

Position Title: Senior Mechanical Design Engineer – Precision Machine Design - Mechatronics

Location: Milpitas, California

Company: KLA

Job Type: Full-Time, Regular

Apply here: <https://careers.kla-tencor.com/jobs/4543304-senior-mechanical-design-engineer-precision-machine-design-mechatronics>

Company Overview:

Calling the adventurers ready to join a company that's pushing the limits of nanotechnology to keep the digital revolution rolling. At KLA, we're making technology advancements that are bigger—and tinier—than the world has ever seen.

Who are we? We research, develop, and manufacture the world's most advanced inspection and measurement equipment for the semiconductor and nanoelectronics industries. We enable the digital age by pushing the boundaries of technology, creating tools capable of finding defects smaller than a wavelength of visible light. We create smarter processes so that technology leaders can manufacture high-performance chips—the kind in that phone in your pocket, the tablet on your desk and nearly every electronic device you own—faster and better. We're passionate about creating solutions that drive progress and help people do what wouldn't be possible without us. The future is calling. Will you answer?

Group / Division:

With over 40 years of semiconductor process control experience, chipmakers around the globe rely on KLA to ensure that their fabs ramp next-generation devices to volume production quickly and cost-effectively. Enabling the movement towards advanced chip design, KLA's Global Products Group (GPG), which is responsible for creating all of KLA's metrology and inspection products, is looking for the best and the brightest research scientist, software engineers, application development engineers, and senior product technology process engineers.

The Film and Scatterometry Technology (FaST) Division provides industry leading metrology solutions for worldwide semiconductor IC manufacturers. The FaST Division portfolio of metrology products includes hardware and software solutions for optical film thickness, optical critical dimension (CD), composition, and resistivity measurement systems. These products are essential for the IC manufacturers as they provide critical metrology capabilities for the development and implementation of their advanced IC processes. The FaST division is committed to support our customers to achieve performance entitlement of our solution and we effectively partner with our customers from their early research and development phase to the high volume in-line manufacturing implementation specific for their process needs. The division consists of a global team located in US, Israel, China, and India.

Responsibilities:

Work with marketing, advanced technology and the program manager to develop systems design requirements for the next generation metrology systems. Assist the program manager, with inputs to the program schedules, evaluate skill set requirements and material cost. Provide periodic updates to management. Participate in establishing a roadmap for next generation mechanical systems.

As a Senior Mechanical Design Engineer on our team, you will be responsible for the development of major subassemblies of our next generation wafer inspection tools. Including, complete design process, requirements specification, feasibility studies, analysis and FEA modeling, conceptual and detailed design, procurement of prototype parts, prototype testing, system integration, and handoff to manufacturing.

This position requires good interpersonal skills to provide clear directions to other engineers working on projects. You would also, provide technical guidance to junior staff and write technical documents.

Creative approach to problem solving is indispensable. Work with a team of engineers to produce design concepts and apply first principles to determine feasibility. Create a team atmosphere that allows multiple point of views to be heard.

Qualifications:

- PhD with 5+ years or Master's in Mechanical Engineering with 10+ years with semiconductor product development experience is desired. Good understanding of SEMI design requirements.
- *** Excellent communications skill is necessary for this position, written and verbal. ***
- Precision machine design and mechatronics is necessary for this position. Design experience with flexures, piezo actuators, VCMS and other components typically used in sub-micron motion.
- Experience with measurement systems such as autocollimators, LVDT, capacitive sensors and accelerometers.
- Good understanding of EMI shielding, analog sensors and low voltage signals
- Proficient at finite element analysis for linear static, thermal transient and steady state. Some CFD experience a plus.
- Matlab, Simulink system modeling and data analysis.
- Experimental design, quick turn experiments to retire design risks
- Material selection and manufacturing methods for precision machining.
- Geometric dimensioning and tolerancing methods and proper assignment of references planes.
- General knowledge of experimental mode shape testing
- Should have analytical skills to consider impact of designs at a system level

Minimum Qualifications

- Doctorate (Academic) with at least 5 years of experience. OR
- Master's Level Degree with at least 6 years of experience. OR
- Bachelor's Level Degree with at least 7 years of experience.

KLA is an Equal Opportunity Employer. Applicants will be considered for employment without regard to age, race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status, disability, or any other characteristics protected by applicable law.

Relocation Available: Possible

Remote/Virtual Location: no