

Contents

Part I Strokes, Marks and Filters for Artistic Stylization	
1	Stroke Based Painterly Rendering 3 David Vanderhaeghe and John Collomosse
2	A Brush Stroke Synthesis Toolbox 23 Stephen DiVerdi
3	Halftoning and Stippling 45 Oliver Deussen and Tobias Isenberg
4	Non-photorealistic Shading and Hatching 63 Victor Ostromoukhov
5	Artistic Stylization by Nonlinear Filtering 77 Jan Eric Kyprianidis
6	NPR for Traditional Artistic Genres 103 Eugene Zhang
Part II Stylization from Structure	
7	Region-Based Abstraction 125 David Mould
8	Gradient Art: Creation and Vectorization 149 Pascal Barla and Adrien Bousseau
9	Depiction Using Geometric Constraints 167 Craig S. Kaplan
10	Artificial Mosaic Generation 189 Giovanni Puglisi and Sebastiano Battiato
11	Non-photorealistic Rendering with Reduced Colour Palettes 211 Yu-Kun Lai and Paul L. Rosin

12 Artistic Rendering of Portraits 237
Mingtian Zhao and Song-Chun Zhu

Part III Stylized Animations

13 Temporally Coherent Video Stylization 257
Pierre B nard, Jo lle Thollot, and John Collomosse

14 Computer-Assisted Repurposing of Existing Animations 285
Daniel S kora and John Dingliana

Part IV Evaluation and Impact of Artistic Stylization

**15 Evaluating and Validating Non-photorealistic and Illustrative
Rendering 311**
Tobias Isenberg

**16 Don’t Measure—Appreciate! NPR Seen Through the Prism of Art
History 333**
Peter Hall and Ann-Sophie Lehmann

17 NPR in the Wild 353
Holger Winnem ller

References 375

Index 395



<http://www.springer.com/978-1-4471-4518-9>

Image and Video-Based Artistic Stylisation

Rosin, P.; Collomosse, J. (Eds.)

2013, XII, 397 p., Hardcover

ISBN: 978-1-4471-4518-9