NCS-Based KAIST Job Description

Recruitment area	Postdoctoral researcher	Classification system	Parent category	Sub-category	Sub sub-category	Sub sub-sub-category
			*20. Communication	*01. Information Technologies	06. Information Security (Quantum Information Theory)	04. Cryptography

Mission	○ Korea Advanced Institute of Science and Technology (KAIST) Act
	  - Educating outstanding talent proficient in theory and practice as required in the fields of science and technology for industrial development
	  - Carrying out the nation's mid- and long-term R&D, and basic and applied research to foster national competitiveness in science and technology
	  - Providing comprehensive support to research conducted by other research centers and industries

KAIST's major businesses	○ Education: Fostering creative talent, strengthening convergence education, nurturing global leaders in science and technology, strengthening human resource capacity ○ Research: Support for development of outstanding research projects, acquisition of specialized researchers, advancement of entrepreneurial culture, creation of high value-added intellectual property rights, promotion of technology transfer/commercialization, and development of large-scale, leading projects ○ Cooperation: Creating a working environment to be at par with global standards, and multifaceted cooperation for global leadership ○ Administration: Provision of administrative and technical service for international students/faculty (Support for operation of a "Korean-English bilingual campus")

Growth engines	○ Vision: Global Value-Creative World-Leading University
	  - Hub for Fostering Knowledge Creation and Global Convergence Talents
	  - Center for the World-Leading New Knowledge and Technology)
	○ Five innovation initiatives: Innovation in education, research, technology commercialization, globalization and future strategies
	○ 3C Leadership: Change, Communication, Care

Duties and responsibilities	○ Research in quantum communication protocols ○ Collaborations within the research group ○ Dissemination of the research outcomes in major conferences

Job performance details	○ Quantum cryptographic protocols ○ Analysis on quantum algorithms ○ Co-supervision of undergraduate or graduate students

Knowledge required	○ Basics of quantum information theory ○ Quantum algorithms and quantum communication

Required skills	○ Matlab, Qiskit, Python ○ Optimization ○ Latex, PPT, and other presentation skills

Attitude while performing duties	○ Cooperative and collaborative interactions within the research group ○ 40 working hours per week
Basic skills	○ Communication in English ○ Constructive interactions within the group
Reference site	www.ncs.go.kr, www.kaist.ac.kr