



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER



APPLIED
MATHEMATICS
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Memory Profiling using Valgrind's Massif

Tools for Software Development



What is Valgrind?



www.valgrind.org



What is Valgrind?

- ▶ CPU simulator executing the program
- ▶ ... has a tool for runtime profiling
- ▶ ... has a tool to find race conditions
- ▶ ... has a tool to find memory leaks
- ▶ ... has a tool to profile memory usage (tool massif)



How to profile memory usage

- ▶ `sudo apt-get install valgrind`
- ▶ `g++ -g -o myprog myprog.cpp`
- ▶ `valgrind --tool=massif ./myprog`
- ▶ `ms_print massif.out.<pid>`



Live Demo



Homework: try it

- ▶ take any executable with debug symbols
- ▶ run “valgrind --tool=massif ./myprog”
- ▶ ms_print massif.out.<pid>