

# MATLAB on Bridges

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# MATLAB on Bridges

## What is available?

- Basic MATLAB
- A large collection of toolboxes
  - You can see the list of available toolboxes with the *ver* command
- In particular, the Parallel Computing Toolbox (PCT)



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## What is not available?

- MATLAB Distributed Computing Server (MDCS)



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## Licensing

- If you are an **XSEDE academic** user, you **will not** have to worry about licensing. We will have you covered.



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## Parallelization

- Run multiple independent instances of MATLAB
- Use the Parallel Computing Toolbox (PCT)
  - Provides both the *parfor* and *spmd* constructs
  - No artificial limit on the number of workers. Number of workers should be equal to the number of available cores
  - Must be run within one node
    - 28 workers on a Regular Memory (RM) node
    - 60 workers on a Large Memory (LM) node
    - 240 workers on an Extreme Memory (EM) node
- Run MATLAB on GPUs using *gpuarray* and GPU enabled functions



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## How to run MATLAB?

- Either use a batch job script or an interactive session  
(Do not run MATLAB on the login node)
- *module load matlab/R2016a*
- Execute a MATLAB m-file with  
*matlab < myscript.m >& output.log*
- Launch the MATLAB command prompt with simply  
*matlab*



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## Concluding remarks

If you want to try out MATLAB on Bridges using your trial account, please first sign up on the following web page :

<http://www.psc.edu/index.php/user-resources/software/matlab/permission-form>



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