CAREER OPPORTUNITY

Silicon Photonics Integration Engineer

Kgs. Lyngby, Denmark | Full-time | On-site

Do you like moving between simulations, a probe station, and a high-speed optical link? At Lizard Photonics, you will connect photonic device physics with RF electronics, drivers, packaging, and real laboratory measurements to help us commercialize the technology.

About Lizard Photonics

We are a Danish deep-tech start-up from the Technical University of Denmark (DTU) developing an ultra-low-power, highly efficient silicon photonics platform. You will join an innovative and ambitious environment where your decisions directly influence device performance and our technology roadmap. With newly secured funding, we are now expanding our team.

What you will do

- **Design and model silicon-photonic devices** such as waveguides, couplers, resonators, modulators, phase shifters, photonic-crystal cavities, and photodetectors using Ansys Lumerical, COMSOL Multiphysics, or similar tools.
- **Electronic-photonic integration** e.g., co-designing electronic-photonic interfaces for drivers, amplifiers, electrodes, transmission lines, PCBs, interposers, packages, and control electronics.
- **Build and improve laboratory setups** for optical, electrical, RF, and electro-optic measurements at wafer, chip, package, and link level. Select, integrate, calibrate, and document the equipment.
- **Characterize devices and high-speed links** using optical characterization, I-V and C-V measurements, S-parameters, EO/OE response, eye diagrams, bit-error ratio, NRZ/PAM4, jitter, and optical modulation amplitude.
- **Use system-level thinking** through link budgets, drivers and TIAs, and practical SerDes/DSP concepts such as pre-emphasis, equalization, clock recovery, and link optimization.
- **Automate testing and learn from data** using Python, MATLAB, LabVIEW, VISA/SCPI, or similar tools. Compare measurements with models and lead structured root-cause analysis.

What you bring

- A Master's degree or PhD in photonics, optical engineering, electrical engineering, applied physics, semiconductor engineering, communications engineering, or a related field. A Bachelor's degree with strong industry experience is also welcome.
- Strong depth in at least one core area: photonic device design, high-speed electro-optic characterization, or RF/electronic-photonic integration - plus the curiosity to work across the interfaces.
- Practical experience with COMSOL Multiphysics, Ansys Lumerical, or comparable software, together with a sound understanding of guided-wave optics and active-device physics.
- Hands-on experience with optical or high-speed electrical laboratory setups, plus working knowledge of RF fundamentals, drivers, SerDes/DSP concepts, and common link metrics.
- Experience with Python, MATLAB, LabVIEW, or similar tools, and good English communication and collaboration skills.

It is a plus if you have

- Designed or tested high-speed modulators, photodetectors, resonant devices, photonic crystals, or integrated optomechanical devices, including work with PDKs or foundry tape-outs.
- Hands-on with VNAs, high-speed oscilloscopes, AWGs or pattern generators, BERTs, RF probes, automated test stations, ADS, Cadence, or SPICE.
- Experience with RF, NRZ/PAM4, SerDes PHY validation, DSP optimization, and packaging.

Why join us?

- Join the core team at an early stage, with opportunities to grow alongside the company and potentially build and lead a team of engineers and scientists.
- Join an ambitious Danish deep-tech start-up with access to state-of-the-art laboratory facilities.
- Work across the full path from device concept to high-speed demonstration.
- Build laboratory and integration capabilities that will shape our products while solving technically meaningful problems with visible impact.
- Join a collaborative international team with strong academic and industry connections.

Role details

Full-time | Kgs. Lyngby, Denmark | Regular on-site laboratory work | Start date by mutual agreement. Salary according to the experience.

Ready to apply?

Apply through the link accompanying this post with your CV and a short note about your motivation and the photonic design, integration, or high-speed measurement work you are most proud of.

Link: https://www.lizardphotonics.com/job-application

We value different perspectives and are committed to an inclusive workplace. You do not need to match every preferred qualification to apply - if the role excites you and your experience gives you a strong foundation, we would like to hear from you.