

# Senior Mechatronics Systems Engineer

## Metrology Equipment

### INTRODUCTION

Nearfield Instruments (NFI) brings together the most creative minds in science and technology to develop a revolutionary high throughput atomic force microscopy system enabling atom-scale resolution 3D metrology at industry-level throughput, based on three pillars:

- Unrivaled measurement speed;
- Parallelization capability;
- Advanced measurement modes.

At NFI, we design, develop, integrate, market and service these advanced metrology machines, which enable our customers - the world's leading chipmakers – to increase the production yields, and thus, functionality of their microchips, which in turn leads to smaller, more powerful consumer electronics. We aim to develop leading edge metrology systems, to be installed at the customer site, within specifications, on time, with quality exceeding the customer's expectations.

### WHAT WILL YOU BE DOING?

As a Mechatronics Systems Engineer (MSE) you will be involved with mechatronic concept developments, deriving requirements, developing modules, analyzing options, driving decisions, documenting system functionality, and planning, supervising and performing tests to verify mechatronics performance. You will be responsible for mechatronics specifications definition based on system requirements. You will derive lower level requirements and designs for each module/element and test campaigns for testing the metrology systems and the sub-systems. You will be responsible to manage the mechatronics supply chain for the sub-modules. You will be trusted to recommend design changes or substitution of materials when appropriate. You will also advise users of appropriate actions to correct malfunctions and may recommend changes in user procedures.

As a MSE you will be in close/regular contact with the customer. You'll answer questions and assist them in a professional manner. In order to excel at this, you need to be customer-oriented and have excellent problem analysis skills. Your power of persuasion is strong, you demonstrate good communication skills and you possess natural leadership qualities.

In this role you will travel for about 10 percent of your time. You will report directly to the CTO.

### WHAT DO WE REQUIRE OF YOU?

The MSE we seek ideally has at least 5 years of experience as a Mechatronics System Engineer and in mechatronics systems design in a working environment which, in terms of complexity, is in line with that of NFI. Experience in the field of semiconductor equipment is a plus. Furthermore, you need to recognize yourself in the profile as described below.

#### You have:

- A Master's in Mechanical Engineering, Mechatronics, Physics or Electrical Engineering with an emphasis on mechatronic systems (preferred) / mechanics / kinematics / dynamics / opto-mechanics is required or equivalent experience;

- A second degree in Physics, Mathematics, or other relevant disciplines is preferred;
- Experience in analyzing applicability, accuracy and adherence to design specifications.
- Generated models or simulations to analyze expected mechatronics performance, and have lead a multi-disciplinary team to an optimal solution;
- Prepared written technical reports on an independent basis;
- A complete understanding of the dynamic behavior of mechanical constructions;
- Direct experience in the design and test of mechatronic systems preferably in the area of metrology systems for semiconductor industry
- Experience working in a multi-disciplinary engineering environment, with suppliers and co-developers, to ensure timely realization of competitive, high precision, complex components and assemblies;
- Experience in the following areas is required: sub-nanometer motion stage design/tuning for closed loop servo control, actuator design/selection, kinematics, dynamics, MATLAB/Simulink;
- Experience in the following areas is a plus: CAD, thermal analysis, opto-mechanical mounting, adhesives, materials, FEA or other modeling tools;
- Be a demonstrated “team player” with strong interpersonal skills and a quality orientation;
- Be able to quickly acquire technical knowledge from documentation and on-the-job training, and be capable of thoroughly investigating technical issues (analytically and hands-on in a lab or cleanroom environment);
- Be willing to contribute to the integrated systems performance, and support the entire product life-cycle (development through sustaining engineering);
- Strong written and oral communication skills and a commitment to achieving results on time;
- You have a good command of the English language, both written and spoken.

## HAS THIS VACANCY AROUSED YOUR INTEREST?

Then please feel free to apply on this vacancy! Nearfield Instruments offers an exciting, fast-paced working environment where you will be able to shape the system and the company.

For further questions don't hesitate to contact us.

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