CALL FOR PAPERS

Declarative programming (functional, logic, rule-based, constraints, dataflow, and visual) has several advantages over imperative programming. For example, using the functional reactive programming (FRP) paradigm over the imperative programming style found in languages such as C/C++/C# and Java for implementing embedded and real-time software allows the programmer to intuitively describe safety-critical behaviors of the system, thus lowering the chance of introducing bugs in the design phase. Its stateless nature of execution does not require the use of synchronization primitives like mutexes and semaphores, thus reducing the complexity in programming. However, accurate response time analysis of FRP-based controllers remains a largely unexplored problem. Furthermore, efficient runtime architectures and execution platforms for FRP and programs implemented in other declarative languages are nearly absent.

To address these and other relevant issues for the emerging declarative programming paradigm for real-time and cyber-physical systems (for instance, two full FRP papers are scheduled to be presented at RTCSA 2015), this timely workshop serves as a forum for presenting work and exchanging ideas in the programming, response time analysis, scheduling, verification, execution, and performance evaluation of embedded controllers and CPS components implemented as declarative programs. No such workshops or conferences are available with a focus on both declarative programming as well as real-time and CPS. Short papers (6 pages maximum, 2 columns, 10 point size) or long abstracts (4 pages maximum, 2
columns, 10 point size) and invited papers (8 pages maximum, 2 columns, 10 point size) compliant with ACM SIG proceedings templates / SIGBED Review submission guidelines in the following areas are welcome. Short papers and long abstracts will be reviewed by at least three PC members. Open discussions and a keynote are also being planned.

**Topics of interest include but are not limited to:**

Functional and Functional Reactive Programming  
Declarative Programming  
Declarative Domain-Specific Languages  
Constraint-based Programming  
Logic Programming  
Rule-Based Programming  
Dataflow Programming  
Visual Programming  
Response Time Analysis  
Scheduling and Resource Management  
Formal Verification  
Runtime Architecture and Execution Platforms  
Software Transactional Memory  
Performance Evaluation  
Practical Experiences and Industrial Applications

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Important Dates:

July 4, 2015 – Workshop Web Page Posted with CFP
September 28, 2015 – FIRM Workshop Papers Submission Deadline
October 26, 2015 – Workshop Papers Notification of Acceptance
November 2, 2015 – FIRM Workshop Papers Camera Ready Deadline
December 1, 2015 – DPRTCPS Workshop
December 2-4, 2015 – RTSS Conference

Paper Submission

The submitted material must be unpublished and not under submission elsewhere. By submitting a paper, the author(s) confirm that if the paper is accepted, at least one author will register for the DPRTCPS 2015 Workshop by the notification of acceptance's special registration deadline and present in person the paper at the workshop. Papers must be submitted electronically in PDF format.

Proceedings

Accepted papers will be published in the SIGBED Review newsletter and ACM Digital Library. By submitting to the workshop the authors are granting permission for ACM to publish in print and digital formats for the newsletter and the ACM archive. Note that the copyright remains with authors.

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