



# Computer Architecture Group

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# Research Lines

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- Hierarchically Tiled Arrays
  - Collaboration with UIUC
  - Since 2003
- UPC
  - Beginning now!

# Hierarchically Tiled Arrays

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- Data type that helps express locality and parallelism
  - Represents (recursively) tiled array
  - Explicit manipulation of tiles
  - Extended array indexing and operations
  - Data parallelism
- Tested in distributed and shared memory environments

# UPC

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- Productivity and performance analysis
  - Comparison with MPI, OpenMP, both
  - Target machine: constellation architecture ([Finisterrae Supercomputer](#))
- Identification of useful missing functionalities
- Development of libraries
  - Collective operations/primitives
  - Regular and irregular numerical computation
  - High level data structures



GRUPO DE ARQUITECTURA  
DE COMPUTADORES