Manufacturing Engineering Professional

Job ID: STG-0690266  Full-time  Regular
Work country: USA  Position type: Entry level
Work city: Essex Junction, VT  Posted: 14-Sep-2014
Travel: No travel  Job area: Engineering (hardware)
Business group: IBM Systems & Technology Group  Job category: Manufacturing
Business unit: Micro Div  Job role: Manufacturing Engineering Professional
Job role skillset: General
Commissionable/ Sales-Incentive jobs only: No

Job description
IBM’s Systems and Technology Group (STG) is looking for engineers to join its Semiconductor Manufacturing Solutions (SMS) organization. The SMS organization is a semiconductor supplier consisting of 300mm and 200mm state of the art manufacturing facilities. Positions may be available in areas as described below:

- Equipment Engineering: Responsibilities include developing the manufacturing process strategy; installing, maintaining, and improving manufacturing processes and equipment; implementing new product processes and logistics setups utilizing Lean Manufacturing Principles. Candidates in this role implement engineering changes and related manufacturing system settings. Other responsibilities include participating in world wide engineering projects to design new processes, make existing processes, equipment and systems more manufacturing friendly, and provide feedback problems linked to products.

- Industrial Engineer: With the growth in cell phone and wireless demand, the IBM Semiconductor Manufacturing team is looking for a driven industrial engineer to join the capacity planning team. Your role as an industrial engineer would be to manage the loading, utilization and manufacturing efficiency of individual technology areas in the Fabricator. You would drive analysis of changing load, future needs and tactical business requirements. This would provide you with tools to support the technology centers with decision making to optimize their process, meet capacity demands and throughput...
requirements. Your work would be on a complex manufacturing line which handles thousands of part numbers across hundreds of unique process steps. You would need to have demonstrated skills in industrial engineering, problem solving, project management, data analysis, and in using IT applications. You will take the leadership role on some projects and will drive communication thru effective presentations to technology teams, support groups and Fab Leadership.

- Technology Computer Aided Design (TCAD) Engineer: The successful candidate will work closely with device design and process integration engineers as an integral part of the development teams, supplying predictive simulation results to both focus experiments and assess novel design ideas. Physically accurate process and device simulation decks will be developed and maintained throughout the technology life cycles. Knowledge of physical process models (diffusion, activation), and the ability to employ them in these decks is required. Close working relationships with layout, characterization and physical analysis groups will be required to obtain the electrical and structural data to accurately calibrate the appropriate physical models employed by the simulation tools. The ability to conceive device test structures to extract critical model parameters, is desired. Demonstrated skills in commercial (Synopsys) and internally developed TCAD tools is preferred, including the occasional need to develop custom scripts/programs to support efficiency gains. Familiarity with version control concepts is required, as all development work (simulation decks, software) will be performed in a CVS environment. Demonstrated communication skills are important, both to regularly report progress and results to development team members, and to document software and deck development activity in a clear, concise manner. Skills: Process/Device Physics--A comprehensive knowledge of modern device physics is essential to this position, as well as bulk and Silicon on Insulator (SOI) device structures. A demonstrated working knowledge of semico fab process physics (diffusion, activation, strain) is required. Computer Aided Design (CAD) Tools--Familiarity with both the operation and calibration of industry standard process and device simulation tools is required. The ideal candidate will also have demonstrated problem solving, computer, communication, teaming, & leadership skills.

Required

- High School Diploma/GED
- English: Fluent

Preferred

- Bachelor's Degree in Engineering

IBM is committed to creating a diverse environment and is proud to be an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status. IBM is also committed to compliance with all fair employment practices regarding citizenship and immigration status.