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Senior Systems Engineer

Job Ref 107

Job Description

We are looking for a Senior Systems Engineer to join our team and lead the systems integration on the Machine 4 programme. Machine 4 is expected to be the largest pulsed power facility in the world, the size of the machine at the heart of this scientific facility will be circa. 100 m and the facility will accommodate a series of supporting sub-systems.

The programme is expected to take around five years to deliver with a materials budget exceeding £100M. The Systems Engineer will lead aspects of design review, and contribute to design work, as well as decisions in some areas.

Responsibilities will include:

The role combines technical, hands-on approach and systems thinking, to maintain an exceptionally good grip on the rapidly developing design and implementation of this large and complex system. This calls for effective techniques for managing the engineering lifecycle, in particular requirements, interfaces, and change control.

The programme is significantly larger and more complex than those delivered so far at First Light Fusion, the successful candidate will have the opportunity to play a key role in determining our unique approach to systems engineering at this scale.

We are keen to maintain positive aspects from past programmes including genuine agility, while developing our programme control measures as appropriate. In striking that balance, our engineering approach must be of world class standard for us to meet our technology ambitions.

The successful candidate will demonstrate an acumen for managing the balance of risk against the pace of delivery. The machine will exist to service our physics experiments and our requirements tend to evolve; the programme is therefore dynamic as well as large and complex.

Further programme delivery responsibilities may be assigned such as quality control, risk management, recruitment support, and technical information management. There is also scope for occasional support to other technology projects at First Light. There may be scope for this role to include line management of one or more system engineering professionals in the future.

Essential

- Degree in Engineering, Physics, or similar.
- Substantial and successful systems engineering experience.
- Proven ability to handle large requirements sets throughout the engineering lifecycle.
- Strong knowledge and enthusiasm for systems engineering good practice.
- A good eye for elegant solutions, and excellent attention to detail.
- Knowledge of health and safety matters relating to electrical systems.

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Company No – 07555858
www.firstlightfusion.com





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- Strong communication and interpersonal skills, including interaction with a wide range of technical specialists and stakeholders.
- Ability to manage and prioritise time effectively to work under pressure to tight and evolving deadlines.

Desirable

- Technical engineering or science experience in the relevant fields.
- Experience managing requirements traceability at scale.
- Awareness of the Jama requirements management tool (training can readily be provided).
- Awareness of CAD design tools, such as SolidWorks.
- Awareness of circuit or electromagnetic simulation tools, such as COMSOL.
- Professional membership and relevant qualifications in systems engineering.
- Chartered Engineer status

Benefits

- Very competitive salary
- 25 days annual leave (increasing to 28 with time in service) + bank holidays
- 8% employer pension contribution without matching requirements
- Relocation support
- Flexible working
- Generous share options scheme
- Free lunch and soft drinks
- Enhanced maternal / paternal leave
- Enhanced sick leave

Additional information

How to apply

Please send your application and CV to careers@firstlightfusion.com quoting the job title in the subject. If you don't hear back from us within four weeks, it means that unfortunately your application was unsuccessful at this time.

Informal enquiries may also be addressed to careers@firstlightfusion.com.

The interview process

We typically carry out two separate interviews, each one about sixty to ninety minutes long. The first one aims to understand how your skills match what is required for the job and the discussion will be focused on your areas of expertise. If successful, you will be invited to the second interview, which is more focused on your personal skills, and how your objectives align with the company mission and values. We try to understand the value you will add to First Light, and how you can thrive and be happy with us. There will be opportunity to ask us as many questions as you like.

If you are invited to the second interview, it's probably time to warm up two of your referees, as we may ask you to put us in touch with them. If you are the successful candidate, we will send you an offer letter and, once agreed, a contract.

If you are invited to an interview, we will certainly get back to you to let you know the outcome.

To help with logistics issues, we can arrange so that the two interviews are organised on the

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same day. We will also reimburse reasonable expenses you incur to come to talk to us.

We don't have a dress code at First Light and regardless of seniority there is a good mix of t-shirts, trainers, shirts and blazers. For your interview, please dress in whatever makes you feel most confident and comfortable.

[Our commitment to equality, diversity and inclusion](#)

We are a small company with a huge mission. The only important aspect for the team, and for each individual, is the contribution they can make. Our selection process and requirements for career progression disregard gender, gender identity, race, disability, colour, religion, and all other aspects of diversity that make us all humans. Diverse teams have been proven to be better and we strongly believe it. We're not perfect but we strive to be.

[Information for recruiters](#)

We work with a trusted network of recruiters, therefore CVs sent by other recruitment agencies will not be considered. In the event that the company receives a CV from both the direct applicant and a recruitment agency, the CV will be treated as a direct application by the individual only. Unsolicited contact from recruitment agencies will be disregarded.

First Light Fusion

We are a lean, focused and agile company researching energy generation by inertial confinement fusion. We spun out from the University of Oxford in June 2011 and are based near Oxford. First Light continues to work closely with the academic community, both in the UK and internationally. The company is well-funded by both institutional investors and private individuals.

Inertial confinement fusion for energy generation is a well-established research field and is being pursued in many laboratories worldwide, perhaps most notably in the US at the National Ignition Facility. We are exploring a number of alternative research directions that harness the same fundamental physics, with the prime focus being power generation. Our work to-date has included theoretical analysis, detailed numerical simulation, and experimental validation. We have an increasingly clear vision of the pathway to a power plant.

We really believe fusion will be solved in the 2020s. If it's solved by us, fantastic, if it's solved by someone else, still great.

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