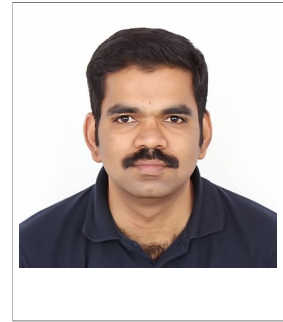




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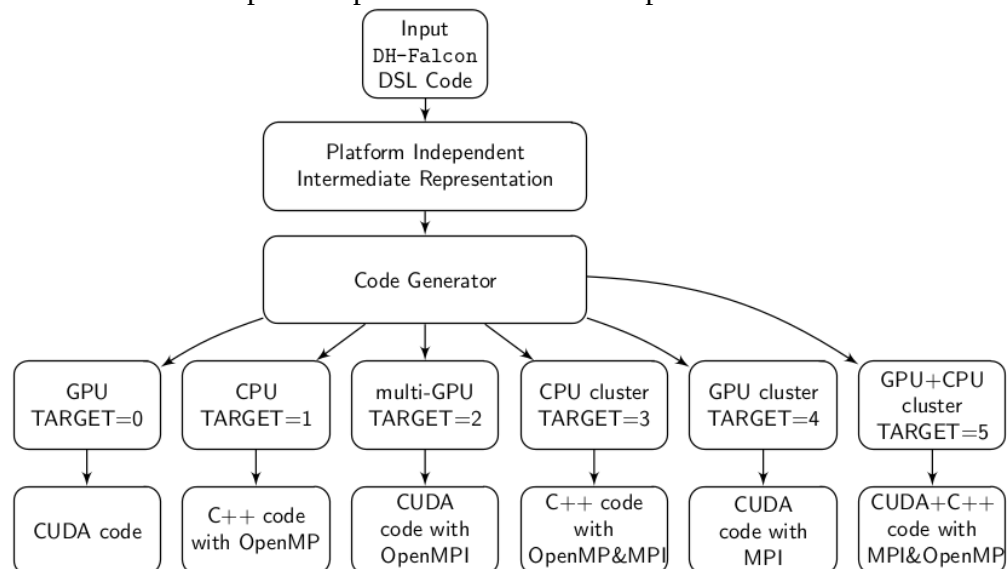


Research Interests

- Domain Specific Languages
- Program Analysis and Verification
- High-Performance Computing
- Cyber-Physical Systems

Brief Summary of Research

Unnikrishnan joined as an Assistant Professor at IIT Palakkad in May, 2019. He received Ph.D. in Computer Science from Indian Institute of Science Bangalore in February, 2018. His research specialization is in compilers and programming languages. In the Ph.D. work, he developed the domain specific language *Falcon* for programming graph analytics on a distributed system with CPU and GPU. He worked as a postdoctoral research fellow at SUTD Singapore for one year. He worked in the area of robotics, IoT, and cyber-physical systems during one year at SUTD Singapore. A flowchart of the compilation process of *Falcon* compiler is shown below.



Recent Publications

- DH-Falcon: A Language for Large-Scale Graph Processing on Distributed Heterogeneous Systems. **U.Cheramangalath**, R.Nasre, Y N Srikant. IEEE CLUSTER, 2017.
- N. Upadhyay, P. Patel, **U. Cheramangalath**, Y.N. Srikant. (2018) Large Scale Graph Processing in a Distributed Environment. Hetero-Par, 2017.
- Taming the War in Memory: A Resilient Mitigation Strategy Against Memory Safety Attacks in CPS. E.G. Chekole, **U.Cheramangalath**, S. Chattopadhyay, Martin Ochoa, Guo Huaqun. Sep, 2018 (arXiv preprint)
- Custom Code Generation for a Graph DSL: B.Gogoi, **U. Cheramangalath**, R.Nasre. Mar, 2019 (arXiv preprint).