

# Computational Design & Robotics Manufacturing Engineer

## About Gradel Lightweight:

Gradel Lightweight, a leader in innovative composite lightweight solutions, is at the forefront of revolutionizing industries such as aerospace, automotive, and consumer products. Our dedication to pioneering advanced manufacturing techniques is the driving force behind our search for dedicated, inventive, and technically adept professionals to expand our dynamic team.

## Position Overview:

We are seeking a **Computational Design and Robotics Manufacturing Engineer** to enhance our team's capabilities. As an early team member, you will play a significant role in our product development, offering you the chance to collaborate on designing, developing, and operating state-of-the-art robotic systems. These systems are instrumental in advancing next-generation manufacturing processes. The role demands implementing cutting-edge robotics solutions on industry-standard platforms, collaborating closely with team members to define requirements, and assembling robust industrial robotic manufacturing systems. We expect a high level of autonomy, ownership, and a strong willingness to learn.

## Key Responsibilities:

- Develop advanced winding syntax for robotic endless filament winding in production.
- Engineer and refine robotic path planning for the fabrication of complex mechanical components.
- Program and fine-tune robot operations using ABB RAPID language in RobotStudio.
- Employ computational strategies to enhance process efficiency and precision.
- Lead software development projects, overseeing the entire development lifecycle.
- Create and maintain comprehensive documentation for our processes.
- Collaborate with interdisciplinary teams, including materials and mechanical engineers and production technicians, to promote a creative and accountable work environment.
- Stay current with the latest trends and advancements in robotics and automation technology.

## Minimum Requirements:

- A Master's degree in Robotics engineering or digital manufacturing or a related discipline.
- Solid foundation in computational design, with proficiency in Rhino/Grasshopper.
- Advanced Python skills, object-oriented programming, and experience with RhinoCommon.
- Excellent coding practices and documentation skills.
- Demonstrated experience with Industrial Robots, preferably ABB (using RAPID and RobotStudio).
- Extensive knowledge in robotics and digital fabrication technologies.
- Detail oriented, responsibility in project completion, and punctuality.
- Exceptional analytical, critical thinking, and problem-solving skills.
- Ability to work independently as well as collaboratively in a team environment.
- Strong communication skills, both written and verbal.
- Fluency in English; proficiency in French or other languages is a plus.

**Preferred Qualifications:**

- Deep understanding of material properties, particularly in composite materials.
- Experience with version control tools like Git and GitHub.
- Knowledge of robot kinematics and dynamics.

If you are interested in taking this challenging opportunity and wish to take part actively to our development, please send your application (CV + cover letter + portfolio) to [job@gradel.lu](mailto:job@gradel.lu). The selection process may be extensive, and early applications are advisable. All information provided will be treated with confidentiality and disclosed only to employees involved in the hiring process.

#Robotics #Digital manufacturing #Computational design #Robotics engineer #Rhino #Grasshopper