

Fortran
.....**M**odernization
.....**f**or
.....**S**cientific
.....**A**pplications

Welcome!

Why?

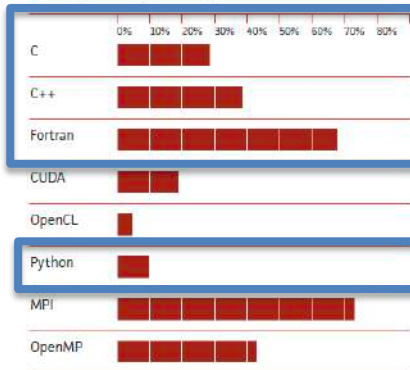
- Many of the applications that are used in scientific date back many years (>20 years)
- In the last 15 years there was an revolution of the hardware
 - Single core → Multi core → Many core → ?
 - Vectorization more and more important
- Fortran is **still** ~~one of~~ the most popular performing language in scientific applications
 - Rising of C++ and other modern languages for new projects, e.g. Python and Julia
- We have to ~~rewrite~~ modernize old codes

CSCS Code Statistics

<https://www.cscs.ch/publications/annual-reports/>

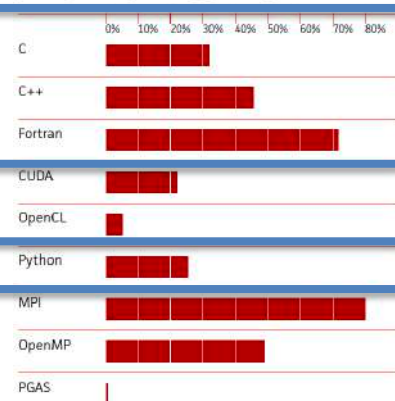
2011

What programming languages and parallelisation paradigms are you using?



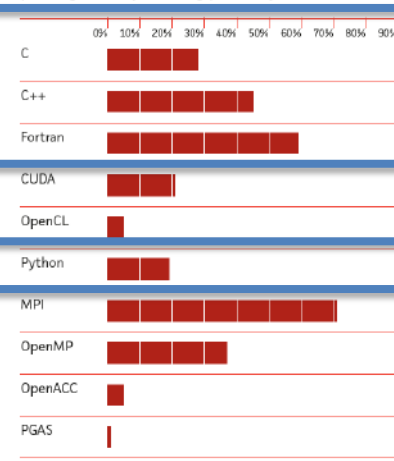
2012

Which programming languages and parallelization paradigms are you using primarily?



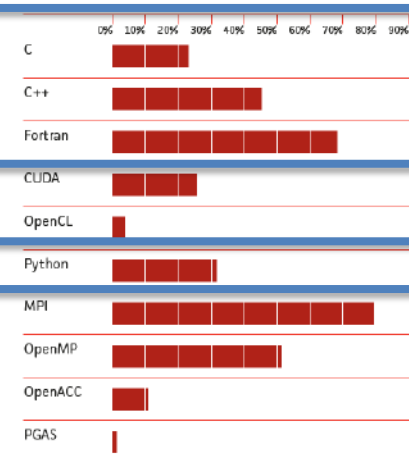
2013

Which programming languages and parallelization paradigms are you using primarily?



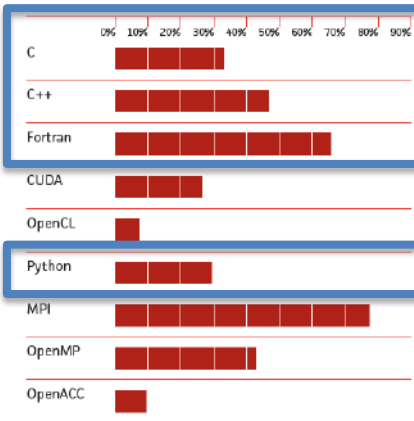
2014

Which programming languages and parallelization paradigms are you using primarily?



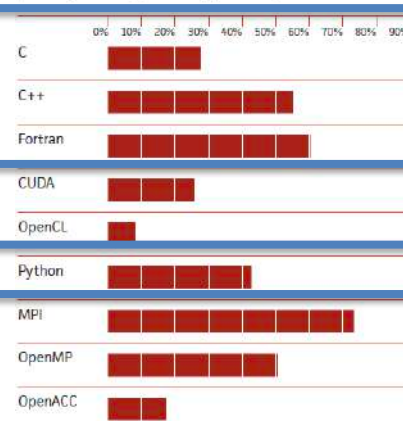
2015

Which programming languages and parallelization paradigms are you using primarily?



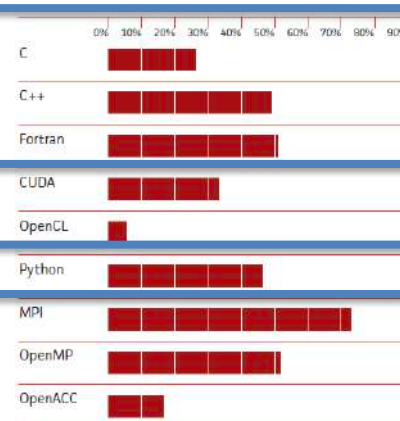
2016

Which programming languages and parallelization paradigms are you using primarily?



2017

Which programming languages and parallelization paradigms are you using primarily?



Organizers / Contact Persons

- Alfio Lazzaro
- Tiziano Müller
- Patrick Seewald



**University of
Zurich^{UZH}**

@ University of Zurich, Department of
Chemistry, prof. Jürg Hutter group

Please contact us for any logistic question!

Speakers

- **Day 1: Arjen Markus** (Deltares Institute in Delft, The Netherlands)
- **Day 2: Hans Pabst** (Intel Switzerland) **and Mikko Byckling** (Intel Finland)
- **Day 3: Bálint Aradi** (Bremen Center for Computational Materials Science, University of Bremen)

Agenda / Materials / Lunches

- <https://tcevents.chem.uzh.ch/event/3/timetable/>
- All the materials will be made available in agenda (slides/hands-on)
- Lunches are on your own
 - Schedule time 12.30 – 13.30

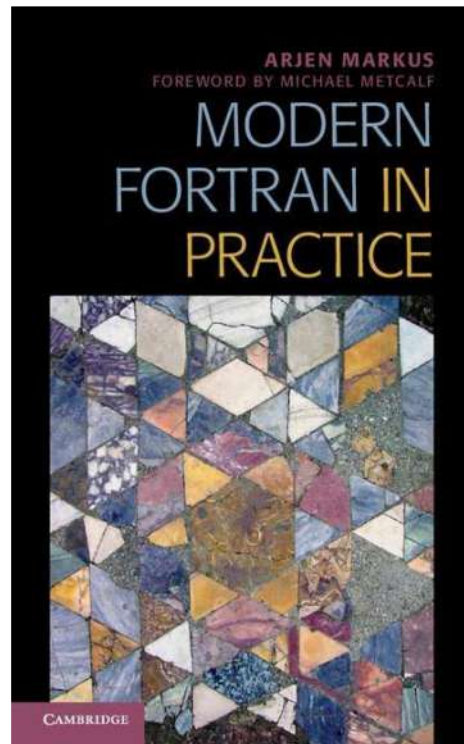
Coffee Breaks and Apéro

- Coffee-breaks in the same workshop room
- Join us to the tomorrow Apéro (18.00-) in the Aquarium room (Y13-M-Foyer)



Raffle

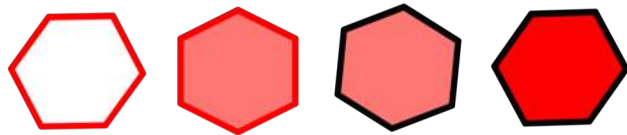
- On the last day (Friday afternoon)
- Use the name of the badge
- Prize



Sponsors

- Funding by the **UZH Graduate Campus** via a GRC Grant is gratefully acknowledged
- Funding by the **NCCR MARVEL** is gratefully acknowledged

MARVEL



NATIONAL CENTRE OF COMPETENCE IN RESEARCH



The National Centres of Competence in Research (NCCR) are a research instrument of the Swiss National Science Foundation