50 years of lasers - 35 years with the laser

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The laser, together with the transistor and the integrated circuit, is among the main technological innovations of the 20th century. First considered as "a solution looking for a problem", the laser, and in particular the semiconductor laser, has now found a wide range of applications. As is well known, we are celebrating the 50th anniversary of the first demonstration of a laser; it also happens to be the 35th anniversary of my first serious contact with semiconductor lasers. This talk will deal with some of the developments which have taken place in this period, but rather than trying to give a systematic historical account, I will give a more personal account of some selected issues which have had my particular interest. I will also look at some of the basic physical properties which make the semiconductor laser so special and so versatile.