MEMS Engineer: Reference ZPM0303M

Location: Bristol, UK

About

At Zero Point Motion we are redefining the limits of inertial sensors to enable high precision positioning and navigation. Our mission is providing exquisitely low-noise readout of acceleration and rotation using cavity optomechanics in a hybrid micro-electro-mechanical systems (MEMS) and photonic integrated circuit (PIC) chip.

We're an early stage start-up founded in 2020 to commercialise technology invented by the CEO Dr Lia Li, with a founding team comprised of eminent semiconductor veterans. We operate a fabless business model, and are VC funded.

We are seeking enthusiastic technical engineers to join our team and shape our technology design, strategy, and workflow. Together we will bring aerospace/defence levels of sensor performance to commercial mass markets and transform indoor, autonomous and GNSS-denied navigation. Can you help us disrupt the inertial sensing market?

Zero Point Motion is based in Bristol, and supports virtual working practices where applicable.

Role Overview

We are looking for MEMS engineers with experience in either inertial sensors, microphones, oscillators or pressure sensors. You will draw upon your previous experience to support development of our MEMS/photonic integrated circuit optical inertial sensors. Our collaborative culture of knowledge exchange means no prior experience in photonics is required, just your enthusiasm to learn.

You will be working directly with the company CEO/inventor, and will be responsible for designing and testing new inertial sensors for high volume commercial applications. Your background in application specific MEMS will influence key design decisions to meet our target performance requirements, whilst rapidly learning how to adapt these designs for foundry fabrication and packaging.

You will be a vital part of the core technical team working with an experienced group of electronic engineers, physicists, chip designers and hardware engineers in a fast-paced environment that requires self-motivation and a willingness to embrace new ideas. We want dynamic people that understand the scale and nature of our goal, who can challenge our assumptions. This is an exciting opportunity for a MEMS engineer to join a small start-up with big ambitions who will value your personal initiative.

What you'll accomplish

- Create and simulate custom electrostatic closed-loop MEMS inertial sensor designs and liaise with external partners such as foundries and test development houses
- Collaborate with the PIC team to make key contributions in the overall design, layout and testing of our unique PIC/MEMS devices
- Create internal design rules, design verification checks and other documentation or automation to fast track optimisation in mask layout

The critical attributes we'll use to compare candidates

- Demonstratable experience of designing and testing MEMS devices
- Competent in mask design layout and mechanical/electrostatic modelling e.g. COMSOL, Coventor, Ansys
- A passion to learn how to scale MEMS devices into packaged robust products and to apply this knowledge to optimise design

Must-have-skills

- Masters / PhD in Physics or Engineering
- 5+ years PIC design and production scale-up experience in one or more of the following:
  - Chipscale LIDAR
  - Optoelectronics chipscale devices
  - MEMS optical switches or laser chips
- Supervising chip design and layout, through to collaboration with foundries for tapeout and testing
- Experience with working within small engineering teams and leading teams with integrity
- Demonstrate a strong discipline for thorough documentation
- Ability to distil and communicate scientific information effectively with the wider team
- Highly adaptable, good communication and interpersonal skills

Package

- Competitive salary
- Generous company package including share options, Royal London pension, and sick pay
- Flexible working arrangements

Location & Travel

Zero Point Motion's office and lab space is located in the Bristol University Quantum Technologies Innovation Center amongst likeminded start-up companies. There will be a occasional travel throughout the UK and abroad for conferences, meetings and engineering visits.

Zero Point Motion is determined to foster belonging and empowerment at work. We are committed to providing a work environment where there's a zero-tolerance approach to discrimination, and everyone is treated with respect. Equity, diversity and inclusion are central to our mission and we strongly encourage candidates of all different backgrounds and identities to apply. If you need assistance or an accommodation due to a disability, please contact us.

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