Safety and Security of System Software
TRel Special Track @ NASAC 2018

Call for Papers

Background

With the rapid advance of computing technology, new system software in domains such as AI, big data, CPS and IoT emerges. While such system software helps the development of new applications in the new computing paradigms, it also brings new challenges and concerns, especially in system safety and security. There has already been reports on attacks on such new system software that result in privacy leakage and property loss. The problem will be even more severe if the system software is deployed in a safety-critical system.

To address this problem, there will be a special track at the 17th National Software Application Conference (NASAC 2018). We welcome original work in methods and technologies that make novel theoretical or practical contributions to enhance the safety and security of system software for emerging computing paradigms. The papers that pass the first round of review are required to present at NASAC. The presented papers that pass further review will be published at IEEE Transactions on Reliability (TRel). To participate in this special track, authors must submit their manuscripts simultaneously to both NASAC and TRel.

Topics

Submissions related to the following topics are encouraged. However, others relevant to safety and security of system software for emerging computing paradigms are also welcome. Their practical applications will be considered as well.

- Reliability, security, and safety of system software
- Testing, verification, and validation
- Maintenance and evolvement
- Architecture and modeling
- Advanced methods for error detection, fault tolerance, and debugging
- Software quality, metrics and measurements, estimation and prediction of quality/reliability
- Dependability, survivability, and resilience study
- Supporting tools and automation
- Empirical study
- Novel interdisciplinary research

Submission

We welcome high quality submissions that are neither published nor currently under submission elsewhere. We also encourage extensions to conference papers, unless prohibited by copyright, if there is a significant difference in the technical content. Improvements such as adding a new case study or including a description of additional related studies do not satisfy this requirement. The overlapping between each extension and the original article should be less than 30%.

1.Each submission must conform to the single-space two-column format of printed articles in the IEEE Transactions on Reliability with all figures and tables embedded in the paper, rather than listed at the end or in the appendix.

2.For the initial submission, authors must submit their manuscripts simultaneously to **both** NASAC and TRel, by following the two links below.
- NASAC: https://easychair.org/my/conference.cgi?conf=nasac2018

(For manuscript type, choose "select NASAC Safety and Security of System Software track")
- IEEE Transactions on Reliability: https://mc.manuscriptcentral.com/tr-ieee
  (For manuscript type, choose "Special Section on Safety and Security of System Software")

3.Based on the comments given in the first round of review and during the oral presentation at NASAC, authors are invited to submit their revised papers to TRel only using the aforementioned submission link. These manuscripts will be treated as revisions by TRel.

4.Authors are required to submit their final revision based on the comments given in the second round of review. TRel will give the final decisions based on the recommendations by the guest editors.

Note that the conference will not have formal proceedings. The only publication venue for this special track is the IEEE Transactions on Reliability.

Important Dates
- June 1, 2018
- Aug 15, 2018
- Sep 15, 2018
- Nov 23-25, 2018
- Dec 1, 2018
- Jan 1, 2019
- Feb 15, 2019

- Paper submission due
- First round notification
- First round revised paper due
- NASAC 2018 Presentation
- Second round notification
- Second round revised paper due
- Final notification

Track Chairs
- Zijiang Yang,   Western Michigan University, USA
- Lei Bu,   Nanjing University, China

Program Committee
- Xiaoying Bai,   Tsinghua University, China
- Yan Cai,   Institute of Software, Chinese Academy of Sciences, China
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- Zhenbang Chen,   National University of Defense Technology, China
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- Xinyu Feng,   University of Science and Technology of China, China
- He Jiang,   Dalian University of Technology, China
- Yu Jiang,   Tsinghua University, China
- Guoqiang Li,   Shanghai Jiao Tong University, China
- Jian Liu,   Institute of Information Engineering, Chinese Academy of Sciences, China
- Jin Liu,   Wuhan University, China
- Ting Liu,   Xian Jiao Tong University, China
- Yang Liu,   Nanyang Technological University, Singapore
- Daniel Luo,   Hong Kong Polytechnic University, China
- Xiaokang Qiu,   Purdue University, USA
- Jun Sun,   Singapore University of Technology and Design, Singapore
- Cong Tian,   Xidian University, China
- Chao Wang,   University of Southern California, USA
- Qixin Wang,   Hong Kong Polytechnic University, China
- Yunni Xia,   Chongqing University, China
- Yingfei Xiong,   Peking University, China
- Chang Xu,   Nanjing University, China
- Lihua Xu,   East China Normal University, China
- Haibo Zeng,   Virginia Tech, USA
- Qi Zhu,   Northwestern University, USA