

Wireless Systems Electrical Engineer

About Paradromics

Paradromics is bringing to market the first high-bandwidth data interface between brains and computers. We envision a future where data is medicine and some of the hardest challenges in physical and mental health have been reframed as technical problems with clear solutions. By allowing direct readout and modulation of neural activity, brain computer interfaces (BCI) will act like a modem for the brain, allowing it to connect with restorative digital systems. Our first product will be an Assistive Communication Device for patients with severe combined speech and motor deficits as a result of paralysis.

We are an equal opportunity employer. We offer a competitive compensation package with stock options, flexible PTO, and a friendly working environment.

Job description

Paradromics is looking for an electrical engineer with specialization in radio frequency and other forms of wireless power and data transfer. The person in this role will contribute to the specification, development, and testing of several components of the Paradromics' first implantable device. This work will involve research into wireless systems, rapid prototyping of test systems, and preparation of system specifications based on test results and design requirements. Parts of this will involve the design of basic electronic printed circuit boards and packaging for both prototype and production systems in conjunction with other members of the team. Experience with wearable electronic systems, in particular wirelessly powered systems, is preferred. Prior experience with end to end development of complex electronic systems and is required to excel at this role. Close coordination with other engineers in the team will be essential, therefore excellent communication and interpersonal skills are crucial in excelling at this role. If you like big challenges, working at the frontier of human technology, and have worked on and shipped high-performance wireless systems in the past, we would like to hear from you.

Required Skills & Experience

- Very strong analytical and debugging skills
- In-depth understanding of analog and digital electronics building blocks
- 2+ years of experience of designing and testing of custom microelectronic systems
- In-depth knowledge of electromagnetic field interactions and antenna design
- In-depth knowledge of wireless communication protocols (Wi-Fi, Bluetooth, Zigbee, etc.)
- Experience with HF circuit design tools (Cadence, ADS, etc.)
- Experience with SPICE circuit simulators for RF and high frequency (Eldo, Spectre, etc.)
- Experience with EM solvers and multiphysics simulation tools (COMSOL, ANSYS, etc.)
- Rapid electronics prototyping skills (microcontroller, analog and digital interfacing, etc.)
- Excellent programming skills with Python (preferred) and/or MATLAB
- High degree of proficiency with advanced lab instruments (oscilloscope, spectrum analyzer, logic analyzer, etc.)
- Attention to detail and ability to dig out obscure information from technical literature and documentation

Qualified candidates should send cover letter and resume to HR@paradromics.com

- Excellent verbal and non-verbal communication skills
- Demonstrated ability to produce well-written technical reports and documentation
- Ability to clearly communicate with vendors for prototype and production manufacturing
- Master's degree or PhD in electrical engineering or a closely related discipline

Preferred Skills & Experience

- Experience with ultra low-noise and/or biomedical instrumentation systems
- Experience in wearable electronics application area
- Multiple completed and built PCB design projects in Altium Designer
- Experience with advanced lab instruments and test automation systems
- Experience with testing and packaging of noise-sensitive integrated circuits (CCD, CMOS camera, sensor arrays, etc.)
- Comfort with Linux, shell scripting and Linux programming environment
- Proficiency with Git version control system and collaborative development practices

Paradromics is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

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