

15th May, 2016

**Report of the Research Alumni Re-Invitation Grant  
15<sup>th</sup> March- 31<sup>st</sup> March 2016**

I had the honor to be part of the research alumni re-invitation program from 15th to 31st March 2016, which has been funded by Alexander von Humboldt foundation. The program was held at Institute for Information Processing Technologies (ITIV) from Karlsruhe Institute of Technology (KIT) hosted by Prof. Dr. Jürgen Becker.

During my stay at ITIV (KIT) we have advanced our collaboration in order to prepare a proposal to be submitted to eventual funding opportunities. The goal of our investigation is to develop and evaluate a distributed high-performance Computing Platform based on Heterogeneous Embedded Systems called HyPHEMS. The platform aims on large scale embedded system applications, which require a high amount of computation power. This can be for example cooperative multi-robot applications, real-time video surveillance applications, large-scale Car-2-X scenarios, Internet of Things or different applications in the field of Smart Cities. In such scenarios, embedded systems usually need to be spatially distributed and the overall system is often composed of different heterogeneous computation elements, which are directly interacting with analog and mechanical components (so called Cyber-Physical Systems). More specifically, in Karlsruhe during the mobility, I have researched and evaluated through experiments, which available technologies are more suitable to achieve our goals.

We also had meetings to manage which would be our next steps. Both sides have agreed that we should keep our collaboration and look forward the extend the exchanging of researchers and keep work together for future opportunities.



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