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Empowering Southern Africa's Researchers: Overcoming HPC Barriers with MATLAB Tools

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As scientific data gets bigger and its analyses involves increasingly complex algorithms, access to High Performance Computing (HPC) resources in the form of multi-core CPUs and GPUs become essential for scientific research.

One main impediment to harnessing these resources remains the high barrier to entry – HPC systems often require a deep understanding of computing architecture and command line interfaces, a skill not many researchers possess.

The approach to parallel computing within MATLAB is to abstract away a lot of this complexity from the end-user, so that they can progress seamlessly from their prototype on the desktop onto the cloud or the cluster. The power of the Parallel Computing Toolbox and MATLAB Parallel Server is free and available already to more than 20+ Universities and Institutions in Southern Africa, like CSIR and many others. In this presentation, I will show how MathWorks tools can streamline research computational effort with three ways to make parallel programming more accessible

1. the ability to scale from local machine to cluster using minimal changes to the code,
2. the ability to submit jobs remotely to HPC clusters from within the users' local MATLAB environment using MATLAB Parallel Server,
3. free training workshop being held globally in partnership with HPC centers to upskill scientists and researchers in parallel programming.

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Workshop Duration

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