



# System requirements

Quantum Espresso Tutorial 2019

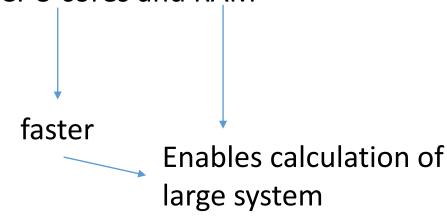
Quick start guide







- Any laptop/desktop will work
  - Both Intel and AMD
- Server/Cluster/supercomputer
  - Much more CPU cores and RAM







### Operating system

- Can run on: Linux, Mac-OS X, Windows
- Linux (e.g. Ubuntu)
  - Designed to be used and mostly used in
  - This tutorial is based on QE in Linux
  - · Pros: full control and features, parallel computation well supported
  - Cons: need to get used to Linux
- Windows
  - CMD
  - Virtual machine (e.g. Quantum Mobile virtual machine)
  - GUI: Burai (free), Amsterdam Modeling Suite (commercial)





 $H(t)|\psi(t)$ 



#### Windows or Linux?

- If just curious/very small calculation
  - Windows, GUI (Burai, free)
- If your target system is larger/want to get the best out of your computer
  - Linux
- If very serious calculation/large system
  - Server/cluster -> Linux





## Important for performance

the compilation highly influences the speed of the code!

- Compiler
- Math library
- Parallel computing library







#### Next

- Installation and compilation of QE
- Hands-on:
  - How to install Ubuntu
  - Basic commands in Linux

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