Edsger Smits was born in Huizen on December 21, 1979. He obtained his International Baccalaureate in the summer of 1998 from the Arnhem International School. After securing his Propedeutic exam in applied physics in 1999 he obtained his Master degree in Applied physics in August 2004 at the University of Groningen. During his study he did his master thesis on the development of a drift-diffusion based organic bulk heterojunction solar cell simulation program in the group of Paul Blom and had a 6 month traineeship at Philips Research under supervision of Dago de Leeuw on the investigation of new ambipolar organic semiconductors.

In September 2004 he became a PhD student at the molecular electronics and physics of organic semiconductor group in Groningen. The project, supported by the Dutch Polymer Institute, was focused on the fabrication of CMOS circuits with ambipolar organic semiconductors. Besides working on ambipolar organic semiconductors he developed an interest for electronics fabricated via self-assembly and for chemiresistive sensor devices.