



Call for Papers

Journal of Universal Computer Science (J.UCS) Special Issue

Recent Advances in Cybersecurity and Safety Architectures in Automotive, Medical, and Connected Services

Abstract

The server and software architectures in modern vehicles, health/medical systems, and supporting telecom infrastructures are changing to fulfil the growing demands for cybersecurity and safety. More than 90% of functions in cars and medical devices are controlled by software and cybersecurity attacks at safety functions can lead to disasters and up-to-date defensive software architectures need to deal with this. This requires the implementation of new design patterns in software and hardware design, as well as the development and training of new skills for the future design of complex systems.

Researchers are encouraged to submit original research contributions in all major areas, which include, but are not limited to:

Topics

- Functional safety related software and system design
- Cybersecurity related software and system design
- Integrating functional safety and cybersecurity
- Hazard and risk analysis
- Threat and risk analysis
- Defensive design
- Defensive programming strategies
- Secure development environments
- Cars/medical devices in the cloud
- Recent standards to be considered in software and system design for functional safety and cybersecurity
- Design patterns / state of the art design
- Known problems and risks with functional safety and cybersecurity
- New research and new emerging architectures in vehicles, medical devices, IT, ...

Submission Deadlines

16.10.2020 Paper Submission

29.01.2021 Review of Papers and Distribution of Review Notes

30.04.2021 Refined Paper Submissions (in case of acceptance)

30.06.2021 Final Paper Acceptance Date

Special Issue publication date: **J.UCS publication schedule**

Submission and Evaluation Procedure

The Journal of Universal Computer Science is a high-quality electronic publication that deals with all aspects of computer science. J.UCS has been appearing monthly since 1995 and is thus **one of the oldest electronic journals** with uninterrupted publication since its foundation. A number of special issues as well as the printed archive editions of the volumes are also available in print and can be ordered directly from J.UCS office. J.UCS is ranked in Clarivate Journal Citation Reports with an impact factor of 0.910 (2019) and also ranked in other indexes e.g. Q2 ranking in SCIMAGO, e.g. journal h-index 48, e.g. Thomson Reuters JCR Impact Factor: 1.408. For further information, please refer to:

http://www.jucs.org/jucs_info/aims/unique_features.html

Manuscripts must be submitted in PDF format, written in English and should not exceed 20 pages. Papers only prepared according to the JUCS's guidelines for authors and submitted online (see procedure described below) will be included in the review process. Illustrations and tables must be provided as integrated parts of the manuscript.

The guidelines for authors are available at:

http://www.jucs.org/ujs/jucs/info/submissions/style_guide.html .

For all potential authors receiving an invitation for an extended version of their European Systems, Software Services Process and Product Improvement (EuroSPI 2020) paper, please bear in mind that we can only consider submissions which are significantly extended (at least 50 percent new material, and the title of the extended version must clearly and unmistakably differ from the title of the article presented at the conference). Only novel research papers, which are currently not under review at another event or a journal are accepted for the review process. For more details, please also refer to:

http://www.jucs.org/ujs/jucs/info/special_issues/special_guidelines.html Please submit your original and proof-read papers not later than 16.10.2020 using the submission system at: <http://2020.eurospi.net/index.php/submission> .

Naming convention: file names shall have JUCS_ as a prefix and word files *.docx are preferred.

Each paper will be (blind) reviewed by at least 3 reviewers. According to the covered main subjects in the content, a selected set of reviewers with the appropriate expertise will be assigned.

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Dr Richard Messnarz, ISCN GesmbH, Austria, Email: rmess@iscn.com

Prof. Ricardo Colomo Palacios, Ostfold University College, Norway, Email: ricardo.colomo-palacios@hiof.no

Dr Georg Macher, Graz University of Technology, Austria, Email: georg.macher@tugraz.at

Dr Andreas Riel, Grenoble Institute of Technology, France, Email: andreas.riel@grenoble-inp.fr

Dr Miklos Biro, Software Competence Center Hagenberg, Austria, miklos.biro@scch.at

Reviewers

Dr Richard Messnarz, ISCN GesmbH, Austria

Prof. Ricardo Colomo Palacios, Ostfold University College, Norway

Dr Georg Macher, Graz University of Technology, Austria

Dr Andreas Riel, Grenoble Institute of Technology, France

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Jezreel Mejia, Mathematic Research Center (CIMAT)- Zacatecas Unit, Mexico

José Manuel Machado, Director of Centro ALGORITMI, Portugal

Alexander Poth, Volkswagen, Germany

Alexander Much, Elektrobit, Germany