WoSAR: The 10th International Workshop on Software Aging and Rejuvenation

October 15-18, 2018, Memphis, US, co-located with ISSRE 2018

http://wosar2018.buaa.edu.cn

Software aging is a problem of progressive degradation of performance and dependability in computer programs, especially those executing for long period of time. This phenomenon has been extensively studied since more than 20 years, as it affects many systems, from embedded devices to server software to critical systems.

Software rejuvenation, i.e. restart of application (components/threads/task), VMs or machines, is the most prominent approach to combat software aging. A variety of reactive and proactive rejuvenation techniques, scheduling plans, scope and granularity, have been proposed for different application categories and platforms.

WoSAR is the premier international venue to discuss the recent advances and discoveries in theoretical and practical aspects of software aging and rejuvenation research. In this year, we encourage submissions targeting interdisciplinary research, in particular those listed in the topics of interest.

TOPICS OF INTEREST

This call for papers addresses all researchers and practitioners with an interest about performance and dependability degradation of software systems. Topics addressed in the workshop include but are not limited to:

- Progressive degradation of performability / availability / reliability / scalability / "-ilities" in software systems.
- Modeling and characterization of the software aging phenomenon.
- Design and evaluation of rejuvenation techniques.
- Analysis of aging-related faults/bugs, errors, and failures.
- Software test strategies for detecting aging-related bugs.
- Monitoring and detection of software aging effects (e.g., memory leaks, database index fragmentation, unterminated processes/threads, accrual of round-off errors, ...).
- New classes of software aging effects.
- Software aging and rejuvenation in Big Data and IoT Apps.
- Prognostics and Health Management (PHM).
- Environment dependent bugs and their mitigation techniques.
- Metrics for software performance and degradation.
- Fault localization and testing for aging-related bugs.
- Machine learning techniques for aging-related bugs.
- Tools for detection and repair of memory leaks.
- Analytical, empirical, and experimental studies of any of the above topics.

For all the above topics, WoSAR is a unique forum to discuss the software aging and rejuvenation impacts on systems from different domains of applicability such as:

Cloud computing, Mobile, Embedded, Medical, Cyber-physical, SCADA, Smart Cities, Transportation, Telecommunication, Military, System of systems, Databases, High Performance Computing, Software Defined Networks, and others.

IMPORTANT DATES

Full paper submission: July 21, 2018
Research paper notification: August 13, 2018
Submission of camera-ready copy: August 28, 2018

RESEARCH PAPER SUBMISSION

Authors are invited to submit high quality unpublished research work describing the results of theoretical and experimental software aging and rejuvenation research. All the accepted papers will be included in the IEEE Xplore Digital Library.

Papers must be written in English and be formatted according to the IEEE authoring guidelines[1]. Full papers should not exceed seven pages in IEEE style. Paper submission will be done electronically through EasyChair[2].

JOURNAL SPECIAL ISSUE

Distinguished papers, after further revisions and approval, will be published in a special issue of Software Quality Journal,Springer[3].

[1] www.ieee.org/conferences_events/conferences/publishing/templates.html

[2] https://easychair.org/conferences/?conf=wosar2018

[3] http://static.springer.com/sgw/documents/1633617/application/pdf/SQJO+CFP+-+Modeling+and+Mitigation+Techniques+for+Software+Aging.pdf

SPECIAL SESSION ON INVITED JOURNAL PAPERS

There will be a special session titled “Invited Journal Papers” at WoSAR 2018. During this session, researchers will have the opportunity to present any of their recently published peer-reviewed journal articles. For an article to be considered in this session, it must have been published between January 1, 2016 and August 15, 2018.

Researchers interested in presenting their work in this session, must send an email to cotroneo@unina.it with the following information, by 11:59 pm Pacific Time on September 30, 2018.

1) A copy of the refereed journal article
2) One paragraph description of the technical significance of this article in the fields related to SAR
3) Short biography of the presenting author

Authors, whose papers are selected, must be registered for the conference in order to present their poster. Note that the selected papers will **NOT** be reprinted nor archived by WoSAR 2018.

Deadline: August 15, 2018
Notification: August 23, 2018

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