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## Open Position: INSTRUMENTAL SOFTWARE ENGINEER – Optical Systems (f/m/d)

**Employment type: Full-time, on-site**

**Contract: Permanent**

**Location: Garching (Munich area)**

UltraFast Innovations GmbH is a deep-tech photonics company in Garching, north of Munich. UFI designs, manufactures, and supplies state-of-the-art optics and devices for ultrashort laser applications such as micromachining, fusion, spectroscopy and imaging. Our products enable leading research and industrial progress in ultrafast photonics, attosecond science, high-power laser technology, and thin-film coatings characterization.

Our portfolio includes dispersive mirrors, broadband beam-splitters, AR/HR coatings, and systems designed for the generation, characterization, and manipulation of ultrashort light pulses, along with instruments for characterization and quality control of optical components. UFI collaborates with leading laser manufacturers, research institutes, and industrial partners worldwide and is expanding its commercial presence in Europe, North America, and Asia.

We are looking for a new colleague to join the UltraFast Innovations team as:

### INSTRUMENTAL SOFTWARE ENGINEER – Optical Systems

#### Your main responsibilities:

Working closely with optical, mechanical, electrical, and system engineers you will:

- Develop embedded software for metrology and ultrafast laser systems
- Develop, conceptualize, implement, and verify SW-architecture according to product and design specifications
- Gather and analyse user needs
- Define and implement system-level tests
- Verify system performance in laboratory environment
- Support the management team in planning customer projects and R&D initiatives
- Collect and determine technical requirements
- Support troubleshooting and post-sales product care
- Take care of documentation and manuals
- Occasional worldwide travel to key customers

#### Your Experience & Knowledge:

- Bachelor / Master degree or Diploma in SW Engineering, Computer Science, Electrical Engineering & IT or similar
- 3-5 years in the field of scientific instrumentation (spectroscopy, microscopy, metrology), photonics start-ups, laser manufacturing or medical devices R&D
- Knowledge of HW-SW interfaces
- Understanding of HW datasheets

Note to agencies: UltraFast Innovations does not accept unsolicited resumes from any sources other than directly from a candidate and will not pay a fee for any placement resulting from the receipt of an unsolicited offer, even when the relevant candidate is employed.

Agencies must obtain written approval in advance from UltraFast Innovations to submit resumes. UltraFast Innovations will not pay a fee to any agency that does not have a valid agreement for service and in response to a specific job opening.

- Understanding of data acquisition principles including sampling theory, noise, and signal conditioning as well as real-world measurement systems

**You have proficiency in:**

- Python and/or C/C++
- Modular SW architecture
- GUI development
- Object-oriented design
- Version control

**Your soft skills are:**

- Systematic and strategic thinking
- Ability to work in an interdisciplinary team (ask questions and explain decisions so that everyone can understand)
- Ability to design tests for system debugging
- Proactive approach and taking ownership of decisions
- Ability to work in a fast-changing environment, multitask, and handle challenging situations
- General curiosity about photonics

**We offer**

- Work at the frontier of ultrafast photonics and attosecond science
- Competitive salary and performance-based bonus
- Flexible working hours and hybrid options
- A dynamic, young, multicultural working environment within a growing company
- Opportunities for professional growth
- Autonomy, ownership, and opportunity to drive results

**Contact:**

We look forward to receiving your application!

Please send us your application documents (CV and motivation letter) including a possible start date and your salary expectations to [info@ultrafast-innovations.com](mailto:info@ultrafast-innovations.com)

Subject: INSTRUMENTAL SOFTWARE ENGINEER – Optical Systems



**Dr. Alexander Guggenmos**  
CEO

## We are looking for YOU!



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