【Job Description for Research Scientist(Full-time) Recruitment for 2026 – 1】

<table>
<tr><td>Area of recruitment</td><td colspan="5">Accelerator - Control System and Beam Diagnostics</td></tr>
<tr><td>Academic major</td><td colspan="2">Physics, Electrical/Electronic Engineering, Control & Instrumentation Engineering, Computer Engineering, Accelerator Engineering, and related major</td><td>Job position</td><td>Research Scientist</td><td>Locations</td><td>Ochang, Pohang</td></tr>
<tr><td rowspan="2">NCS category</td><td>Main Category</td><td colspan="2">Category</td><td colspan="2">Sub-Category</td></tr>
<tr><td colspan="5">A separate analysis was performed to prepare the following contents as the NCS has not developed job categories corresponding to the job duties</td></tr>
<tr><td>KBSI mission</td><td colspan="6">□ Conducting R&D on research facilities & equipment and analytical S&T, and joint research and support for promoting basic science, the foundation of the national science and technology development</td></tr>
<tr><td>KBSI main functions</td><td colspan="6">□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment
□ Development of analytical technology and equipment through analytical science research
□ In charge of general management of national research facilities and equipment
□ Fostering research equipment experts and creative future talent</td></tr>
<tr><td>General requirements</td><td>Age and gender</td><td colspan="5">Not specified</td></tr>
<tr><td>Educational requirements</td><td>Academic Background</td><td colspan="5">Doctoral degree</td></tr>
<tr><td>Required job duties</td><td colspan="6">□ Control: Design, build, and maintain the accelerator control system of the Korea Light Source (KLS)
□ Diagnostics: Develop, fabricate, performance-test, and maintain the beam diagnostic systems of the KLS</td></tr>
<tr><td>Capacity and ability</td><td colspan="6">□ Accelerator control system design and programming (C/C++, Python, etc.)
□ Beam signal acquisition and digital signal processing
□ Real-time feedback control and measurement data analysis
□ (Preferred) Experience in developing/operating EPICS-based accelerator control systems
□ (Preferred) Experience in developing/operating beam diagnostics (e.g., BPM) at synchrotron light sources
□ (Preferred) AI/ML-based accelerator operation optimization and anomaly diagnosis</td></tr>
<tr><td>Required knowledge</td><td colspan="6">□ Accelerator physics and beam dynamics
□ Control engineering and distributed control system architecture (EPICS, control network)
□ Analog/digital signal processing and measurement theory
□ Programming languages (C/C++, Python) and Linux-based systems</td></tr>
<tr><td>Required skills</td><td colspan="6">□ EPICS IOC/OPI development and control network/data archiving implementation
□ Design and signal processing of BPM and beam current/size/loss monitors
□ Beam measurement data analysis, modeling, and simulation
□ Hardware/software system integration and commissioning</td></tr>
<tr><td>Attitude in performing duties</td><td colspan="6">□ Proactive, responsible, and diligent attitude to solve a problem
□ An exploratory attitude towards new knowledge and skills
□ Positive and active communication attitude
□ Efforts oriented towards teamwork</td></tr>
<tr><td>Reference websites</td><td colspan="6">□ www.ncs.go.kr (except for the undeveloped jobs in NCS)
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【Job Description for Research Scientist(Full-time) Recruitment for 2026 – 2】

<table>
<tr><td>Area of recruitment</td><td colspan="5">Accelerator - Magnet Power Supply</td></tr>
<tr><td>Academic major</td><td colspan="2">Electrical Engineering, Electronic Engineering, Power Electronics, Control & Instrumentation Eng., and related major</td><td>Job position</td><td>Research Scientist</td><td>Locations</td><td>Ochang, Pohang</td></tr>
<tr><td rowspan="2">NCS category</td><td>Main Category</td><td colspan="2">Category</td><td colspan="2">Sub-Category</td></tr>
<tr><td colspan="5">A separate analysis was performed to prepare the following contents as the NCS has not developed job categories corresponding to the job duties</td></tr>
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<tr><td>KBSI main functions</td><td colspan="5">□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment
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□ Fostering research equipment experts and creative future talent</td></tr>
<tr><td>General requirements</td><td>Age and gender</td><td colspan="4">Not specified</td></tr>
<tr><td>Educational requirements</td><td>Academic Background</td><td colspan="4">Doctoral degree</td></tr>
<tr><td>Required job duties</td><td colspan="5">□ R&D on magnet power supplies (AC & DC) for the Korea Light Source (KLS)
□ Build, operate, maintain, and improve the performance of the KLS magnet power supply system</td></tr>
<tr><td>Capacity and ability</td><td colspan="5">□ Design and analysis of high-precision power converters (switching converters)
□ Digital current controller design and firmware development (FPGA/DSP)
□ Precision current measurement and performance evaluation (DCCT, high-resolution ADC)
□ (Preferred) Experience in developing or operating accelerator magnet power supplies
□ (Preferred) Experience in developing high-current/high-stability or ramping/pulsed (kicker/septum) power supplies
□ (Preferred) Circuit/PCB design and power electronics simulation (PSIM, PLECS, etc.)</td></tr>
<tr><td>Required knowledge</td><td colspan="5">□ Power electronics (converter topologies, power semiconductor devices)
□ Control theory (digital control, feedback loop design)
□ Analog/digital circuits and precision measurement theory
□ Electromagnetics and magnet load characteristics (inductance, hysteresis, etc.)</td></tr>
<tr><td>Required skills</td><td colspan="5">□ Topology design of high-precision/high-voltage power supply systems
□ Circuit design and schematic interpretation
□ Precision measurement and performance evaluation of high-precision/high-voltage systems</td></tr>
<tr><td>Attitude in performing duties</td><td colspan="5">□ Proactive, responsible, and diligent attitude to solve a problem
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□ Positive and active communication attitude
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【Job Description for Research Scientist(Full-time) Recruitment for 2026 – 3】

<table>
<tr><td>Area of recruitment</td><td colspan="6">Beamline - Nanoprobe</td></tr>
<tr><td>Academic major</td><td colspan="2">Physics, Material Science, and related major</td><td>Job position</td><td>Research Scientist</td><td>Locations</td><td>Ochang</td></tr>
<tr><td rowspan="2">NCS category</td><td>Main Category</td><td colspan="2">Category</td><td colspan="3">Sub-Category</td></tr>
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<tr><td>KBSI main functions</td><td colspan="6">□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment
□ Development of analytical technology and equipment through analytical science research
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<tr><td>General requirements</td><td colspan="2">Age and gender</td><td colspan="4">Not specified</td></tr>
<tr><td>Educational requirements</td><td colspan="2">Academic Background</td><td colspan="4">Doctoral degree</td></tr>
<tr><td>Required job duties</td><td colspan="6">□ Research and development of hard x-ray multi-modal measurements technique
□ Development of hard x-ray nanoprobe beamline and instrumentation (Korea-4GSR construction project)
□ R&D program utilizing with hard x-ray measurements in synchrotron facility
□ R&D for autonomous control and measurement system for the nanoprobe beamline</td></tr>
<tr><td>Capacity and ability</td><td colspan="6">□ Ability and knowledge of hard x-ray scattering/imaging using synchrotron radiation
□ Ability for dvelopment and operation of hard x-ray beamline and end-station
□ Ability and knowledge to development autonomous measurement and analysis system
□ Ability for collaborative R&D and international collaboration</td></tr>
<tr><td>Required knowledge</td><td colspan="6">□ Hard x-ray beamline components and nano-focusing optics
□ Experimental system and methodology of hard x-ray scattering/imaging technique
□ Control, measurement, analysis architecture for hard x-ray scattering/imaging tool
□ Sample manipulation, environment system and detector</td></tr>
<tr><td>Required skills</td><td colspan="6">□ Data acquisition and analysis for hard x-ray measurements
□ Device for sample transfer, positioning and temperature control system
□ CCD detector, analyzer for hard x-ray measurements</td></tr>
<tr><td>Attitude in performing duties</td><td colspan="6">□ Proactive, responsible, and diligent attitude to solve a problem
□ An exploratory attitude towards new knowledge and skills
□ Positive and active communication attitude
□ Efforts oriented towards teamwork based on mutual trust and cooperation</td></tr>
<tr><td>Reference websites</td><td colspan="6">□ www.ncs.go.kr (except for the undeveloped jobs in NCS)
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<tr><td>Area of recruitment</td><td colspan="6">Beamline – Data Science</td></tr>
<tr><td>Academic major</td><td colspan="2">Computer Engineering, Computer Science, and related major</td><td>Job position</td><td>Research Scientist</td><td>Locations</td><td>Ochang</td></tr>
<tr><td rowspan="2">NCS category</td><td>Main Category</td><td colspan="2">Category</td><td colspan="3">Sub-Category</td></tr>
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<tr><td>General requirements</td><td colspan="2">Age and gender</td><td colspan="4">Not specified</td></tr>
<tr><td>Educational requirements</td><td colspan="2">Academic Background</td><td colspan="4">Doctoral degree</td></tr>
<tr><td>Required job duties</td><td colspan="6">□ Design and implementation of integrated networks for synchrotron beamlines
□ Development of AI-based scientific data processing, analysis, and intelligent information systems
□ Development of machine learning- and deep learning-based scientific data extraction and intelligent analysis systems
□ Development of high-speed experimental data transfer and data management infrastructure for beamlines
□ Configuration and operation of control, experimental data, and management networks for beamlines
□ Installation, configuration, and management of beamline servers, storage infrastructure, and data transfer systems</td></tr>
<tr><td>Capacity and ability</td><td colspan="6">□ Knowledge of computing and network infrastructure design and implementation
□ Skills in the deployment and operation of servers, storage, and data management systems
□ Skills in large-scale scientific data acquisition, transfer, processing, and distributed systems
□ Skills in AI- and machine learning-based data analysis and software development
□ Knowledge of computing and data system integration and operation for large-scale research facilities</td></tr>
<tr><td>Required knowledge</td><td colspan="6">□ Knowledge of the design and development of large-scale data transfer, storage, and analysis systems
□ Knowledge of AI- and machine learning-based scientific data processing, analysis, and intelligent information system development
□ Knowledge of integrated data workflow system development for large-scale research facilities
□ Knowledge of EPICS-based integrated control and measurement systems for synchrotron beamlines</td></tr>
<tr><td>Required skills</td><td colspan="6">□ Skills in the installation and management of storage and computing systems for large-scale data processing
□ Skills in AI- and machine learning-based scientific data analysis and intelligent information processing system development
□ Skills in software stack development for scientific data management and analysis
□ Software development skills required for the above duties, including proficiency in programming languages such as Python and C++</td></tr>
<tr><td>Attitude in performing duties</td><td colspan="6">□ Proactive, responsible, and diligent attitude to solve a problem
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