



Increasingly complex and interdependent systems require careful design to ensure continued operation in the presence of component failures, natural disasters, software/hardware vulnerabilities, and latent software errors. Such systems span broad range of applicability. Devices such as pacemakers and insulin pumps, aim at better life for individuals, while large public infrastructure such a smart power grid, rapid public transport, and water treatment and distribution, impact the daily lives of a mass of people. Often such systems are interdependent in complex ways implying that flaws in the design of one may affect the behaviour of a system-of-systems.

A key question then becomes *What design innovation is needed to bring about systems whose operation in accordance with functional and non-functional requirements is assured with a very high probability?* [HASE 2017](#) will focus on this and related questions and answers which are of paramount importance to engineers who design and build interdependent complex systems that impact individuals, entire cities and even nations.

Call for Papers

Researchers and practitioners are invited to submit original work, not previously published, to HASE 2017. All submissions must be written in English and formatted according to the [IEEE formatting guidelines](#) for conference papers. All papers must be submitted through the [EasyChair](#), in PDF format. Page limits for papers under different tracks are given below. All submissions will be reviewed by at least three members of the Technical [Programme Committee](#). The final HASE 2017 technical programme will be divided into the following tracks:

Track A: Theoretical foundations of assurance (8 pages, including all materials e.g. references, appendices)

Contributions under this track will focus on formal methods that aid in modelling and validating new and existing designs of complex systems.

Track B: The practice of assurance (4 pages)

Contributions under this track will focus on methods that have been applied in the design of high assurance systems, or have been tested in realistic testbeds.

Track C: Tools (4 pages)

Contributions under this track will focus on new or existing tools and their effectiveness in creating high assurance designs.

Track D: Ideas under trial (2 pages)

Short papers under this track will focus on new ideas that fall under design innovation. Such ideas might not have undergone a rigorous test but are worthy of discussion.

Papers that cut across Tracks A, B, and C are welcome.

Track E: Student Session (4 pages)

This track will feature research presentations by undergraduate and graduate students. Papers under this category must have a student as the first author who is enrolled full time at a recognised university. Student authors will be asked to provide a letter from the university confirming their full time enrolment.

Limited travel support is available for students with accepted papers under this session to partially cover the air fare and hotel costs.

Systems of interest (not limited to)

- Cyber-physical Systems (including public infrastructure such as power grid, water treatment and distribution, mass transportation, digital manufacturing systems)
- Internet of Things

- Cloud Systems
- Distributed Systems
- Web Services
- Embedded Systems
- Autonomous vehicles
- Robot swarms
- High Assurance Complex Networks

Topics of interest (not limited to)

- Model-driven Engineering
- Design languages
- Synthesis
- Formal Methods
- Domain Specific Languages
- Evolution and Change
- Verification and Validation
- Software Analysis and Visualisation
- Transformation-based Development
- Security and Privacy
- Reliability and Safety
- Tools for High Assurance Systems
- Artificial Intelligence in High Assurance
- Machine Learning in High Assurance

Submission guidelines

Submissions that exceed the page limits as specified above, outside the scope of the symposium, or do not follow the formatting guidelines may be rejected without review. At least one author of each accepted paper is required to pay the full registration fee to the conference. Authors of papers under *Student Session*, and authored exclusively by one or more students, will pay reduced student registration fee.

Each accepted paper must be presented in person by the author or one of the authors. All accepted papers will be published in the electronic proceedings by the IEEE Computer Society, indexed through INSPEC and EI Index, and automatically included in the IEEE digital library.

Important dates (GMT+8)

Submission deadline: 19 September 2016 @ 11:59 PM

Acceptance notification: 17 October 2016

Camera-ready submission: 14 November 2016 @ 11:59 PM

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