



RuQing G. XU

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EDUCATION

SEPT. 2019 - AUG. 2024	The University of Tokyo Global Science Graduate Course = <i>S. Todo Lab, Department of Physics</i> M.S. in PHYSICS = <i>Differentiating TRG for Phys. Quantit. and Scaling Anal.</i> Ph.D. in PHYSICS <i>expected in 2024.</i>
SEPT. 2015 - JUL. 2019	University of Science and Technology of China Special Class for Gifted Young = <i>Department of Modern Physics</i> B.S. in PHYSICS

SELECTED PROJECTS & EXPERIENCES

JUL. 2020 - SEPT. 2021 FZ. JÜLICH UNIV. TOKYO UNIV. TEXAS AUSTIN	Arm SVE Kernels for BLIS: Rapid BLAS-like Functionality Instantiator Tuned for Latest Arm Architecture Collaborator: Stepan NASSYR et. al. <ul style="list-style-type: none"> [Apr. 2, 2021] BLIS outperforms vendor libraries on SC Fugaku Talks [21Spring] [21Autumn] in the Arm HPC User Group Workshop Same set of kernels used also in TBLIS, provisional BLIS extension for direct tensor contraction.
JUN. 2021 - AUG. 2021 PERSONAL	Customizing BLAS on Apple's Matrix Coprocessor <ul style="list-style-type: none"> Crafted AMX2 Assembly for BLIS & TBLIS, Peak above VecLib
SEPT. 2021 - JAN. 2022 NVIDIA CORP.	Edge Case Improvements for cuTENSOR Library INTERNSHIP @ NVIDIA G.K. Tokyo Office
JUL. 2018 - PRESENT WASEDA UNIV. UNIV. TOKYO	Two-Dimensional Superconductivity and Quantum Spin Liquid Project Leader: Masatoshi IMADA <ul style="list-style-type: none"> VMC code speeded up 6x by block-update & skew-symmetric BLAS

RELATED PUBLICATIONS

MAY. 2021	<i>Comput. Phys. Commun.</i> 277 , 108375, RuQing G. Xu , Tsuyoshi Okubo, Synge Todo, Masatoshi Imada, <i>Optimized Implementation for ... Pfaffians ...</i>
MAR. 2021	<i>Phys. Rev. Research</i> 3 , 023048, Xinliang Lyu, RuQing G. Xu , Naoki Kawashima, <i>Scaling dimensions from linearized tensor renormalization group transformations</i>
NOV. 2018	<i>J. Chem. Theory Comput.</i> 2019, 15 , 3, 1728-1742, James S. Spencer, Nick S. Blunt, ... William A. Vigor, RuQing Xu , Alex J. W. Thom, <i>The HANDE-QMC project: open-source stochastic quantum chemistry ...</i>

PREFERRED PROGRAMMING LANGUAGES / TOOLS

Generic	C, C++, Python
Low-Level	armv8+SVE, CUDA®, PTX
Numerical	julia, NumPy, MATLAB®

NATURAL LANGUAGES

ENGLISH	TOEFL®iBT: 108 (Expired); GRE®General: 330 (v:163;q:167)
JAPANESE	JLPT N1-Level
CHINESE	Native