Job Advert

Team Leader, Optical Engineering – Ultrafast Fiber and Free-Space Laser Systems

About the Role

You will lead the optical engineering team within our Engineering / R&D organization and guide the development of advanced ultrafast laser systems, combining fiber-based and free-space optical technologies. Working closely with a highly skilled, interdisciplinary team, you will provide both **technical leadership and people management** across the full product lifecycle, from early concepts and feasibility studies through industrialization, release, and continuous improvement.

This role offers a unique opportunity to combine **deep laser expertise with team leadership**, developing people and technical capabilities while shaping robust, innovative products in a dynamic and international environment.

Key Responsibilities

- Lead, manage, and develop a team of optical and laser engineers, setting clear objectives, priorities, and expectations.
- Own the team's technical direction and capability roadmap for ultrafast fiber and free-space laser technologies.
- Guide the design, development, integration, verification, and industrialization of laser systems and optical subsystems across the complete product lifecycle.
- Provide expert technical guidance on laser architecture, optical design, fiber optics, free-space beam delivery, nonlinear optics, pulse characterization, and laser safety.
- Balance project priorities, resources, and workload across multiple concurrent development and sustaining activities.
- Ensure engineering work is executed with appropriate design rigor, including requirements, technical reviews, risk management, verification, design documentation, and change control.
- Drive root-cause analysis and resolution of complex optical performance, reliability, manufacturability, and field issues.
- Ensure robust transfer of designs and processes to Operations, including specifications, Bills of Materials, assembly and test instructions, tolerances, and acceptance criteria.
- Drive cross-functional alignment and decision-making with Systems Engineering, Electronics, Mechanics, Software, Reliability, Project Management, Product Management, Operations, Quality, Supply Chain, Service, and Sales
- Contribute to customer and supplier interactions where deep technical expertise or escalation support is required.

- Identify relevant technology trends and development opportunities and translate them into practical product and capability improvements.
- Contribute to continuous improvement of engineering methods, tools, standards, laboratory practices, and organizational processes.

Leadership Expectations

- Act as a role model for engineering excellence, technical integrity, quality, safety, and delivery discipline.
- Provide effective line management through regular feedback, objective setting, performance and development conversations, mentoring, and coaching.
- Build team capability through recruitment, onboarding, succession planning, knowledge sharing, and targeted development of technical skills.
- Proactively address capability gaps, resource conflicts, technical risks, and organizational barriers.

Technical Expertise

- Deep expert knowledge of laser physics and ultrafast laser technology, with strong relevance to mode-locked fiber lasers, fiber amplifiers, and free-space ultrafast optical systems.
- Extensive hands-on experience with fiber optics and free-space optics, including optical alignment, beam diagnostics, pulse measurement, and systematic troubleshooting.
- Strong understanding of laser system architecture and key design trade-offs involving power, pulse energy, pulse duration, repetition rate, noise, stability, thermal behavior, and reliability.
- Experience developing industrial laser products or complex optical instruments from concept through production release and lifecycle support.
- Good understanding of optical, mechanical, electronic, thermal, control, and software interfaces within complex laser systems.
- Practical experience with Design for Manufacture and Assembly, tolerance management, supplier interaction, and transfer to production.
- Knowledge of product safety, laser safety, risk management, configuration management, and disciplined engineering documentation.
- Experience with optical simulation, data analysis, laboratory automation, or programming tools such as Python, LabVIEW, Zemax OpticStudio, or equivalent is an advantage.

Your Profile

Qualifications

- Master's degree or PhD in Physics, Photonics, Optical Engineering, Electrical Engineering, or a related technical field
- Formal leadership or management training is an advantage

Language Skills

- English: business fluency, written and spoken
- German: a plus

Travel

- Willingness to travel up to 10%, including international travel

Apply Today

sucheta.panda@lf.hamamatsu.com

Sucheta Panda

HR Manager

We review applications continuously and invite suitable candidates for interviews as soon as possible. If you are motivated by both advanced laser technology and the opportunity to develop a strong engineering team, we look forward to hearing from you.