Contents

Foreword xvi
Introduction xv

PART I ■ CREATING A CHARACTER WITH BLENDER 1

Chapter 1 ■ Blender Basics: Interface and Objects 3
Work Areas and Window Types 4
Navigating the 3D Space 9
Objects and Datablocks 18
User Preferences 23

Chapter 2 ■ Working with Meshes 27
Polygons and Subsurfacing 28
Poly-by-Poly Modeling and Box Modeling 33
Common Problems and Solutions in Mesh Modeling 81

Chapter 3 ■ Completing the Model with Materials, Textures, and Hair 87
Materials and Material Slots 88
Material Properties 91
Textures and UV Mapping 98
Working with Particle Hair 115

Chapter 4 ■ Armatures and Rigging 121
Blender Armature System 122
Building a Simple Armature 123
Rigging Captain Blender with Rigify 135
Chapter 11 - Lighting, Rendering, and Editing Your Animation

Lighting Basics 322
Rendering Your Animation 334
Editing in the Sequence Editor 336

Chapter 12 - Python Scripts and Add-Ons

Using Add-Ons 342
The Blender Python API 345
Learning More about Blender Python Scripting 346

PART III - BLENDER IN PRODUCTION

Chapter 13 - The Fruits of Freedom: Open Movies and Open Content

The Blender Institute 350
The Blender Open Movie Project 350
Free and Open Licenses for Software and Content 355

Chapter 14 - A Look Inside the Blender Open Movies

Learning from Elephants Dream 360
Nonhuman Rigs in Big Buck Bunny and Sintel 370
The Production Pipeline 375

Chapter 15 - Behind the Scenes with Sintel

From Durian to Sintel 382
The Sintel Open Content 383
Sintel Artists in Their Own Words 387

Chapter 16 - Feifi the Canary—Plumiferos Takes Wing

Introducing Feifi 408
Facial Deformations with Lattices 410
Rigging a Cartoon Bird 411
PART IV  ■  BLENDER AND BEYOND  419

Chapter 17  ■  Other Software and Formats  421

Importing and Exporting Other File Formats  422

Useful Open Source Software for Blender Artists  422

Blending into the (Near) Future  425

Chapter 18  ■  Resources for Further Learning  427

Selected Blender Resources  428

Recommended Non-Blender-Specific Books  430

On Becoming a Blender Master  432

Index  433