SIMD库相关资料文献

1. **Boost.SIMD**

**仓库**： <https://github.com/nickporubsky/boost-simd-clone> （原仓库已删除，相关团队转为做nsimd库项目了）

**论文**: <https://www.lri.fr/~falcou/paper/bsimd.pdf> “*Boost.SIMD Generic Programming for portable SIMDization”*

1. **E.V.E.**

**仓库**：https://github.com/jfalcou/eve

**论文**: <https://www.researchgate.net/publication/200179961> “*EVE\_an\_object\_oriented\_SIMD\_library”*

**网站:** https://jfalcou.github.io/eve/index.html

1. **Vc**

**仓库**： https://github.com/VcDevel/Vc

**论文**： https://sci-hub.se/10.1002/spe.1149 “*Vc: A C++ library for explicit vectorization“*

1. **Generic SIMD library**

**仓库**： https://github.com/genericsimd/generic\_simd

**论文**: <https://github.com/genericsimd/generic_simd/raw/master/docs/Generic.SIMD.Library> “*Simple, Portable and Fast SIMD Intrinsic Programming: Generic SIMD Library*”

1. **MIPP**

**仓库**： https://github.com/aff3ct/MIPP

**论文**:https://sci-hub.st/https://doi.org/10.1145/3178433.3178435“*[MIPP: a Portable C++ SIMD Wrapper and its use for Error Correction Coding in 5G Standard](https://doi.org/10.1145/3178433.3178435)*”

1. **UME::SIMD**

**仓库**： <https://github.com/edanor/umesimd>

**论文**:https://sci-hub.se/https://doi.org/10.1145/3026937.3026939“*Simple, Portable and Fast SIMD Intrinsic Programming: Generic SIMD Library*”

1. **NSIMD**

**仓库**： <https://github.com/agenium-scale/nsimd>

**手册：**https://agenium-scale.github.io/nsimd/faq.html

**网站：**<https://agenium-scale.com/en/nsimd-simd>

**相关论文：**<https://www.earthdoc.org/content/papers/10.3997/2214-4609.2021612021> *“Application of the vectorization library NSIMD to the EFISPEC3D kernel”*

1. **libsimdpp**

**仓库**： https://github.com/p12tic/libsimdpp

**手册**： http://p12tic.github.io/libsimdpp/v2.2-dev/libsimdpp/w/index.html

1. **xsimd**

**仓库**： https://github.com/xtensor-stack/xsimd

**手册**： https://xsimd.readthedocs.io/en/latest/index.html

1. **T-simd**

**仓库**： https://github.com/jeffamstutz/tsimd

**手册**：http://www.ti.unibielefeld.de/html/people/moeller/tsimd\_warpingsimd.html

1. **highway**

**仓库**：https://github.com/google/highway

**手册:**<https://github.com/google/highway/blob/master/>

g3doc/design\_philosophy.md#differences-vs-p02

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1. **VCL**

**仓库**： https://github.com/vectorclass

**手册:** <https://www.agner.org/optimize/#vectorclass>

**视频:** <https://www.youtube.com/watch?v=TKjYdLIMTrI>

1. **Neat-SIMD**

**论文:** https://www.sci-hub.st/10.1109/HPCSim.2016.7568423 *“Neat SIMD: Elegant vectorization in C++ by using specialized templates “*

1. **Cyme**

**论文:** T. Ewart, F. Delalondre and F. Schuermann. *“Cyme: A Library Maximizing SIMD Computation on User-Defifined Containers*”*.* In Supercomputing, 2014

1. **simdjson**

**仓库：**https://github.com/simdjson/simdjson

**论文:** https://arxiv.org/pdf/1902.08318.pdf. *“Parsing Gigabytes of JSON per Second*”*.*

1. **Simd**

**仓库:** https://github.com/ermig1979/Simd

**手册：**http://ermig1979.github.io/Simd/

1. **dimsum**

**仓库:** https://github.com/google/dimsum

**手册：**<https://github.com/google/dimsum/blob/master/README.md>(见readme)

1. **DirectXMath**

**仓库:** https://github.com/Microsoft/DirectXMath

**手册：**https://docs.microsoft.com/en-us/windows/win32/dxmath/directxmath-portal

1. **veccore**

**仓库:** https://github.com/root-project/veccore

**论文：**https://iopscience.iop.org/article/10.1088/1742-6596/1085/3/032034/pdf

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1. **并行编程模型综述**

**论文:** https://depositonce.tuberlin.de/bitstream/11303/7930/3/pohl\_etal\_2016.pdf. *“*An evaluation of current SIMD programming models for C++”*.*