

## IPEC 2021 Abstract Submission Guidelines

All abstracts submitted for IPEC 2021 must follow this guide.

Call for abstracts closes: **6 November 2020**.

The outcome of abstract submissions will be emailed **25 November 2020**.

All abstracts accepted for submission of their 'Research and/or Application Full Paper will be required to submit their Full Paper by: **15 February 2021**.

Accepted presenters must be registered for the Congress by **22 March 2021**.

### Abstract submission guidelines:

All abstracts submitted for IPEC 2021 must follow these guidelines.

- The abstract must be written in English and submitted through the [online presentation portal](#).

#### Presentation Title

- The abstract title should be short, informative and contain the keywords.
- **Format:** Sentence case, Arial, size 12, bold, centred.

#### Abstract Body

- The abstract body should define the precise subject of the presentation to an audience. The abstract should state the problem being addressed, the purpose of the paper, basic procedures/methods, main findings and principal conclusions. The abstract body must contain the content of your abstract only. DO NOT include the abstract title, author names or references in the abstract body.
- **Format:** Arial, size 11.
- Maximum 300 words.
- **Abbreviations:** Use standard abbreviations only. Within the body of the abstract, when using abbreviations spell out the name in full at the first mention and follow with the abbreviation in parentheses. Abbreviations may be used in the title, provided the name in full is outlined in the body of the abstract.
- Headings should not be included.
- References do not need to be included.

## Submitting an abstract via eOrganiser

To submit your abstract, Create an author account, once created, proceed to answer all questions and upload your abstract within the fields provided within the portal.

Once all fields have been completed, click **Preview and Submit** to generate a final preview of the abstract. Once you are satisfied with your preview click **Submit** to complete the abstract submission process.

Once submitted a PDF copy of your abstract will be sent to you via email. This should be reviewed to ensure the accuracy of the submission. Please check junk or spam folders if not received in your inbox. Please contact [ipecongress@engineersaustralia.org.au](mailto:ipecongress@engineersaustralia.org.au) if a confirmation email is not received upon abstract submission.

## Presentation Types

The following presentation types are available:

### Industry (Paperless) Presentation / Abstract

Submission are invited on past studies and practical experience in the form of a presentation, with the abstract to summarise the content aligned with the congress theme and sub-themes.

### Research and/or Application Full Paper

Submissions are refereed papers are invited for oral presentations, aligned with the congress theme and sub-themes and are subject to formal peer review by the congress technical committee.

### Panel/Forum Discussion Sessions

Submissions for this format encourages the exchange of ideas and experiences on various subjects by researchers, practitioners and other experts. Persons with differing points of view are encouraged to create a dialogue and promote interaction with participants.

### Tutorials

**Submissions for Tutorials are for the SESA Tutorials taking place 26<sup>th</sup> May 2021.**

Submissions are invited for half a day or full day sessions that provide training or knowledge transfer on a specific topic relevant to Systems Engineering, Test & Evaluation, Knowledge and practice aligned with the congress theme and sub-themes. Submissions are reviewed by the congress technical committee for inclusion in the program.

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## Themes & Sub-Themes

The theme for IPEC 2021, ***Creating the Future Together***, covers a range of topics relevant to practicing System, RISK and Project Control engineers, students, academics, defence, cyber security professionals, asset managers, consultants in infrastructure/ building industry, government departments in transport, researchers and industry specialist providers.

The sub-themes for **IPEC 2021** are:

### Capital Projects and Lifecycle



- Qualitative and Quantative Risk Assessment in Capital Projects
- Asset Optimisation and Management
- Risk Based Decision Making (RBDM) in project and asset lifecycle
- Enterprise/ Integrated Project Management Office (e/iPMO)
- Contingency Management for Portfolio, Program and Project
- Integrated Project Controls and Reporting: Risk, Planning & Scheduling, Cost
- Whole of life view to Systems
- Complex Systems, Programs and Projects
- Education in Systems Concepts and Methodologies (Acquisition & Sustainment)
- Test and Evaluation
- Leadership & Management

### Sustainability and Resilience



- Natural disasters and resilient infrastructure
- Sustainable Future (Climate Change, UN SDGs)
- Systems Approach to System Definition, Realisation, Sustainment and Disposal

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- Holistic conceptual reference architectures for critical systems
- Life after/with COVID
- Education in systems concepts and methodologies
- Triple bottom line sustainability (profit, people, planet)
- Building resilience in individuals, teams and organisations
- Supportability, Reliability, Availability, Maintainability, Modifiability – retention of capability utility
- Agility – disruptive technologies, obsolescence, proofing and interoperability architectures
- Sovereign Capability
- Education and Training
- Leadership & Management

### Technology and Data



- Data-driven Risk Analysis Methodologies
- New technologies, including AI/ML, in delivering major projects
- Integrated project controls
- Building information modelling (BIM)
- Autonomous driving, new transport modes and smart infrastructure
- Enterprise Risk Management (ERM)
- Agile, Interoperable Architectures & Standards
- Experimentation for Capability Definition, Design, Development, Test & Evaluation
- Systems and Data Security
- Modelling & Simulation, MBSE, Digital transformation of SE
- IP protection/ Management
- Education and Training
- Leadership & Management

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## Human Systems & Culture



- Diversity; age, gender, education, culture, thinking etc
- People build projects, not machines, software
- New norms on working on projects – WFH etc
- Education and Training
- Organisation and Project Culture
- Building high performing teams
- Social systems engineering
- Human Factors
- Health and Well being
- Artificial Intelligence/ Machine Learning
- Trusted systems, safety, security, privacy, ethics
- Collaborative contracts
- Work Health and Safety
- Leadership & Management

## Governance and Assurance



- Risk-based audit, assurance & three lines of defence for major projects
- Whole of life approach – extending and establishing reference architectures
- Wholism – considering social, cultural, environmental, commercial, political, technological, biological and ethical dimensions
- Integrity by design
- Verification and validation
- Legal/ Regulatory frameworks, - safety, criticality, privacy
- Self regulation vs independent assurance
- Principles of good governance frameworks
- Link between good governance and leadership
- Critical role of Test and evaluation in governance and assurance
- Leadership & Management

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## Full Paper Guidelines

These guidelines will be provided in November 2020

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