삼성전자 생산기술연구소 채용분야

▶ **Business Field** : Thin-Film Process, Inspection, Signal Process, Mechatronics System, Semiconductor Front-End & Back-End Process (Photo Litho., Etch, Deposition etc.)

▶ **Major Technology**

- **Semiconductor Fab. Equipment** : Mechanical Design/Engineering, Vacuum Chamber Design Technology, Ceramic Technology, Electro-Static Chuck, RF/Microwave Technology, Plasma Technology, ALD/CVD Precursor Chemistry, Plasma/Quantum Chemistry Simulation, Real-time Process Monitoring Technology, Diagnostics Technology, Process Equipment Control S/W, Process Control SW, Diagnostics Technology, III-V semiconductor Physics

- **Equipment Control S/W** : Open Architecture Design, Dynamic Scheduling Algorithm, In-Memory DB UI/UX, Real-Time OS, Large & Fast Data Logging, Augmented Reality

- **Diagnostic S/W** : Database Technology (DB design & optimization), Data Mining Algorithm, Optimization Algorithm, Predictive Algorithm, Statistical Analysis, Information Visualization, Web Programming, Natural Language Processing, Expert System, Mobile App. Programming, Sensor Technology

- **Metrology** : Thin Film Thickness Measurement, Optical Pattern CD Measurement Spectroscopic Reflectometry, Spectroscopic Ellipsometry, Optical Analysis (RCWA) Overlay Measurement, Material Concentration Measurement

- **Inspection** : Image Processing Algorithms, 2D/3D Optical Inspection & Metrology Scanning Probe Microscopy, Electron Beam based Inspection & Metrology, Measurement & Inspection System Design (High Precision Mechanism Design, Analysis, Measurement and Control), GPU-Based Parallel Processing Software, Machine Learning

- **Optical System Design** : High NA, High Precision Optical System Design, High Precision Automatic Focus System, Broadband Light Source, EUV Light Source Bright Field Optics, Dark Field Optics, EUV Optics, Laser Optics, Confocal Microscope Opto-Mechatronic System Design, X-Ray-based Nano Structure Tomography Geometric/Diffractive Optics, Optical Algorithm, Plasma Light Physics

- **Device Packaging** : High rigidity, High-precision, High-accuracy alignment, Thermal Deformation compensation, Thin-wafer/die Handling Technology, Multi-chip stack mounting/bonding Technology, Equipment for TSV & POP package.3D IC(TSV & POP) Packaging, Multi-chip stack mounting/bonding, Molding, Thin-wafer handling Equipment, Process Non-Contact Inspection

- **Packaging** : Semiconductor Back-end Process Development & Equipment Design, High rigidity, High-precision, High-accuracy alignment, Thermal Deformation compensation, Thin-wafer/die Handling Technology, Multi-chip stack mounting/bonding Technology, Equipment for TSV & POP package. 3D IC(TSV & POP) Packaging & Molding, Vision Inspection & Electrical Test for Packages

- **Patterning** : OLED Evaporation & Encapsulation, Printable Electronics, Inkjet Printing, Nano Imprinting, Roll Printing, Lithography, MEMS, Photo Lithography, Mechanical/Electric Design & Analysis, Metrology, Control & Dynamics, Vision & SW, Functional Surface Engineering, Laser based Technology, Roll based System (Roll Printing, Roll Deposition, Roll Lithography etc.)

- **Materials** : Inkjet material, Printing material, Functional material(ex, Transparent Insulator, Conductor, hydro-philic/phobic, oleo-phobic/philic etc.)

- **Precision Mechanism & Stages** : Precise Moving Element Design, Micro Actuator/Sensor, Nano-precision Control System, Evaluation & Integration, Deformation Compensation, Vibration Suppression Control

- **Circuit Design & Test**
  · HW Design : Analog/digital/RF circuit design/characterization/measurement, High Performance Embedded Computing, SI/PI/EMI, Test equipment architecture design
  · SW Design : Firmware & Device Driver, Test data mining, High-capacity data processing, Tester operating software and Application,
  · Test Method : DFT/BIST/BOST, Automatic Test pattern generation, Adaptive testing 3D IC interconnection test, Pre/Post- Bonding Test, Contact/non-Contact probing, Fault modeling/analysis/validation
  · TeraHert : Tera-hertz Imaging/Spectroscopy

- **Power System & Control** : Power Electronics (Inverter/Converter/Motor Control), Precision motion control, High-Power RF Generator/Matcher, Power Testing System, Nano-stage control, Vehicle/Traction Control, Electric Powertrain System, Advanced Motor/Actuator Control Technologies

- **Mechatronics System** : Robotics, Manipulator/Wheel Mechanism Design, MCAE & Optimal Design, Motion Planning & Control, Vibration Control, Nonlinear Control, Actuator Control & Technology, Power System & Circuit Design, Intelligent SW Architecture, Embedded System, RT O/S System Programming, Windows/Linux Programming, Robot Vision(Visual Servoing, Object tracking), Sensor Fusion, HMI/C(Human Machine Interface/Cooperation), Complex Material Application, Laser Application, Machine Learning, Data Mining, Statistical Analysis

- **Optics** : Precision Optical System Simulation, Lens Design considering Assembling and Testing, Opto-Mechanical Design for precision optical system, Development of Assembling Process/Optical Testing Process, Laser Technology

- **Simulation** : Thermal/Heat Transfer/Fluid/Structure/Vibration/Dynamics Simulation, Chemical Reaction/Species/Plasma Simulation, Electro Magnetic Simulation, Molecular Dynamics