

ASML expert Erik Loopstra honoured as ‘tenacious and sharp’ system architect

The first Martin van den Brink Award was presented to Erik Loopstra, ASML program system engineer, at the Conference Centre on the High Tech Campus Eindhoven on 30 May. Martin van den Brink is ASML’s current chief product & technology officer in Veldhoven. Since ASML was founded in 1984, he has played a key role in the continued growth of the company, which has been the world market leader in lithography machines for years. The award named after him reflects the importance of system architecture in the development of high-tech machines, in which the Netherlands is world leader.

The biannual Martin van den Brink Award is an initiative of DSPE (Dutch Society for Precision Engineering) in collaboration with TNO, Brainport Industries, High Tech Systems Platform, Point-One and the High Tech Campus Eindhoven. The award aims to underline the importance of system architecture to the success of the Dutch high-tech systems industry and to show that our country plays a leading role in this field. The prime example of this is the Veldhoven-based company ASML, which originated from Philips in 1984 and has since grown into the current global market leader for lithography machines. Lithography is the crucial step in the production process for chips that determines their performance. It is in part thanks to ASML’s machines that we now all have tablets, smartphones and countless other high-tech electronic products.

Smartest region

At the symposium at the Conference Centre of the High Tech Campus Eindhoven on 30 May, a number of former ASML employees shared their memories of working with Martin van den Brink during the company’s first turbulent years. Eindhoven mayor Rob van Gijzel ascribed a key role to the high-tech systems industry in the region when it was voted the ‘smartest region in the world’. That title was awarded to the Eindhoven Brainport region last year by the Intelligent Community Forum.

System architecture

Martin van den Brink himself contributed to the symposium – although he was not particularly happy with ‘his glorification’ – to ensure that the importance of system architecture was showcased properly. He once again stressed the importance of the environment – the good people at his own firm and the qualified suppliers in the region and beyond – to the success of ASML. When designing a lithography machine, it’s up to ASML to safeguard the system architecture and to connect all modules to each other. This is the job of the system architect, who has a total overview of the system and can decide whether something can be done in the hardware, the electronics or the software. They also have a good overview of all of the modules and all of the interfaces between the modules in the system. Moreover, they keep future developments in mind, so that when there’s a new design, most of the modules can be used again very easily.

Tenacious

Alongside Van den Brink, Erik Loopstra has been fulfilling this crucial role of system architect at ASML for more than 20 years. The role he has played in ASML's development processes was described during the symposium by Henri Werij, Director of Research Technical Sciences at TNO. He described Loopstra as sharp, as someone who is open to unconventional solutions and ready to go places where others think the limit has been reached. He also looks at whether something can really work in practice. It's thanks to his tenacity that he was able to contribute to the development of the successful ASML machine concepts such as Twinscan, immersion and EUV (still in development), all of which prompted the initiators to present the first award to Erik Loopstra. The award he received from name giver Martin van den Brink was an original multicolour lithograph by Belgian graphic designer Hedwig Pauwels. His design was printed on an authentic lithography press in the Dutch Museum of Lithography in Valkenswaard. Pauwels artistically depicted how a lithograph is produced. As is known, there is a remarkable relationship between the photographic lithograph from the late 19th century and the modern microchip.