

## パステルの質感を持つストロークのレンダリング技法に関する研究

村上, 恭子

---

<https://doi.org/10.15017/458912>

---

出版情報 : Kyushu University, 2004, 博士（芸術工学）, 課程博士  
バージョン :  
権利関係 :

---

## 参考文献

- [BSL\*01] B. Baxter, V. Scheib, M. C. Lin, and D. Manocha, "Dab:interactive haptic painting with 3d virtual brushes", In Proceedings of the 28th annual conference on Computer graphics and interactive techniques", pp. 461-468, August 2001.
- [BSM88] T. W. Bleser, J. L. Sibert and J. P. McGee, "Charcoal sketching: returning control to the artist", ACM Transactions on Graphics (TOG), 7(1), pp.76-81, January. 1988.
- [BWL04] W. Baxter, J. Wendt and M. C. Lin, " IMPaSTo: a realistic, interactive model for paint", In Proceedings of the 3rd international symposium on Non-photorealistic animation and rendering, pp.145-148, 2004.
- [CAS\*97] C. J. Curtis, S. E. Anderson, J. E. Seims, K. W. Fleischer, and D. H. Salesin, "Computer-generated watercolor", In Proceedings of the 24th annual conference on Computer graphics and interactive techniques, pp.421-430, 1997.
- [Cur98] C. J. Curtis, "Loose and sketchy animation", In ACM SIGGRAPH98 Electronic art and animation catalog, p.145, July, 1998.
- [CPE92] T. Cookshott, J. Patterson, and D. England, "Modelling the Texture of Paint", Computer Graphics Forum 11: 217-226, 1992.
- [DC04] F. Drago and N. Chiba, "Painting canvas synthesis", The Visual Computer, 20(5), pp.314 - 328, July 2004.
- [DOM\*01] F. Durand, V. Ostromoukhov, M. Miller, F. Duranleau, J. Dorsey, "Decoupling Strokes and High-Level Attributes for Interactive Traditional Drawing", Proceedings of the 12th Eurographics Workshop on Rendering Techniques, p.71-82, June, 2001
- [GG01] A. Gooch and B. Gooch, "Non-Photorealistic Rendering", A. K. Peters, Ltd , June 2001.
- [GIH\*00] A. Girshick, V. Interrante, S. Haker, and T. Lemoine, "Line direction matters: an argument for the use of principal directions in 3D line drawings", In Proceedings of the 1st international symposium on Non-photorealistic animation and rendering, pp.43-52, June 2000.
- [Gih79] 技法叢書編集室 編纂, " パステル画の用具と描き方 基礎技法講座 7 ", 美術出版社 , 1979/01.
- [Gre85] R. Greene, "The drawing prism: a versatile graphic input device", Computer Graphics, 19(3), pp.103-110, July 1985.
- [Hae90] P. Haeberli, "Paint by numbers: abstract image representations", In Proceedings of the 17th annual conference on Computer graphics and interactive techniques, pp.207-214, 1990.
- [Her98] A. Hertzmann, "Painterly rendering with curved brush strokes of multiple sizes", In Proceedings of the 25th annual conference on Computer graphics and interactive

- techniques, pp.453-460, 1998.
- [HH90] P. Hanrahan and P. Haeberli, "Direct WYSIWYG painting and texturing on 3D shapes", In Proceedings of the 17th annual conference on Computer graphics and interactive techniques, pp.215- 223, September 1990.
- [HLW93] S. C. Hsu, I. H. H. Lee, and N. E. Wiseman, "Skeletal strokes", In Proceedings of the 6th annual ACM symposium on User interface software and technology, pp.197-206, December 1993.
- [HL94] S. C. Hsu, and I. H. H. Lee, "Drawing and animation using skeletal strokes", In Proceedings of the 21st annual conference on Computer graphics and interactive techniques, pp.109-118, July 1994.
- [HM92] C. S. Haase and G. W. Meyer, "Modeling pigmented materials for realistic image synthesis". ACM Trans. on Graphics, 11(4), pp.305-335, October 1992.
- [III03] Adobe IllustratorCS. 2003. <http://www.adobe.com/products/illustrator/main.html>
- [Int04] WACOM 2004. insuos3. <http://www.wacom.com/productinfo/intuos.cfm>
- [JML\*01] H. W. Jensen, S. R. Marschner, M. Levoy, and P. Hanrahan, "A practical model for subsurface light transport", In Proceedings of the 28th annual conference on Computer graphics and interactive techniques, pp.511-518, August 2001.
- [JA93] ジュディ・マーティン著, 愛甲 健児訳 グラフィック社, 1993/04.
- [KDM\*03] R. D. Kalnins, P. L. Davidson, L. Markosian, and A. Finkelstein, "A Coherent Stylized Silhouettes", In ACM Transactions on Graphics 2003. pp.856-861, 2003.
- [KSF\*02] A. W. Klein, P. P. J. Sloan, A. Finkelstein and M. F. Cohen, "Stylized Video Cubes", ACM SIGGRAPH Symposium on Computer Animation. pp. 15-22, July 2002.
- [KMM\*02] R. D. Kalnins, L. Markosian, B. J. Meier, M. A. Kowalski, J. C. Lee, P. L. Davidson, M. Webb, J. F. Hughes, and A. Finkelstein, "WYSIWYG NPR: drawing strokes directly on 3d models", In Proceedings of the 29th annual conference on Computer graphics and interactive techniques, pp. 755-762, ACM Press, 2002.
- [Lew84] J. P. Lewis, "Texture Synthesis for Digital Painting", Computer Graphics 18(3), pp. 245-252 1984.
- [Lit97] P. Litwinowicz, "Processing Images and Video for an Impressionist Effect", In Proceedings of the 24th annual conference on Computer graphics and interactive techniques, pp. 407-414, August 1997.
- [Mei96] B. J. Meier, "Painterly rendering for animation", In Proceedings of the 23rd annual conference on Computer graphics and interactive techniques, pp.477-484, August 1996.
- [Mil94] G. Miller, "Efficient algorithms for local and global accessibility shading", In Proceedings of SIGGRAPH94, pp. 319-326, 1994.
- [NM00] J. D. Northrup, Lee Markosian, "Artistic silhouettes: a hybrid approach", In Proceedings of

- the first international symposium on Non-photorealistic animation and rendering, pp.31-37, June 2000.
- [Pai03] COREL. 2004. Painter 8. <http://www.corel.com/painter/>
- [Per85] K. Perlin, "An image synthesizer. In Proceedings of the 12th annual conference on Computer graphics and interactive techniques", pp 287-296. 1985.
- [Pha04] SensAble technologies 1999. PHANToM.  
[http://www.sensable.com/products/phantom\\_ghost/phantom.asp](http://www.sensable.com/products/phantom_ghost/phantom.asp)
- [Pho03] Adobe 2003. Photoshop CS. <http://www.adobe.com/products/photoshop/main.html>
- [Ree83] W. T. Reeves, "Particle systems-A technique for modeling a class of fuzzy objects", SIGGRAPH 83, ComputerGrahpics 17(3),359-376,1983.
- [RMN03] D. Rudolf , D. Mould , E. Neufeld, "Simulating Wax Crayons", In Proceedings of the 11th Pacific Conference on Computer Graphics and Applications, p.163, October 08-10, 2003.
- [Saw91] 佐和 瑛子 (翻訳), "パステル画の技法 インターナショナルアートテクニック", 美術出版社 , 1991/11.
- [SAB\*94] M. P. Salisbury, S. E. Anderson, R. Barzel, and D. H. Salesin, "Interactive pen-and-ink illustration", In Proceedings of the 21st annual conference on Computer graphics and interactive techniques, pp.101-108, July 1994.
- [SB99] M. C. Sousa and J. W. Buchanan, "Computer-Generated Graphite Pencil Rendering of 3D Polygonal Models", Computer Graphics Forum (Proc. of EuroGraphics '99), pp. 195-207, 1999.
- [SB00] M. C. Sousa and J. W. Buchanan, "Observational Model of Graphite Pencil Materials", Computer Graphics Forum, 19(1), 27-49, 2000.
- [Sma91] D. Small, "Simulating Watercolor by Modeling Diffusion, Pigment, and Paper Fibers", In Proceedings of SPIE'91, February 1991.
- [Smi78] A. R. Smith, "Paint," pp. 501-512 in Tutorial: Computer Graphics, ed. K. S. Booth, IEEE Press, 1978.
- [Smi79] A. R. Smith, "Table Paint", SIGGRAPH tutorial notes for "Two Dimensional Computer Animation, 1979.
- [SN99] S. Saito, M. Nakajima, "3D physics-based brush model for painting", SIGGRAPH 99 Conference abstracts and applications, p.226, August, 1999.
- [ST90] T. Saito and T. Takahashi, "Comprehensible rendering of 3D shapes", In Proceedings of the 17th annual conference on Computer graphics and interactive techniques, pages 197-206, September 1990.
- [Str86] S. Strassman, "Hairy Brushes", Computer Graphics, 20(4), pp.225-232, August 1986.
- [SY00] M. Shiraishi, Y. Yamaguchi, "An algorithm for automatic painterly rendering based on local source image approximation", In Proceedings of the 1st international symposium on Non-

- photorealistic animation and rendering, pp.53-58, June, 2000.
- [Tan94] 田中為芳（編），“新しい画材ガイド パステル”，美術出版社，1994/95。
- [TNF99] S. Takagi, M. Nakajima, and I. Fujishiro, "Volumetric modelling of colored pencil drawings", Pacific Graphics, October 1999.
- [Tok91] 東京武蔵野美術学院，“鉛筆デッサン CULTURE SERIES”，グラフィック社，1991/01。
- [Whi83] T. Whitted, "Anti-aliased Line Drawing Using Brush Extrusion", Computer Graphics 17(3) pp.151-156, July 1983.
- [WS94] G. Winkenbach, D. H. Salesin, "Computer-generated pen-and-ink illustration", In Proceedings of the 21st annual conference on Computer graphics and interactive techniques, pp.91-100, July 1994.
- [YMI03] 山本茂文，茅暁陽，今宮淳美，“視覚混色に基づくアーティスティックメディアにおける構成色の自動選択”，情処報告 Vol. 2003, No. 112, pp. 127-132, 2003.