

Face biomechanics as a key player for aging perception

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Abstract

The perception of facial aging is a complex, multisensory phenomenon whose criteria may vary according to ethnicity and geographical area. Nevertheless, there are recurring clinical signs such as the increase of visibility of wrinkles or sagging.

The mechanics of the various skin layers and underlying tissues play a decisive role in understanding these clinical phenomena. However, few studies to date have focused on the mechanistic links between these mechanical properties and clinical signs, thus bringing the worlds of mechanical engineering and the clinic closer together.

In this contribution, we will discuss the concept of “augmented clinical studies” which, by combining clinical assessment with experimental methods and numerical simulation, enables us to go further in our understanding of facial aging and in the design of more effective cosmetic treatments.