



# Parallel and Distributed Systems group

# The group in short

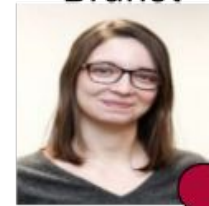
- 9 permanent researchers, 10 PhD students
- Publications at Eurosys, DISC, OOPSLA, ASPLOS, Usenix ATC, Middleware, TPDS, ACM TOCS, DSN...
- Ongoing research projects : 4 ANRs ( JCJC included), 1 FUI, 1 H2020
- International collaborations : IMDEA (Spain), Univ. Neuchatel (Switzerland), TU Braunschweig (Germany), Southwest Univ. Chongqing (China), Univ. do Minho (Portugal)



Elisabeth  
Brunet



Denis  
Conan



Amina  
Guermouche



Pierre Sutra



Gaël Thomas



François  
Trahay



Mathieu Bacou



Michel Simatic



Pascal Hennequin

# What is a system?

system

=

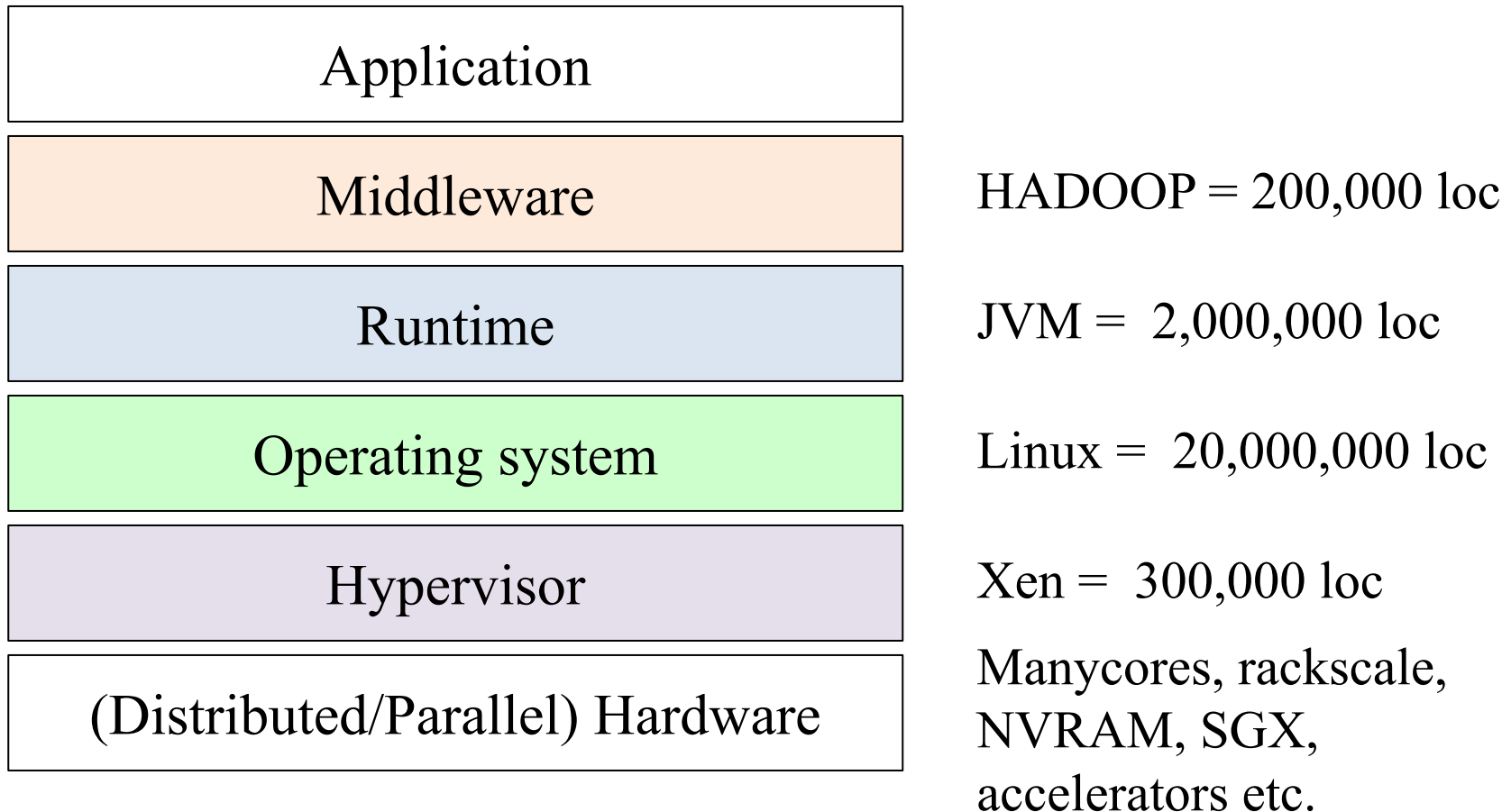
software that offers low-level primitives to applications

Today, a system is intrinsically parallel  
and distributed

# A system software is complex

A system software is large and evolves fast...

... and current hardware is just as complex and evolves faster!



# A system software is complex

and it has to be efficient, safe and easy to develop

## Challenges addressed by the PDS group

- Understanding and improving the **performance**
- Improving the **safety/correctness/privacy**
- Improving the **design** of systems

# Current research projects

- **Performance analysis for parallel applications**
  - A. Colin (PhD), A. Daumen (PhD), F. Trahay (MdC), G. Thomas (P)
- **Rackscale computing/cloud computing**
  - A. Lescouet (PhD), Y. Pipereau (PhD), D. Thenot (PhD), M. Bacou (MdC), G. Thomas (P)
- **Energy consumption for HPC applications**
  - A. Guermouche (MdC), F. Trahay (MdC)
- **Scalable File Systems and Serverless Computing**
  - T. Rezende (PhD), B. Kane (PhD), P. Sutra (MdC), D. Conan (MdC), M. Bacou (MdC)
- **Non volatile memory**
  - A. Lefort (PhD), R. Dulong (PhD), P. Sutra (MdC), M. Bacou (MdC), G. Thomas (P)
- **Runtime for HPC and IA applications**
  - E. Brunet (MdC)
- **Multiscale Distributed Event-Based Systems**
  - D. Conan (MdC) (also DiSSEM group)
- **Language to enforce privacy**
  - S. Tanigassalame (PhD), G. Thomas (P)