"2025 RIKEN R-CCS International Internship Opportunities"

	Team/Unit		Research subject	Internship available
Research Teams / Science of Computing				
1	**Processor Research Team** (*Team Leader: Dr.Sano*)		Data-flow architecture (CGRA) for HPC and AI Reconfigurable high-performance computing systems Error correction and control for Fault-Tolerant Quantum Computers	O
2	**Large-scale Parallel Numerical Computing Technology Research Team** (*Team Leader: Dr.Imamura*)		Developing Numerical Libraries for Fast and Reliable Computations towards emerging Supercomputer systems	O
3	**Next Generation High Performance Architecture Research Team** (*Team Leader: Prof.Kondo*)		Exploring Next Generation High Performance Computer Architectures for Post-Moore Era	-
4	**High Performance Big Data Research Team** (*Team Leader: Dr.Sato*)		Developing System Software and Performance Analysis for Large-Scale Simulations, Big Data Processing and Deep Learning	O
5	**High Performance Artificial Intelligence Systems Research Team** (*Team Leader: Dr.Wahib*)		High Performance Artificial Intelligence Systems, Intelligent Programming Systems, Performance Modeling of AI Systems e.g. Deep Learning Scalable Deep Learning Convergence of AI and Simulation	O
6	**Supercomputing Performance Research Team** (*Team Leader: Dr.Domke*)		Performance Modelling and Predictions, Hardware/Software Co-Design for HPC, Architecture and Application Evaluations, Instrumentation and Monitoring Tools, Auto-Tuning and Portability	O
7	**Large-Scale Digital Twin Research Team** (*Team Leader: Prof.Yamaguchi*)		Digital Twin Platform, Cyber-Physical System Smart City, Sensing Technologies Real-time Intelligent Data Processing	O
8	**High Performance Cloud Systems and Secure Software Research Team** (*Team Leader: Prof.Takefusa*)		Cloud Computing, Virtualization and Container Technologies Trusted Computing, Secure System Software IoT (Internet of Things)	-
Research Teams / Science by Computing				
9	**Field Theory Research Team** (*Team Leader: Dr.Aoki*)		Utilizing Large-scale Computations to Explore the Fundamental Laws of Elementary Particles	O
10	**Discrete Event Simulation Research Team** (*Team Leader: Dr.Ito*)		Developing technology for massively parallel supercomputers to simulate social phenomena and their applications	O
11	**Computational Molecular Science Research Team** (*Team Leader: Dr.Nakajima*)		Development of Quantum Chemistry Theory and Software Materials Informatics for Energy Materials	O
12	**Computational Materials Science Research Team** (*Team Leader: Dr.Yunoki*)		Simulating Quantum States of Matter by Classical and Quantum Computers, and Development of Quantum Algorithms for Quantum Computing	O
13	**Computational Biophysics Research Team** (*Team Leader: Dr.Sugita*)		Depicting the Motion of a Biomolecule to Detail Its Function	O
14	**Computational Climate Science Research Team** (*Team Leader: Dr.Tomita*)		Developing More Fundamental Climate Models for Improved Climate Simulation	O
15	**Complex Phenomena Unified Simulation Research Team** (*Team Leader: Prof.Tsubokura*)		Programs to Enable the Unified Simulation of Complex Phenomena	O
16	**Data Assimilation Research Team** (*Team Leader: Dr.Miyoshi*)		Data Assimilation as a Bridge between Simulations and the Real World	O
17	**Computational Disaster Mitigation and Reduction Research Team** (*Team Leader: Prof.Oishi*)		Development of Large-scale Numerical Simulations of Multi-hazard Natural Disasters	-
18	**Computational Structural Biology Research Team** (*Team Leader: Prof.Tama*)		Structural Biology Integrating Computation and Experimental Data	O

	Operations and Computer Technologies Division			
19	**Facility Operations and Development Unit** (*Unit Leader: Dr.Miura*)		Data center operations Carbon Neutrality PUE (Power Usage Effectivenes) Power Consumption Thermal load	O
20	**System Operations and Development Unit** (*Unit Leader: Mr.Iguchi*)		High Performance Computing Power Efficiency Job Scheduling	O
21	**Software Development Technology Unit** (*Unit Leader: Dr.Murai*)		HPC Programming Environment HPC application Parallel processing	O
22	**Data Integration Technology Unit** (*Unit Leader: Dr.Kai*)		HPC (High Performance Computing) Data Utilization Storage System Wide Area Network	O
23	**Advanced Operation Technologies Unit** (*Unit Leader: Dr.Yamamoto*)		Data center operations Big data processing Virtualization and containerization Cloud computing	O
	HPC- and AI-driven Drug Development Platform Division			
24	**HPC- and AI-driven Drug Development Platform Division** (*Division Director: Prof.Okuno*)		Biomedical Computational Intelligence Medicinal Chemistry Applied AI Molecular Design Computational Intelligence I-driven Drug Discovery Collaborative	-
	Quantum-HPC Hybrid Platform Division			
25	**Quantum-HPC Hybrid Software Environment Unit** (*Unit Leader: Dr.Tsuji*)		Research and development of software stacks for quantum-HPC hybrid computing platform	O
26	**Quantum Computing Simulation Unit** (*Unit Leader: Dr.Ito*)		Development of simulation technology for quantum computers for the "Fugaku" and other HPC system, to accelerate quantum information technologies	O
27	**Quantum-HPC Hybrid Platform Operations Unit** (*Unit Leader: Dr.Miura*)		Operation and its technology development of quantum-HPC hybrid computing platform	O
	AI for Science Platform Division			
28	**Learning Optimization Platform Development Unit** (*Team Leader: Dr.Wahib*)		AI-based Science Infrastrcuture for Foundation Models (training inference) Generative AI in Science Integration of AI in Science	O
29	**Data Management Platform Development Unit** (*Team Leader: Dr.Sato*)		Big Data Processing Platform, Deep Learning Platform Fault Tolerance, Performance evaluation/analysis HPC tools	O
30	**Advanced AI Device Development Unit** (*Team Leader: Dr.Sano*)		Generative AI Next-generation foundation model Accelerator architecture for AI	O
31	**AI Development Computing Environment Operation Technologies Unit** (*Unit Leader: Dr.Miura*)		Operation and its technology development of quantum-HPC hybrid computing platform	O
32	**Life and Medical Science Application Interface Platform Development Unit** (*Team Leader: Dr.Sugita*)		Integrated Modeling Data Assimilation Molecular Dynamics Simulation	-
33	**Material Science Application Interface Platform Development Unit** (*Team Leader: Dr.Nakajima*)		Development of Molecular Software and Theory through Foundation Models	O