg Grossmann, Markus Stumptner and Jim	Bridge Management Integrating Big Data of Structural Health Monitoring Yunxia Xia , Chunwei Zhang, Qingdao University of Technology, China	Influence of tooth surface friction on dynamic transmission error of split torque transmission system G.H. Jin, H.Y. Yang, R.P. Zhu, S.M. Li, Nanjing	encompasses all types of engineered assets includin built environment, infrastructure, plant, equipment, hardware systems and components. This workshop y provide an opportunity to present and discuss ISEAN ongoing initiative to recognise academic programs at higher educational institutions (HEI's). EAM covers a		
.00pm	Cooley, Queensland University of Technology, Australia Engineering Asset Management for various power generations: common concepts and specificities Jerome Lonchampt, EDF, France	A Data-driven Decision Model: A Case on Drawworks in Offshore Oil & Gas Industry Pengyu Zhu, University of Stavanger, Norway	University of Aeronautics and Astronautics, China A modified sideband energy ratio for fault detection of planetary gearboxes Mian Zhang, Dongdong Wei, Kesheng Wang and Ming J Zuo, University of Electronic Science and Technology, China	 very wide multidisciplinary scope, thus, the key question is "what constitutes EAM body of knowledg (EAMBoK)?" ISEAM's recognition, rather than statute accreditation, has two fundamental aims: To provide assurance that "asset management" academic programs at HEIs address EAM body of 		
15pm	Five Future-Proof Steps to Drive Relaibility with IIoT Bill Steele, Emerson, USA		Automated bearing fault diagnostics with cost- effective vibration sensor Agusmian Partogi Ompusunggu, Bovic Kilundu Y'Ebondo, Ted Ooijevaar and Steven Devos, Flanders Make, Belgium	 academic programs at HEIS address EAM body of knowledge; To encourage pedagogical and structured development of educational curricula, as well as research and training programmes that advance the EAM body of knowledge. 		
30pm -		Afternoo				
4.45pm CONCURRENT SESSION 7						
	SESSION 7.1	Thurs SESSION 7.2	day SESSION 7.3	SESSION 7.4		
	Energy Assets 2	Technology & Management – Smart maintenance / Digitalization 3	Condition Monitoring of Machine Elements 2	Education & Training		
	CHAIR: Don Sands, Synengco, Australia	CHAIR: Marco Macchi, Politecnico di Milano, Italy	CHAIR: Robert B. Randall, University of New South	CHAIR: Belle Upadhyaya, University of Tennessee,		
	Boulevard Auditorium	Boulevard Room 1	Wales, Australia Boulevard Room 2	Knoxville, USA Boulevard Room 3		
45pm	Enterprise Risk Profiling using Asset Transaction History Robin Platfoot, Covaris, Australia	Assessing Total Cost of Ownership: Effective asset management along the supply chain Amir Noorbakhsh, Carla Boehl and Kerry Brown, Western Australian School of Mines, Curtin University, Australia	Acoustic signature based early fault detection in rolling element bearings Amir Najafi Amin, Kris McKee, Ilyas Mazhar, Arne Bredin, Ben Mullins and Ian Howard, Curtin University, Australia	Do we know we are competent? A controversial question for asset managers and their teams LEAD SPEAKER: Steve Pudney, Intrinsic Engineers Australia		
00pm	VME a tool for risk informed engineering asset management Jerome Lonchampt, EDF, France	Value-based opportunity management process for asset intensive organization Manuela Trindade, Nuno Almeida, Matthias Finger and Daniel Ferreira, IST - University of Lisbon, Portugal	Condition monitoring of rotating machinery with Acoustic Emission: a British-Australian collaboration Davide Crivelli, Simon Hutt, Alastair Clarke, Pietro Borghesani, Zhongxiao Peng and Robert Randall, Cardiff School of Engineering, Wales	Study of the identification and validation of multidisciplinary and specific competencies with a postgraduate program of asset and maintenand management Edward Johns, Simón Gómez, Tomás Grubessich, Raúl Stegmaier and Fredy Kristjanpoller, Universidad Técnica Federico Santa María, Chile		
15pm	Managing Assets the Digital Way - Eye from Above Sanil C Namboodiripad, Sterlite Power, India	Predicting the remaining life of timber bridges Tane Abbott, Nirdosha Gamage, Sujeeva Setunge and Weena Lokuge, University of Southern Queensland, Australia	Vane Pump Damage Detection via Analysing Synchronously Averaged Vibration Signal Wenyi Wang, DST Group, Australia	Reliability and Maintainability Engineering Progr at the University of Tennessee Belle Upadhyaya, Mingzhou Jin and Wesley Hines, University of Tennessee, Knoxville, USA		
30pm	Smart Asset Management for Electrical Utilities: Big Data and Future Swasti R. Khuntia, Delft University of Technology, The Netherlands	Novel monitoring of offshore wind turbines supporting structure using acoustic emission technique Ángela Angulo, Tat-Hean Gan, Jamil Kanfoud and Slim Soua,TWI Ltd, UK	Vibration analysis of machine tools' spindle units Ali Rastegari, Volvo, Sweden	Successful Organisational Development of Asse Management Organisations Jasper Coetzee and Solly Nkosi, University of Pretor South Africa		
45pm	An integrated approach to process safety Martin Sedgwick and Steven Rigby, Origin Energy, Australia	Structural Integrity Assessment of Ships and Ship- Shaped Offshore Structures Tat-Hean Gan and Subin Kumaran, Brunel University London, UK	Single-Sensor Identification of Multi-Source Vibration Faults based on Power Spectrum Estimation with Application to Aircraft Engines Shunming Li, Yu Xin and Xianglian Li, Nanjing University of Aeronautics and Astronautics, China	An evidence based approach to improving training and development in Critical Infrastructure and Engineering Asset Management Organisations Jeremy Novak, Centaur Institute, Australia		
30pm - .00pm	Conference Dinner Boulevard Room Dinner Speaker: Paul Simshauser, Director-General, Department of Energy and Water Supply, "Energy industry – challenges ahead" Announcement of Finalists for 2017 Global Business Challenge Best Paper Awards ISEAM Lifetime Achievement Award VETOMAC 2018 Portugal Presentation WCEAM 2018Stavanger, Norway Presentation Entertainment: Chris Poulsen Trio					

		Friday 4 Aug	ust 2017		
8.30am	Registration Opens Boulevard Level, Brisbane Convention & Exhibition Centre				
9.00am - 9.45am	Keynote Systems Resilience: A Unifying Framework and associated Measures Professor Loon Ching Tang, Temasek Defence Systems Institute & National University of Singapore CHAIR: Ming Zuo, University of Alberta, Canada Boulevard Auditorium				
	CONCURRENT SESSION 8 Friday				
	SESSION 8.1	SESSION 8.2	SESSION 8.3	SESSION 8.4	
	Water Assets Sponsored by K2Fly	Performance Measurement 1	Vibration Engineering 1	MINICOURSE: The Open Industrial Interoperability Ecosystem, A Supplier-Neutral Digital Ecosystem, Enabling Critical Infrastructure & Industrial Asset Management	
	CHAIR: Nima Gorjian, SA Water, Australia	CHAIR: Melinda Hodkiewicz, University of Western Australia	CHAIR: Shunming Li, National University of Aeronautics and Astronautics, P R China, & Chee W. Lim, City University of Hong Kong	COURSE LEADER: Alan Johnston, MIMOSA	
	Boulevard Auditorium	Boulevard Room 1	Boulevard Room 2	Boulevard Room 3	
9.45am	Water Asset Management is Fluid and Dynamic - A Utility of the Future Perspective LEAD SPEAKER: Abel Immaraj, Queensland Urban Utilities, Australia	Asset Management Performance Measurement Systems – Why they need to evolve and How LEAD SPEAKER: Rob Schoenmaker, Technical University Delft, The Netherlands CO-AUTHORS: Adolfo Crespo Marquez, Spain, Jayantha Prasanna Liyanage, Norway and Melinda Hodkiewicz, Australia	Thermo-acoustic radiation of free-standing nano-thin film in viscous fluid LEAD SPEAKER: Chee W. Lim, City University of Hong Kong	ABSTRACT: The entire industrial revolution was driven by massive gains in efficiency derived from systems which were designed, manufactured, assembled and repaired using interoperable components and spare parts. The Open Industrial Interoperability Ecosystem (OIIE)	
10.15am	Enhancing Water Treatment Plant Resilience using Reliability Block Diagram Modelling Craig Brydges, ARMS Reliability, Australia	Process characteristics and process performance indicators for analysis of process standardization Achim Kampker, Maximilian Lukas and Philipp Jussen, FIR e.V. an der RWTH Aachen, Germany	Semi-analytical approach to vibrations induced by oscillator moving on a beam supported by a finite depth foundation Zuzana Dimitrovová, Universidade Nova De Lisboa, Portugal	can provide similar gains in efficiency for industrial Information Technology and Systems associated with the entire life-cycle of complex physical assets and critical infrastructure management, while also enabling industry initiatives such as Industrie4.0 and the Industr Internet of Things (IIOT).	
	Next Generation Investment Planning & Management: Making Informed Decisions in a Changing World Dane Boers, ARMS Reliability, Australia	Combining reliability assessment with maintenance performance analysis using GAMM Adolfo Crespo Márquez, Antonio Sola Rosique, Antonio	Unsteady Rotor Blade Forces of 3D Transonic Flow Through Steam Turbine Last Stage and Exhaust Hood with Vibrating Blades	Individual suppliers of complex physical assets and related industrial IT solutions have begun to offer	

10.30am	Next Generation Investment Planning & Management: Making Informed Decisions in a Changing World Dane Boers, ARMS Reliability, Australia	Combining reliability assessment with maintenance performance analysis using GAMM Adolfo Crespo Márquez, Antonio Sola Rosique, Antonio J. Guillén López, Asier Erguido and Antonio De La	Unsteady Rotor Blade Forces of 3D Transonic Flow Through Steam Turbine Last Stage and Exhaust Hood with Vibrating Blades Romuald Rzadkowski, Vitaly Gnesin and Ryszard	Individual suppliers of complex physical assets and related industrial IT solutions have begun to offer proprietary digital ecosystems, enabling their own
	Quantitative Bowtie Risk Model: An Agile Tool in the Utility Toolkit	Fuente, University of Seville, Spain Semiparametric valuation of heterogeneous assets Roar Adland and Sebastian Köhn, Norwegian School of	Szczepanik, Polish Academy of Sciences, Poland A study on the torsional vibration response of a three dimensional crankshaft	systems and components to interoperate with each other with little need for traditional systems integration. The major challenge is that large industrial and public sector plants, facilities and platforms are highly heterogeneous systems of systems.
10.45am	Daniel Falzon, SA Water, Australia An Optimised Energy Saving Model for Pump	Economics (NHH), Norway Modular-based framework of key performance	Tian Ran Lin and Xue Wen Zhang, Qingdao University of Technology	This minicourse discusses how the OIIE addresses these challenges, supporting all key phases of the industrial physical asset life cycle, while enabling
11.00am	Scheduling in Wastewater Networks, University of Adelaide Neda Gorjian Jolfaei, Bo Jin, Christopher Chow, Nima Gorjian and Flavio Bressan, SA Water, Australia	indicators regulating maintenance contracts Mirka Kans and Anders Ingwald, Linnaeus University, Sweden		mutually beneficial cooperation between major industrial device and equipment manufacturers, IT platform and applications suppliers, EPC firms and asset owner/ operators.
11.15am - 11.45am		Morning Tea Boulevard (
		CONCURREN Frid		
	SESSION 9.1	SESSION 9.2	SESSION 9.3	SESSION 9.4
	Defence Assets	Performance Measurement 2	Vibration Engineering 2	MINICOURSE: Life estimation & exact time of failure of last stage steam turbine blades
	CHAIR: Johann Aaserud, ASC	CHAIR: Melinda Hodkiewicz, University of Western Australia	CHAIR: Professor Romuald Rzadkowski, Airforce Institute of Technology, Poland	COURSE LEADER: Romuald Rzadkowski, Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Poland
	Boulevard Auditorium	Boulevard Room 1	Boulevard Room 2	Boulevard Room 3
11.45am	Optimising availability, capability and affordability across the fleet: a total lifecycle management approach for improving seaworthiness LEAD SPEAKER: Tobias Lemerande, ASC, Australia	Developing a Standard Framework for Improving Equipment Design based on Operational Performance Data Ahmed Khezam, The University of Manchester, UK	Calculation and Analysis of Anti-Shock of Turbocharger for Marine Diesel Engines Lei Hu, Jianguo Yang, Mingchao Zheng and Yonghua Yu, College of Energy and Power Engineering, Wuhan University of Technology, China	Despite standards some critical machines fail with very little warning due to excessive alternating stresses and related fatigue damage. This mini-course outlines theories of general fatigue failures particularly from strain-based conditions which
12.00pm		Risk Application on Infrastructure in Conventional Contract and Performance Based Contract from Perspective of Owner Mochammad Agung Wibowo, Evita Indrayanti, Bagus Hario Setiadji and Asri Nurdiana, Diponegoro University, Indonesia	Experimental Research on Monitoring Method of Journal Bearing Wear Based on Thermoelectricity for Diesel Engine Biao Wan, Wuhan University of Technology, China	originate from transient conditions such as electrical faults occurring in the field. The negative sequence of currents from short circuits induce severe torsional vibrations, coupling failures, bearing failures, blade rubbing and failures.
12.15pm	Implementing Asset Management in a Naval Environment LEAD SPEAKER: James Tziros, WAMA Alliance, Australia	PANEL SESSION How to improve Asset Management Performance Assessment Systems? Performance assessment systems are like the weather forecast: they start by telling us what the weather was today.	Analysis of dynamic response of thin-walled structure subjected to thermal-acoustic loading Xianglian Li and Shunming Li, College of Science, Nanjing University of Aeronautics and Astronautics, China	In this course we will learn of torsional natural frequencies of the drive train. If the bearings fail, the drive train bending critical speeds would also change. The unbalance response of the rotors will become excessive and misalignment would exacerbate the situation. Fracture mechanics theories for crack initiation, propagation and final fracture and the time taken for this failure phenomenon to occur are presented. Based on rotor coast down conditions verified
12.30pm		Performance assessment systems tell us how we have done in yesterday's circumstances fulfilling yesterday's needs. These systems are frequently criticized for encouraging short-term behavior, lacking strategic focus, stimulating sub-optimization, creating a lack of ambition and influencing managers to minimize variances rather	The design and performance of a novel vibration- based energy harvester adopted various machine rotational frequencies Peter W. Tse and Shilong Sun, City University of Hong Kong, China	by the presence of new critical speeds, the exact time of unstable fracture can be estimated. With today's high performance computers these procedures can be combined with results that would lead to providing timely warning and stoppage of the machine to save it from estastrophic failure.
12.45pm	Application of Discrete Event Simulation to Maintenance and Availability Planning Peter Sanders, BMT Design & Technology, Australia	than seek to continually improve. How can we improve performance assessment systems to help us meet customer's needs in today's and tomorrow's dynamic world? In this session, we first introduce challenges we face. Next we will look at the possibilities to improve performance assessment systems. We propose and	Analysis of flexural vibration of V-shaped beam immersed in viscous fluids Lu Hu, Wen-Ming Zhang, Han Yan and Hong-Xiang Zou, Shanghai Jiao Tong University, China Study on the vibration reduction performance of smart	to save it from catastrophic failure.
		discuss six areas for improvement: #1 – Develop a whole of organisation approach #2 – Model causal effects using system dynamics #3 – Focus on customer value not the asset #4 – Build a dynamic and varied PMS #5 – Not all indicators need targets or consequences #6 – Avoid over-reliance on the PMS CONVENOR : Melinda Hodkiewicz, University of	spring Miaomiao Li, De Ni, Weiming Wu, Rupeng Zhu and Shunming Li, Nanjing University Of Aeronautics And Astronautics, China	
1.00pm		Western Australia PANELISTS Rob Schoenmaker, Delft University of Technology, The Netherlands Adolfo Crespo Marquez, University of Sevilla, Spain Jayantha P. Liyanage, University of Stavanger, Norway Darren Covington, Mainpac, Australia		
1.15pm -		Lunch & E		
2.15pm 2.15pm - 3.00pm	Prof	CHAIR: Stephen Saladine,	note t: What's Really Going on in Industry University of Tennessee – Tickle College of Engineering, US , Asset Institute, Australia	SA
		Boulevard A CONCURRENT Frid	۲ SESSION 10	
	SESSION 10.1	SESSION 10.2	SESSION 10.3	SESSION 10.4
	Health Infrastructure	Asset Criticality CHAIR: Jayanta P. Liyanage, University of Stavanger,		MINICOURSE: Mine autonomous haul system: assessing the impact in asset management COURSE LEADER: Carla Boehl, Curtin University &
	CHAIR: Ashantha Goonetilleke, QUT, Australia	Norway	CHAIR:	Mining Education Australia
	Boulevard Auditorium Precinct-based Trigeneration – the large hospital experience at Lady Cilento Children's Hospital,	Boulevard Room 1 Strategic Asset Planning: Balancing Cost, Performance and Risk in an Aging Asset	Boulevard Room 2	Boulevard Room 3 ABSTRACT: Autonomous haulage system (AHS) is an intelligent management of a system using appropriate
3.00pm	Brisbane Queensland LEAD SPEAKER: Michael Campbell, Children's Health Queensland, Australia	Ype Wijnia and John de Croon, AssetResolutions BV, The Netherlands A bibliographic review of trends in the application of 'criticality' towards the management of engineered assets		technology so that its operation can occur without direct human involvement. To remain competitive in the global mining industry this technology is being pursued in Australia as it is believed that AHS can boost productivity and to reduce mining
3.15pm		Joel Adams, Ajith Parlikad and Joe Amadi-Echendu, University of Cambridge, UK		costs. Even through big companies like Rio Tinto, BHP Billiton and Fortescue Metals Group are currently applying AHS into their daily mining activities, there are still some concerns about deploying AHS for other companies such as the cost and the general
3.30pm	Collaborative Asset Management for Health Care Don Sands, Synengco, Australia	Assessment of the Impact of Maintenance Integration within a Plant using MFD: A Case Study Hatem Algabroun, Basim Al-Najjar and Anders Ingwald, Linnaeus University, Sweden		acceptance. This mini course will focus on the transformational impact in asset management.
3.45pm	PANEL SESSIONUtilising Data in Built Environments in Improving Health CareWith massive investment in new hospitals and redeveloping existing hospitals, the opportunities for	Key considerations when developing an Asset Criticality Assessment Framework Geoff Hales, Barnewall Resources Pty Ltd, Australia	VETOMAC Meeting	
4.00pm	leveraging data and the potential impacts on standard and quality of healthcare is unprecedented. Medical equipment, building information, mobility with smart phones and the increased shift to medical devices all create a wealth of big data as a source of significant benefit in standard and quality of care for patients. This panel session will explore the opportunities afforded for	Asset critical equipment and decision optimization: An integrated research platform Pengyu Zhu and Jayantha Liyanage, University of Stavanger, Norway Risk prioritisation for Cultural and Arts		
	 panel session will explore the opportunities afforded for hospitals and the potential impact for healthcare. CONVENOR: Dr Peter W Beven, Queensland University of Technology, Senior Advisor, Queensland Health, Australia 	Andrew Pham, Christine Soo and Melinda Hodkiewicz, University of Western Australia Derren Foster, Western Australia Department of Culture and the Arts		
4.15pm	PANELISTS: Michael Campbell, Children's Health Queensland, Australia Don Sands, Synengco, Australia Darren Covington, Mainpac, Australia			
4.30pm- 4.45pm		Afterno Boulevard 0		
	High Risk Assets Und		Initiatives Towards Defensive Solutions in a Rapidly Ch	anging Environment
4.45pm	Professor Jayantha P. Liyanage, Cluster on Industrial Asset Management (CIAM) & University of Stavanger, Norway CHAIR: Joseph Mathew, Asset Institute, Australia Boulevard Auditorium			