# Silicon for Beauty and Structure

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The early development of highly segmented and very precise silicon particle detectors happened historically in field of high energy physics in the early 1980's. At the time this was very much driven by the needs in particle physics experiments to detect and identity pico-second long lived particles, containing beauty and charm quarks. The presentation will give a brief historical overview of this development and the driving requirements that defined its developments. Over the years the new detector technology has gone through an enormous growth and improvement in capability and complexity. This was on one hand through the growing demands on the performance of the particle tracking systems at the newest accelerators like the LHC proton-proton collider at CERN and at the same time due to the technological progress in microelectronics, symbolized by Moore's Law. The potential of using this new and precise detector technology in other domains of physics was realized early on. By now, the use of highly segmented silicon strip and pixel detectors has made a phenomenal impact in the field of photon science at synchrotron facilities and free electron X-ray laser machines. They allow now to resolve in an almost unprecedented way the structural and functional information on complex solid state systems and biological molecules. The talk recalls how in the case of the PILATUS, MYTHEN and EIGER pixel system the silicon detector revolution in photon science has happened. Furthermore it will attempt to give an outlook on how the next generation detectors might evolve, given the requirements from future photon science experiments.