



# Creating the Miniature Effect: Movie Set Models



A **miniature effect** is a special effect created for motion pictures and television programs using scale models. Scale models are often combined with high speed photography to make gravitational and other effects appear convincing to the viewer.

Use of scale models in the creation of visual effects by the entertainment industry dates back to the earliest days of cinema.

Models and miniatures are copies of people, animals, buildings, settings and objects.

Miniatures or models are used to represent things that do not really exist, or that are too expensive or difficult to film in reality, such as explosions, floods or fires.↓





## *The Lord of the Rings: The Return of the King*



Where a miniature appears in the foreground of a shot, this is often very close to the camera lens. Since the exposure is set to the object being filmed so the actors appear well lit, the miniature must be over-lit in order to balance the exposure and eliminate any depth of field differences that would otherwise be visible. This foreground miniature usage is referred to as forced perspective. Another form of miniature effect uses stop motion animation.



**Forced perspective** is a technique which employs optical illusion to make an object appear farther away, closer, larger or smaller than it actually is. It manipulates human visual perception through the use of scaled objects and the correlation between them and the vantage point of the spectator or camera. It has uses in photography, filmmaking and architecture.



The use of miniatures have been used less due to computer-generated imagery (CGI) in the current cinema. However, they are still often used, especially for projects requiring physical interaction with fire, explosions or water. [

### 5. UFO Chase - *Independence Day*



20th Century Fox



# Techniques and Skills Used for Model Creations:

- Carpentry
- Plastic Fabrication
- Vacuum Forming
- Mold Making and Casting
- Fiberglass
- Welding
- Rapid Prototyping
- Laser Cutting
- Acid Etching Metal
- Machining
- Kit-Bashing
- Miniature Lighting and Electronics
- Painting
- Motion Control Photography

# Miniature Effects Companies:

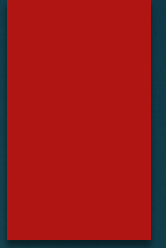
- [Cinema Production Services](#)
- [Surpreeze](#)
- [Fantasy II Film Effects](#)
- [Grant McCune Design](#)
- [New Deal Studios](#)
- [Vision Crew Unlimited](#)
- [Weta Workshop](#)
- [WonderWorks](#)
- [Magicon GmbH](#)
- [Mattes & Miniatures Visual Effects \(UK\)](#)



















Box Trolls





## 1. The Nostromo - *Alien*



20th Century Fox

2. Minas Tirith - *Lord of the Rings*



New Line Cinema

8. Barad-dûr - *Lord of the Rings*



New Line Cinema



### 3. Rivendell - *Lord of the Rings*



*New Line Cinema*

#### 4. Stay Puft Attack - *Ghostbusters*



*Columbia Pictures*



## 6. Train scene - *Back to the Future: Part III*



## 7. Russia - *Goldeneye*





## 9. Snow Fortress - *Inception*



Warner Bros.



10. White House - *Independence Day*



©20thCentFox/Courtesy Everett Collection





11. Rub al Khali Desert - *Indiana Jones and the Raiders of the Lost Ark*



©Paramount/Courtesy Everett Collection

## 12. Rancor - *The Return of the Jedi*





### 13. Isengard - *Lord of the Rings*



New Line Cinema

## 14. Sydney, Australia - *Mad Max Beyond Thunderdome*



Dennis W. Nicholson / Via madmaxmovies.com



## 15. T-Rex Attack - *Jurassic Park*



*Universal Studios*

## 16. Manhattan Island - *Escape From New York*



*New Line Cinema*



## 17. Metropolis - *Superman Returns*



©Warner Bros./Courtesy Everett Collection

## 18. Helm's Deep - *Lord of the Rings*



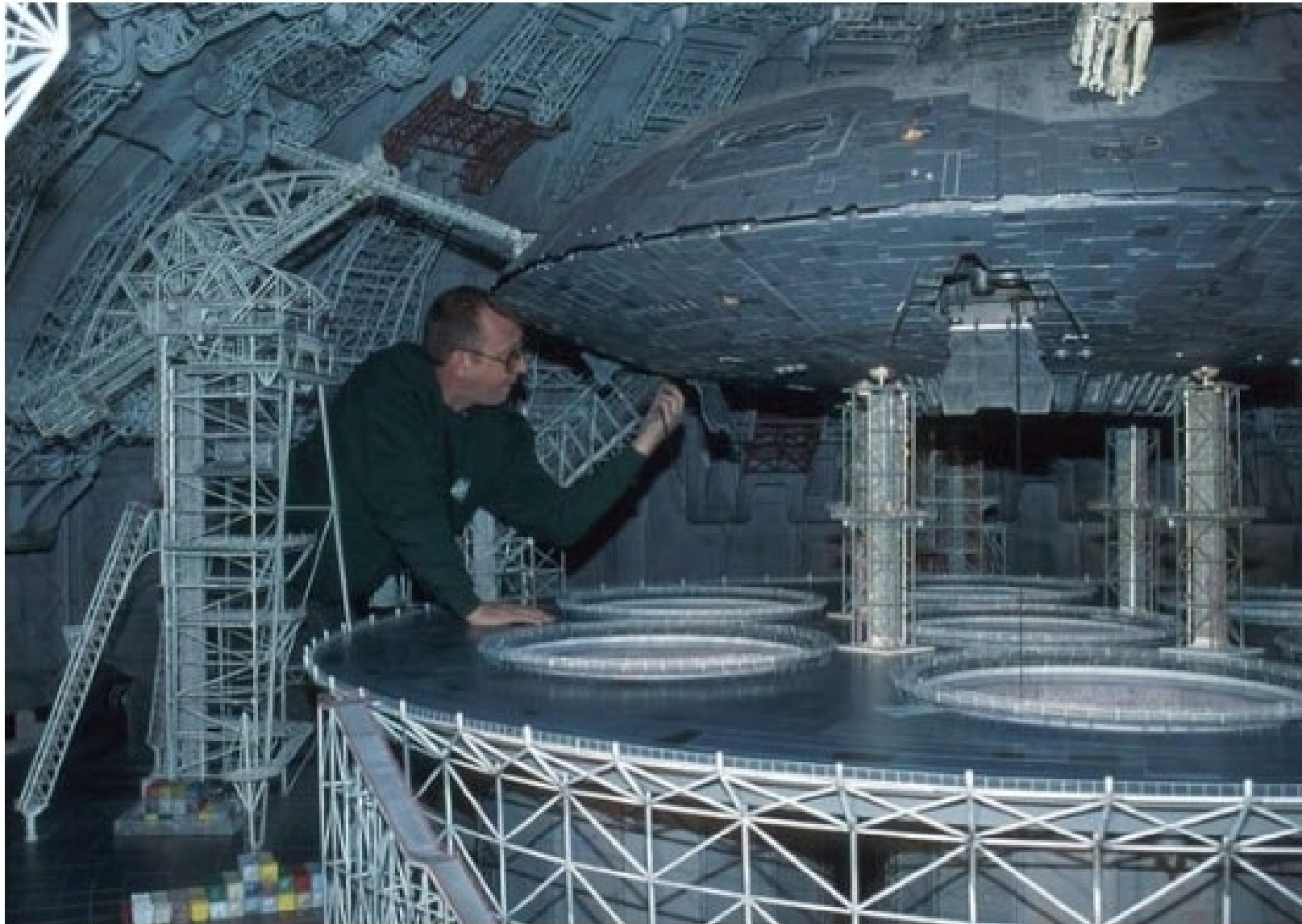


19. King Kong Abduction - *King Kong*



Mery Evans/RKO RADIO PICTURES/Ronald Grant/Everett Collection

## 20. Spaceship - *Lost In Space*



*Nigel Blake*



21. Gotham City - *Batman*



Warner Bros.

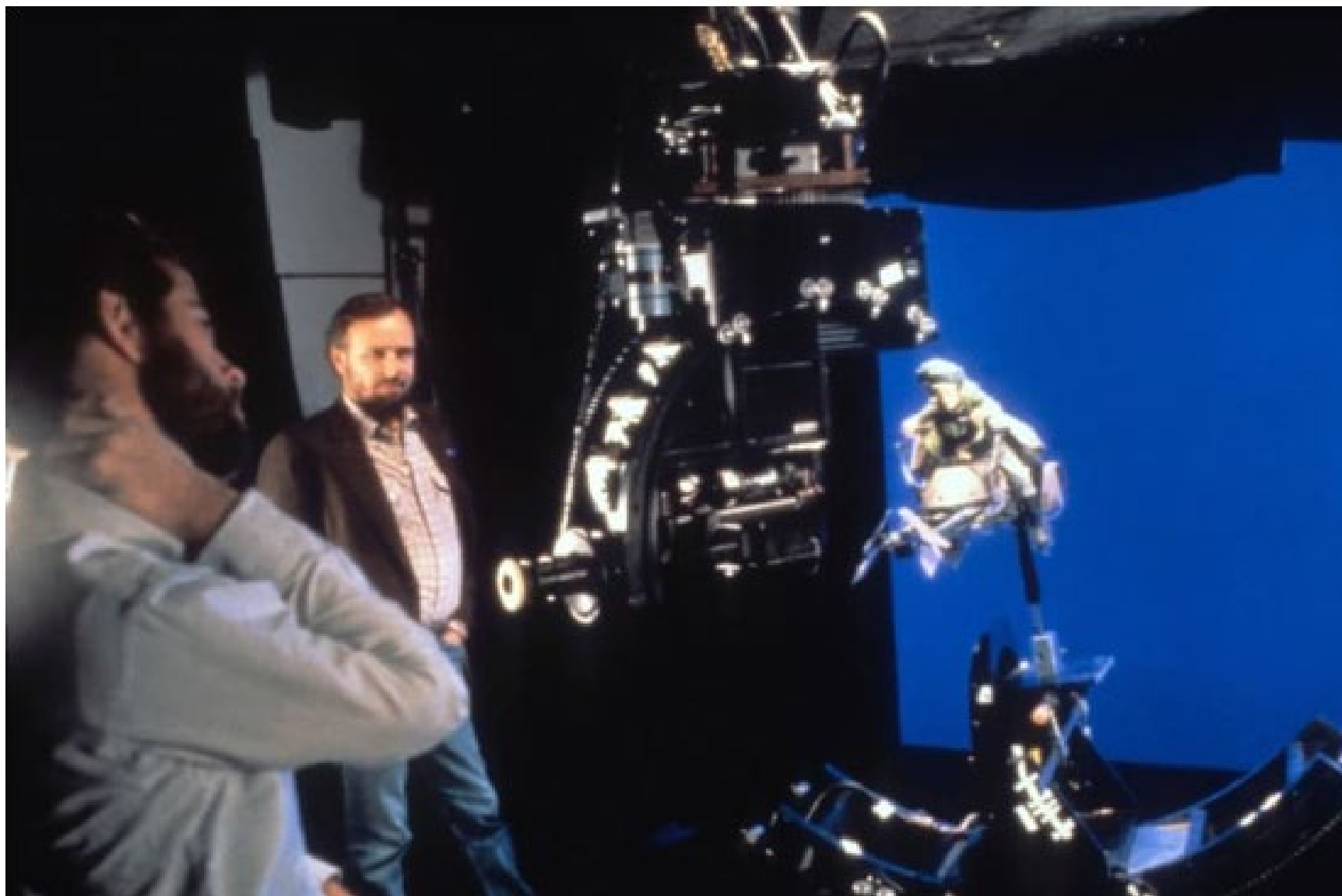
## 22. Hogwarts - *Harry Potter*



*Eamonn McCormack / WireImage*



## 23. Endor Chase - *Return of the Jedi*



LUCASFILM / C20TH FOX / Ronald Grant Archive / Mary Evans

## 24. U.S.S. Enterprise - *Star Trek: The Motion Picture*



*Courtesy Everett Collection*