Programming High Performance Signal Processing Systems in High Level Languages

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Programming high performance signal processing systems is hard. Historically there has been a trade-off between ease of programming and absolute performance. It has long been understood that while for high-performance applications FPGAs are a great implementation technology, though historically they have come with a very poor programming model. For processor style architectures, such as DSPs, C-level languages are often used. Recently, there has been an emergence of C-level languages targeting FPGAs. In this panel we will discuss high level programming models and the efficiency of various technologies: DSP processors, C programming environments for FPGAs, and a completely integrated high level programming environment for a mixed technology. Both tool vendors and actual users will present the pros and cons.

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