

Survey

This survey is carried out within the scope of the article in preparation "**Programming Languages for Data-Intensive HPC Applications: a Systematic Mapping Study**", initiated by **Vasco Amaral** (Univ. Nova de Lisboa) and co-authored by the 19 contributors to the SLR/SMS study during the last 3 years at the ICT COST Action IC1406 *High-Performance Modelling and Simulation for Big Data Applications* (cHiPSet).

**Domain expert in HPC or
Data-Intensive Computing?**

Please fill this questionnaire and
hand in to C. Kessler,

christoph.kessler@liu.se

Thank you!

For complementation and validation of the literature review results, we would like to compare with the honest estimations of **experts** in data-intensive high-performance computing (that is, **you**). Please help us in collecting a sufficiently large and broad statistical basis for this validation by answering this survey. It only takes 2-3 minutes.

Many thanks in advance!

1. How long have you been working in High Performance Computing?
☐ Not at all ☐ < 2 years ☐ 2 to 5 years ☐ 5 to 10 years ☒ > 10 years
2. In what areas of science or engineering have you worked?
(e.g., computer science, bioinformatics, material science, telecommunications ...)
PHYSICS, COMPUTER SCIENCE
3. Do your High Performance Computing related activities consist primarily of
☒ Developing programming support tools, or ☐ Using existing programming tools?
4. How do you rate your level of technical knowledge about languages/frameworks for HPC?
☐ Very Poor ☐ Poor ☐ Neutral ☐ Good ☒ Excellent
5. Which programming *languages* do you use for High Performance Computing?
C++, FORTRAN, C, CUDA
6. What are, in your view, the *key advantages* of these languages (in relation to the alternatives you know)?
(this may include language properties, performance, programmability, etc.)
PREFERENCE MEANWHILE FOR C++ TO ALLOW FOR HW ABSTRACTION
7. What *actually* made you use these languages? (if not already covered in 7.)
SEE 6
8. Which other programming *frameworks* (e.g., *library*-based) and tools do you use for HPC?
OPENMP, OPENACC
9. Which other HPC programming languages / frameworks / tools do you *know* about (but do not use)?
TBB, HAX, KOKKOS, UPC, COARRAY, FORTRAN