Programming OpenMP

An Overview Of OpenMP

Christian Terboven

Programming in OpenMP
Christian Terboven & Members of the OpenMP Language Committee

History

- De-facto standard for Shared-Memory Parallelization.

- 1997: OpenMP 1.0 for FORTRAN
- 1998: OpenMP 1.0 for C and C++
- 1999: OpenMP 1.1 for FORTRAN
- 2000: OpenMP 2.0 for FORTRAN
- 2002: OpenMP 2.0 for C and C++
- 2005: OpenMP 2.5 now includes both programming languages.
- 05/2008: OpenMP 3.0
- 07/2011: OpenMP 3.1
- 07/2013: OpenMP 4.0
- 11/2015: OpenMP 4.5
- 11/2018: OpenMP 5.0
- 11/2020: OpenMP 5.1
- 11/2021: OpenMP 5.2
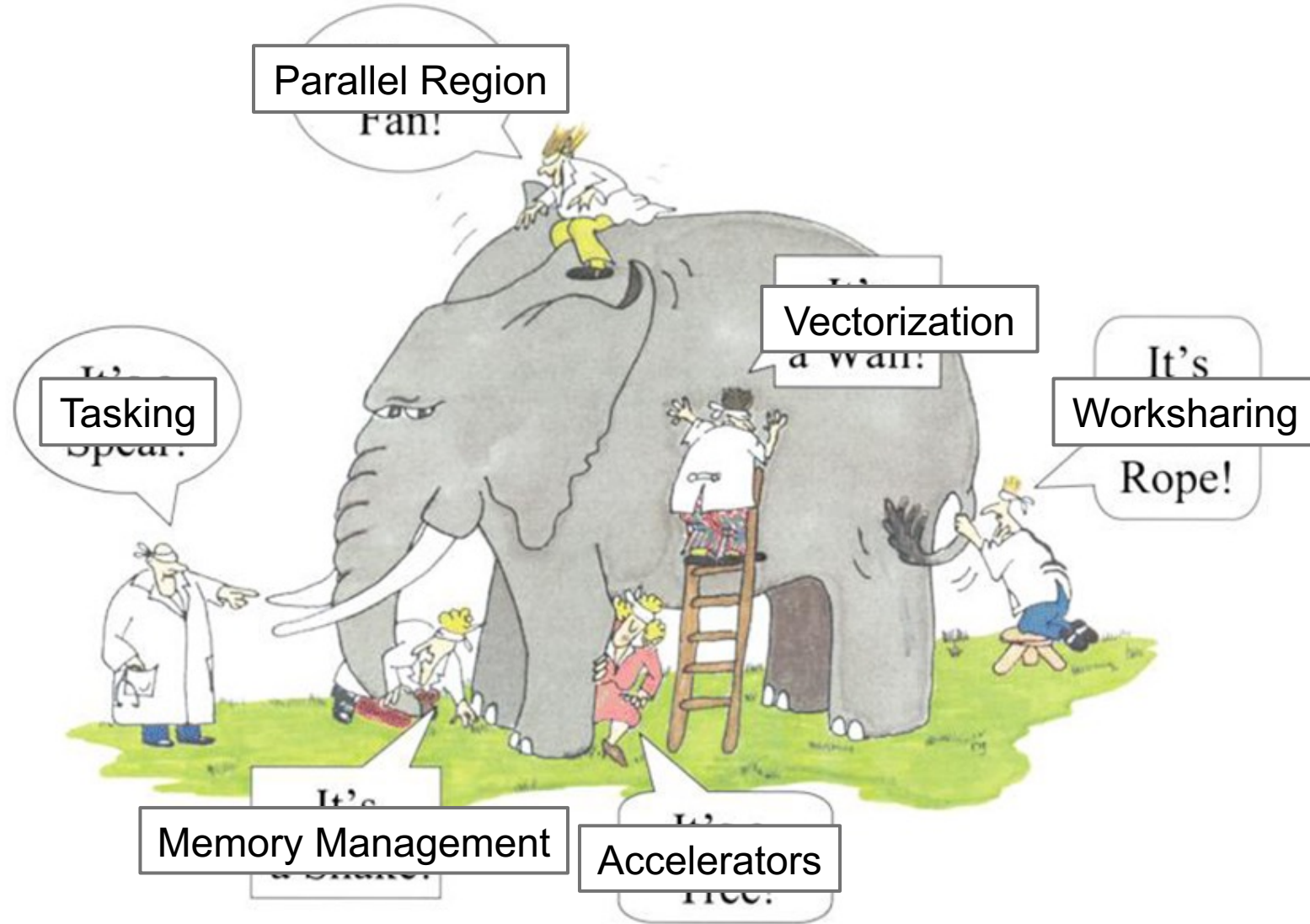
http://www.OpenMP.org

RWTH Aachen University is a member of the OpenMP Architecture Review Board (ARB) since 2006. Main topics:
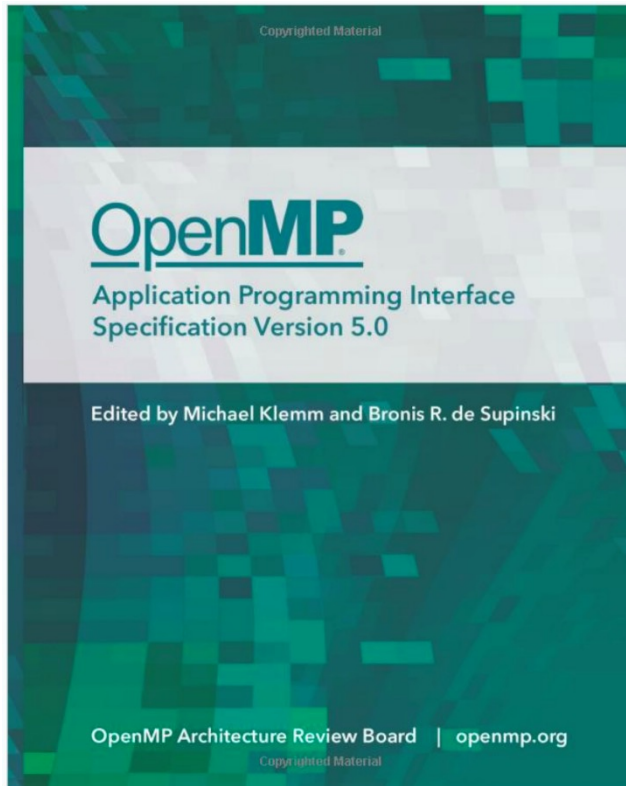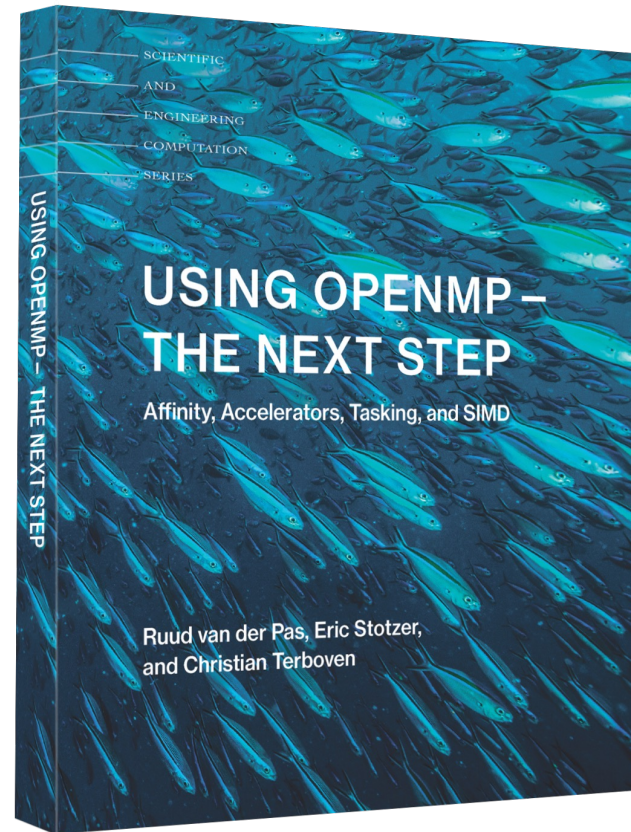- Affinity
- Tasking
- Tool support
- Accelerator support

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What is OpenMP?

- Parallel Region & Worksharing

- Tasking

- SIMD / Vectorization

- Accelerator Programming

- Memory Management

- …

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Covers all of OpenMP 5.0 / 5.1 / 5.2!
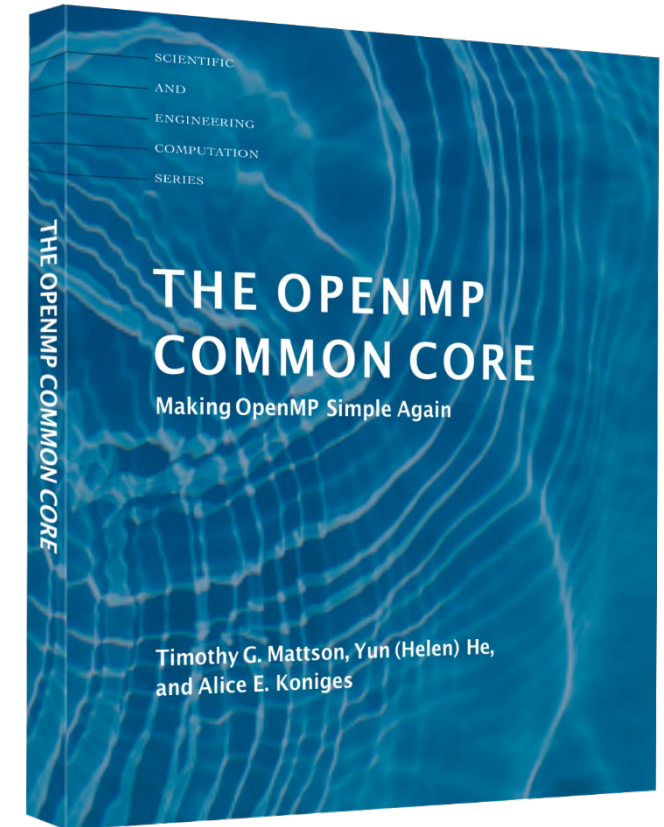https://www.openmp.org/wp-content/uploads/OpenMPRefCard-5.1-web.pdf

Recent Books About OpenMP

A printed copy of the 5.0 specifications, 2019

A book that covers all of the OpenMP 4.5 features, 2017

A new book about the OpenMP Common Core, 2019