Manufacturing excellence for tomorrow's breakthroughs

CCRAFT SA
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ID: CAD2501

Application & Development Engineer (Simulation and PDK)

Job description:

CCRAFT is a pioneering photonic chip foundry specializing in thin-film lithium niobate (TFLN) technology. With in-house, industrial-grade fabrication capabilities, we enable innovation across telecom, datacom, quantum technologies, sensing, and beyond.

Our offering spans multi-project wafer (MPW) runs, custom and dedicated wafer services, and high-volume production, all supported by a qualified Process Design Kit (PDK). The PDK features proprietary building blocks, validated stack parameters, and robust design rules, empowering our customers to design confidently and achieve first-pass success.

At CCRAFT, we combine manufacturing excellence with design enablement to accelerate the adoption of photonic integration and help our partners bring groundbreaking optical systems to market.

The role

We are seeking an ***Application & Development Engineer*** to define how designers interact with CCRAFT's TFLN technology and to drive the success of our customers on the foundry platform. The ideal candidate combines deep technical understanding of photonic design and process integration with a strong customer-oriented mindset, able to guide new partners through onboarding, translate their design needs into foundry-compatible solutions, and continuously improve the usability and robustness of our PDK offering, keeping it intuitive. You will guide customers from their first engagement through design enablement and successful tapeout, translating complex fabrication know-how into accessible design flows, validated building blocks, and world-class user support. You will play a central role in shaping CCRAFT's design ecosystem and accelerating the adoption of our platform across industries.

Responsibilities

PDK development and other CAD activities

- Carry out multi-physical numerical simulation of PIC component for building block design.
- Implement selected building block design into usable P-cell layouts in PDK EDA tools.
- Floor integration and DRC: Elaborate and implement guidelines compatible with design and fabrication considerations.
- Management of mask design and wafer-level integration.

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PDK Lifecycle Management

- Maintain and update the PDK across supported EDA environments, ensuring consistency, reliability, and alignment with the foundry process.
- Monitor qualification data and building block maturity, in line with process and design teams.
- Manage PDK roadmap and release cycle, including validation, documentation, and version control.
- Troubleshoot and resolve PDK-related issues, driving continuous improvement in performance and usability.
- Gather and prioritize user feedback to guide future enhancements and ensure the PDK meets customer and internal design needs.

Customer Onboarding & Support

- Guide new customers through PDK setup, design enablement, and tapeout preparation.
- Provide technical support and training for correct application of DRC and floorplan integration.
- Act as the technical interface between customers and internal teams, translating user needs into actionable improvements.

Community & Awareness

- Promote the PDK through workshops, demos, and technical presentations.
- Contribute to reference designs, application notes, and public documentation to showcase CCRAFT's technology.
- Represent CCRAFT in industrial fairs, conferences and exhibtions.

Requirements

Education & Background

- MSc or PhD in Photonics, Electrical Engineering, Electronics, Physics, or a related field.
- 3+ years of experience in photonic integrated circuit (PIC) design, PDK/EDA development, or foundry enablement.

Technical Expertise

- Advanced hands-on experience with photonic component simulation tools covering FDTD, FEM, RF, Micro-optics.
- Advanced hands-on experience with photonic design tools.
- Strong understanding of PDK structures, parameterized cells, compact models, and DRC/LVS verification flows.
- Proficiency in Python (and/or SKILL) for automation, data processing, and design kit validation.
- Familiarity with qualification data, building block maturity tracking, and version-controlled release workflows.
- Working knowledge of semiconductor or photonic fabrication processes, preferably including thin-film lithium niobate (TFLN) or silicon photonics is a big plus.
- Experience supporting customer design onboarding, tapeout preparation, or MPW participation.

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Interpersonal Skills & Work Style

- Excellent communication and documentation skills, able to explain technical details clearly to both engineers and customers.
- Strong organizational and problem-solving abilities, with the capacity to manage multiple priorities.
- A customer-oriented mindset, combining patience, empathy, and a drive to enable others' success.
- Proactive and detail-focused, comfortable working in a fast-paced startup environment.
- Enthusiastic about representing CCRAFT at conferences, workshops, and industry events to promote our PDK ecosystem.
- Willingness to travel up to 10–20% for customer and partner engagement.

Conditions & Benefits

Work Environment: Based at CCRAFT's European headquarters in Switzerland with flexible hybrid options. Full-time role within a collaborative, low-hierarchy team, encouraging initiative, transparency, and cross-disciplinary growth.

Compensation & Growth: Permanent position offering a competitive salary, performance-based bonus, ESOP participation, and strong support for professional development through conferences, training, and industry engagement.

Impact & Flexibility: Opportunity to be a core team member in a high-potential startup with global impact and recognition. Access to state-of-the-art EDA tools and infrastructure, flexible working hours for international collaboration, and the opportunity to directly shape CCRAFT's design ecosystem and global photonics community impact.

Call to action

Please write to careers@ccraft.com enclosing the following documents in a **single PDF file**:

- 1-page Cover letter outlining what you bring to CCRAFT, what CCRAFT brings to you, and what CCRAFT and you could bring to others.
- 2-page CV with focus on relevant experience.
- Contact info for 2 references.

Email Title: **Job ID_Your Name**
Your application should reach us no later than **November 20th.**