

## **JOB DESCRIPTION: Senior Electrical Engineer Electromagnetic/RF Design**

Location: NeuSpera Medical, Inc Head Quarters in San Jose, CA,

Reporting To: CTO, NeuSpera Medical, Inc

### **JOB SNAPSHOT**

<b>Base Pay</b>	Negotiable
<b>Employment Type</b>	Full-Time
<b>Job Type</b>	Engineer
<b>Education</b>	M.S. or Ph.D. in Electrical Engineering or Physics
<b>Experience</b>	At least 3 year(s)
<b>Manages Others</b>	No
<b>Industry</b>	Medical Devices/ Wireless Technologies
<b>Required Travel</b>	Limited

### **About NeuSpera Medical, Inc**

NeuSpera Medical Incorporated is an exciting medical device startup company headquartered in San Jose, CA that is committed to bringing forward implantable medical device technology that will improve lives of patients battling with chronic illness.

### **PRIMARY FUNCTION:**

NeuSpera Medical is seeking a Senior Electrical Engineer or Scientist with a deep understanding of electromagnetic theory and hands-on knowledge to take a wireless technology from concept to production. The project includes the development of antennas for on-body and in-body devices, with a special focus on maintaining power transfer efficiency employing tunable field patterns within human tissues. At the same time, unwanted RF exposure of the tissue surrounding the antenna and the resulting energy loss shall be minimized. The candidate should be comfortable with design, simulation, prototyping, and measurement of electrically small antennas. Furthermore, the candidate should have knowledge of regulatory issues surrounding electromagnetic interaction with biological models. The ideal candidate should therefore be skilled at and enjoy working with computer simulation tools and RF measurement instrumentation.

### **JOB DUTIES & FUNCTIONS:**

- Antenna design: Including working with product development teams to define appropriate antenna volumes, geometry, impedance matching etc.
- Integration: Ensuring stable antenna performance from prototype to production.

- Employing design for manufacturability principals within the antenna design process.
- Product testing: Identifying and setting minimum performance criteria for quality. Design pre-verification and verification of antenna design against FCC regulations and other design inputs.
  - Failure analysis: Risk management techniques including failure mode and effects analysis and product complaint investigations, troubleshooting and identifying corrective actions.
  - Design to Value: Combine aggressive product cost management (design to cost) with a strong understanding of customer needs to deliver attractive, high value product solutions.
  - Rapid prototyping: Quickly translate product design needs into prototype forms ready for evaluation.
  - Continuous Improvement: Continuously improve products, prototypes & development processes with an eye toward adding value & improving efficiency.
  - Program Management: Build, maintain and manage against high-level project plans that detail timeline of deliverables, costs, scope & people.
  - Intellectual Property: Disclose new ideas and support formal development of intellectual property.
  - Contribute to a goal oriented, collaborative & productive work environment.
  - Other responsibilities as assigned

## **JOB REQUIREMENTS**

### **Senior Electrical Engineer/Scientist Electromagnetic Design**

#### **Qualifications and Experience:**

- M.S. or Ph.D. in Electrical Engineering or Physics
- 3 or more years experience in engineering and design of antenna systems (Healthcare applications preferred)
- Results driven, collaborative team player capable of working well with others, as well as autonomously with little direction
- Excellent written and oral communication skills
- Strong academic background that includes courses in: Microwave Engineering, Electromagnetic Theory, Antenna Theory, Communication Theory
- Hands on experience with antenna testing techniques
- Strong measurement capability, including Vector Network Analyzers, and antenna measurements
- Experience in technical writing, proposal writing, and oral presentations
- Experience with wireless power transfer is a plus
- Familiarity with CST or HFSS simulation software
- Familiarity with antenna fabrication techniques

**Work Environment:**

- Office and Laboratory
- Some travel necessary