

# **“Pervasive Computing for Bioinformatics Applications - The Last Mile”**

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## **Abstract:**

The "last mile" of delivering a solution to where the problem exists is an architectural challenge of many fields, from translational biomedical research to the telecommunications industry where it actually is a physical mile. Advances in pervasive computational environments will be presented and discussed to explain how package development in R or toolbox development in MATLAB no longer have to be the endpoint for the dissemination of biostatistics applications. The division of informatics has initiated a number of projects that makes use, and seeks to advance, asynchronous module development (AMD). These projects are aggregating a community of users at UAB and are open as a dissemination tool for those who develop algorithmic solutions. The inner workings of the map-reduce pattern, used by genomics analysis platforms such as GATK will also be dissected. As the name (AMD) indicates, the ability to deal asynchronous workflows and its asynchronous development represent that missing piece to streamline package delivery to where the data, and problem, is.