## *Application Grand Challenges in the Heterogeneous Accelerator Era*

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Accelerators have gained prominence as the next disruptive technology with a potential to provide a non-incremental jump in performance. However, the number of applications that have actually moved to accelerators is still limited because of many reasons, arguably the biggest of which is the gap in understanding between accelerator and application developers. This BoF is an application-oriented session that aims to bring the two camps of application developers and accelerator developers head-to-head.

We had a successful BoF at SC13 this year. We had a number of representatives from universities, labs and industry give their perspective on what the critical application grand challenges are for accelerators. What applications are being built with accelerators, what is not as condusive for applications. We had Alice Koniges (Lawrence Berkeley National Laboratory), Robert Harrison (Stony Brook University), Tim Mattson (Intel); Nick Wright (NERSC) and David Bernholdt (Oak Ridge National Laboratory) participate in the BoF.

This year we tried a unique format for the BoF with zero slides. It was more of a chat-room session with the BoF members discussing various topics related to application development on accelerators. The BoF chair (Pavan Balaji) injected key questions into the discussion, but much of the discussion was driven by attendees who graciously participated in the discussions raising important questions that needed to be answered as well as providing answers and comments on different perspectives. We felt that the model was quite successful, though it can be smoothened out further in the following years of the BoF.