Software Engineering at ASML

Repositioning a wafer, with nanometer accuracy, every 50 µs

Our customers need to miniaturize their microchips. That's why we are constantly developing new and revolutionary lithography machines. One of the latest of which is a software controlled system that repositions a silicon wafer 20,000 times a second.

"We work closely with the hardware guys: what we can do in software affects what they have to do in hardware and vice versa. That means our software has to account for characteristics of hardware that hasn't even been developed yet. At ASML you have lots of opportunities to develop yourself. It's up to you to take those opportunities."

Roel Houtackers
Team Leader Embedded Software Development

Multidisciplinary teams that create challenges
You'll be working in multidisciplinary teams. These forward-thinking teams are creating brand new technologies as well as new products. This creates a unique challenge for our software engineers; how do you design code to control a sub-system that is still being designed itself?

Check our vacancies

Machine software
The majority of our developers work on ‘on-machine’ software: the embedded code that makes our systems work. Here we increasingly aim for a Model Driven Engineering (MDE) approach where we first create models of a (sub-)system in order to reach agreement on requirements and design, and in some cases we use them to generate code.

Off-machine software to deliver customer value
Furthermore, a large group focuses on developing ‘off-machine’ software for system calibration, diagnostics and evaluation. Other off-machine software is designed to enhance our value to customers through, for example, advanced eServicing and fab control / automation options.

As a Software Engineer at ASML you have the opportunity to define your own career path. After gaining experience as a designer and then lead designer, you could become an architect or move into team-, project- and group-leadership. The choice is yours. The challenges that we are facing ask for highly experienced professionals as well as young professionals.

Check our vacancies