EUV lithography for chip production:

Experiences at Carl Zeiss as an IMPRS alumni

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In this presentation, I will talk about the role of Carl Zeiss Semiconductor Manufacturing Technology (SMT) GmbH in the global semiconductor industry. The company is the worldwide leading player in the development and production of modern high-performance lithography optics and metrology, both of which are vital components needed to continue following Moore's Law. The lithography technology is one of the key factors in the manufacturing process of microchips with nanometer precision, which we all use in our daily life such as in smartphones, laptops and our digital infrastructure. Current state-of-the-art chip machines are so-called "extreme-ultraviolet" (EUV) lithography systems equipped with ultra-high precision mirrors that operate at a wavelength of 13nm. This small wavelength allows the exposure of even more powerful, energy-efficient and cost-effective transistors on silicon wafers.

As part of the talk, I will share my experiences in successfully transiting from academia to the semiconductor industry after receiving my PhD in astrophysics within the IMPRS program at MPIA in 2018. Moreover, I will describe my previous career steps and activities at Carl Zeiss. I am looking forward to exchanging experiences with you.

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