

Adaptica: products outline and technology developments

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Abstract

Adaptica is a Spin-off company of the University of Padova (incorporated in February 2009). It is composed by six young scientists and three collaborators. The background expertise of Adaptica's R&D division is in adaptive optics for ultrashort pulses laser technology, astronomy, non linear optics and embedded systems for digital electronics. Moreover Adaptica CEO is a thirty years experienced manager in the field of technologies for automation and ophthalmic diagnostic system productions.

This vertical approach is fostering new technologies, very compact and with friendly interfaces with the goal to make Adaptive Optics a technology for many optical applications. The mixture of academic and company organization maximizes both productivity and innovation, with high quality in the components. The same approach brought consequently to the submission of two patents in the first 8 months of activity.

The products of Adaptica are based on adaptive optics systems composed by a highly embedded digital electronic system, deformable optics and aberration sensors. On this base, Adaptica is presenting on the market state of the art membrane deformable mirrors, electronic control units based on embedded PC, Shack Hartmann wavefront sensors and LCD/LCOS spatial light modulators. By means of these standard laboratory products, Adaptica produces also a series which is internationally distributed by Edmund Optics Inc (USA). Moreover Adaptica is recently producing and distributing a tool for teaching Adaptive Optics to universities courses and R&D industry division.

In this talk it will be presented a description of Adaptica's product line with particular attention on the specifications, constraints and typical applications. In the conclusions we will outline a summary of some recent results and future developments.

