

# Math Special Interest Group

Session 3

July 12, 2023

# Agenda

- Welcoming remarks – 5 minutes
- Updates from last meeting – 5 minutes
- Integrating SYCL-BLAS into oneMKL – Ouadie El Farouki (30 minutes)
- Wrap-up and next steps – 5 minutes

# Updates from last meeting

- Image SIG has launched! Focused on oneAPI Image Processing Library
- Open source oneMKL interfaces updates:
  - rocFFT added as a backend for DFT domain
  - Additional functionality supported for cuBLAS (omatadd, omatcopy), cuSOLVER (batch getri), and SYCL-BLAS (mainly some level-2, symm) backends

	x86 CPU	Intel GPU	NVIDIA GPU	AMD GPU
BLAS	Intel® oneMKL NETLIB LAPACK SYCL-BLAS	Intel® oneMKL SYCL-BLAS	NVIDIA cuBLAS SYCL-BLAS	AMD rocBLAS SYCL-BLAS
LAPACK	Intel® oneMKL	Intel® oneMKL	NVIDIA cuSOLVER	AMD rocSOLVER
RNG	Intel® oneMKL	Intel® oneMKL	NVIDIA cuRAND	AMD rocRAND
DFT	Intel® oneMKL	Intel® oneMKL	NVIDIA cuFFT	AMD rocFFT

# Integrating SYCL-BLAS into oneMKL

# Wrap-up

# Next Steps

- Focuses for next meeting(s):
  - Any topics from Math SIG members?
- Please feel free to extend invitations to others to join Math SIG
- If anyone has content that they would like posted on [oneAPI.io](https://oneAPI.io), please let us know

# Resources

- oneAPI Main Page: <https://www.oneapi.io/>
- Latest release of oneMKL Spec (currently v. 1.2):  
<https://spec.oneapi.com/versions/latest/elements/oneMKL/source/index.html>
- GitHub for oneAPI Spec: <https://github.com/oneapi-src/oneAPI-spec>
- GitHub for oneAPI Community Forum: <https://github.com/oneapi-src/oneAPI-tab>
- GitHub for open source oneMKL interfaces (currently BLAS, RNG, LAPACK, and DFT domains): <https://github.com/oneapi-src/oneMKL>