

## **Medical Device Simulations (San Diego, California)**

3DT Holdings, LLC is a fast-moving medical device company with a focus on innovating in high-growth markets. Our unique facility enables rapid design, prototyping, and on-site in-vivo testing of medical devices. 3DT brings together researchers, clinicians, engineers, and technicians to address the significant health care challenges of vascular disease, heart failure, and metabolic disorders through a deep understanding of organ systems. Our products and technologies are used to diagnose or treat a wide range of important medical conditions that effect our society.

We are seeking a finite element Analyst with a strong background in Abaqus software package. This person will apply technical skills in physics-based modeling and validation of MitraClip treatment for the mitral valve, with preferred experience in cardiac mechanics. Responsibilities include model creation, model validation, and evaluation of early-stage FE-based software packages. We work in a lively team-oriented environment that offers the opportunity to make real impacts in human health through the diagnosis and treatment of diseases. This person will be an essential part of that team.

### **Experience Required:**

- This position requires a minimum of five years of related technical experience in academia or industry.
- Excellent finite element modeling experience required.
- Experienced in analyzing biomedical images (especially cardiac echo images) required.

### **Key Responsibilities**

- Ideal candidate will be required to independently manage and provide technical updates to program manager regarding assigned project/development tasks.
- Perform finite element analysis including model creation, meshing, validation and debugging.
- Working knowledge and use of complex software, and algorithm specific to functional areas. May use mathematical and other quantitative and qualitative methods and measurements. May create algorithm specific to functional area.
- Reads, understands, and can instruct others in the use of cardiac images, finite element models, geometry morphing procedures, and documentation associated with specialized models. Reads and interprets Abaqus input files, CAE files, and complex morphing procedures.
- Automates FE model creation from cardiac image datasets.
- Able to work independently. Accepts non-routine and complex assignments. Follows established procedures. Uses judgment and makes choices on how to proceed. Assignments often require creativity.
- Modeling skills involving the use of Abaqus, Simulia 3D Experience, other relevant software packages.
- Able to use Python to interact with Abaqus models.
- Mitral valve modeling experience skills a plus.
- Machine learning experience

### **Basic Qualifications:**

PhD (preferred)/MSc degree is required. Position is based in San Diego.

### **Salary and Benefits:**

We offer a competitive salary commensurate with level of experience and demonstration of skills. Performance-based equity incentives available. Benefits include comprehensive medical, dental and vision insurance, and paid vacation.

3DT Holdings, LLC is an Equal Opportunity Employer. Our policy prohibits discriminatory practices or harassment against applicants or employees based on any legally impermissible basis including, but not necessarily limited to, race, color, religion, national origin, gender, age, sexual orientation, gender identity or expression, marital status, mental or physical disability, genetic information, family status, pregnancy, or any other basis protected by applicable law.