A Brief Summary of Biography

Toshiki Tajima
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Toshiki Tajima along with Professor John Dawson suggested in 1979 the concept and theory of the formation of a wakefield behind an ultra-short intense laser pulse and its subsequent acceleration of particles to high energies in a very compact way. This concept spurred the creation of the field now referred to as Advanced Accelerator Research. Laser wakefield acceleration has now been experimentally verified, and its applications are rapidly emerging. Amongst other things, it allows for the compact generation of high-energy electrons, ions, and X-rays on ultrafast (femto- to attosecond and beyond) time scales.

Alongside these developments, Professor Tajima also laid the foundation for and spearheaded the development of High Field Science. Recent applications of this new field include ultrafast radiolysis, compact cancer therapy (such as intraoperative radiation therapy and hadron therapy), as well as compact THz, X-ray, and gamma ray sources (including compact free electron lasers and betatron sources). He continues to act in a leadership role in the further development of this field worldwide. For example, he was instrumental in ushering in the EU's Extreme Light Infrastructure (ELI) as its Chairman of the Scientific Advisory Committee.

Prof. Tajima is presently serving as Chair of the International Committee for Ultrahigh Intensity Lasers (ICUIL). In recent years he was awarded the 2013 Einstein Professorship of CAS, the Blaise Pascal Chair as well as the Nishina Memorial Prize. Before moving to Europe he served as Director General of the Kansai Photon Science Institute in Japan from 2002-2008. In the period of 1980-2001 he served as assistant, associate, and full professor as well as the Jane and Roland Blumberg Professor of Physics at the University of Texas at Austin.