Creating Models for Simulating the Face

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Abstract. Creating animated computer generated faces which can withstand scrutiny on the large screen is a daunting task. How does the face move? How does it reflect light? What information is relevant? How can it be captured and then transformed to convincingly breathe life into a digital human or fantastic creature? The talk will give examples of new technologies and methodologies developed to achieve this in blockbuster films including “Avatar” and will point the way to the next generation of computer generated characters by showing the increasing importance of computational simulation and discovering and modeling what is really going on underneath the skin.

Keywords: computer animation, computer generated characters, computational simulation.