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Eitan Grinspun*, Computer Science Department, Columbia University, New York, NY. *Movie magic: The mathematics behind Hollywood's visual effects.*

Blockbuster films have amazing visual effects. Virtual stunt doubles, animated characters, and imaginary creatures are built from mathematical models of hair, fur, skin, and clothing. Explosions, floods, and disasters that would be dangerous if not impossible to film in real life are instead simulated on computers using mathematical models of fracture, fire, granular media, and liquids. This is the world of applied mathematics with an artistic flair. In this talk aimed at the general audience I will expose various aspects of movie magic, and the exciting mathematical questions that arise. (Received April 11, 2013)