deal.II Users and Developers Training
March 21 – 24 2016

Timo Heister (heister@clemson.edu)
Luca Heltai (luca.heltai@sissa.it)

More features of deal.II

- Adaptive mesh refinement, including dual-weighted error estimators (step-6, step-7)

- Linear solvers: direct solvers, iterative solvers, preconditioners, multigrid, etc.

- Parallel computing: multithreading (step-9), MPI (step-40)

- Vector-valued problems: step-8, step-20, …

- Other FE spaces: DG, RT, Nedelec, ...

-

More features of deal.II b)

- Non-homogeneous Neumann conditions, boundary integrals: step-7

- Systems of PDEs: step-8, step-20

- Nonlinear problems: step-15

- Time dependent problems: step-18, ...

- Fluid flow (Stokes, Navier-Stokes, …): step-22, step-32, ...

- Complicated meshes: step-49

- Matrix-free computations: step-37, step-48

Resources

- Tutorials (by topic, graph, etc.):
  https://www.dealii.org/developer/doxygen/deal.II/Tutorial.html

- Video lectures:

  http://www.math.tamu.edu/~bangerth/videos.html

- Manual: https://www.dealii.org/developer/doxygen/deal.II/index.html

- Mailing list: https://groups.google.com/forum/#!forum/dealii

-