Bibliography Review

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Chapter 1

Curvature in Image processing - Introduction

The idea of this chapter is to explain the interest behind curvature, introduce some of the tasks in image processing in which curvature can be used and to roughly point out some of the difficulties involved on the use of curvature. At the last section, I'm going to point out the interest to turn out to digital approaches.

1.1 Curvature and Elastica energy

1.2 Curvature as a prior

1.2.1 Image Segmentation

1. S. Geman and D. Geman, "Stochastic Relaxation, Gibbs Distributions, and the Bayesian Restoration of Images"

2. Kass, Witkin, and Terzopoulos, "Snakes: Active contour models"

3. Caselles, Kimmel, and Sapiro, "Geodesic Active Contours"

4. Chan and Vese, "Active contours without edges"

5. Y. Y. Boykov and M. .-.-. Jolly, "Interactive graph cuts for optimal boundary amp;amp; region segmentation of objects in N-D images"

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1.2.3 Inpainting

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2. Masnou and Morel, "Level Lines Based Disocclusion"
3. Masnou, "Disocclusion: A variational approach using level lines"
4. Ambrosio and Masnou, "A direct variational approach to a problem arising in image reconstruction"
5. Shen, Ha Kang, and F. Chan, "Euler's Elastica and Curvature-Based Inpainting"

1.2.4 Stereo

1.3 Continuous x Discrete x Digital

1. Mumford, "Optimal approximation by piecewise smooth functions and associated variational problems"
2. Bar et al., "Mumford and Shah Model and Its Applications to Image Segmentation and Image Restoration"

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1. S. Geman and D. Geman, "Stochastic Relaxation, Gibbs Distributions, and the Bayesian Restoration of Images"

2. Jordan et al., "An Introduction to Variational Methods for Graphical Models"

3. Jaakkola, "Tutorial on Variational Approximation Methods"

4. Yedidia, Freeman, and Weiss, "Understanding Belief Propagation and Its Generalizations"

5. Ben-Gal, "Bayesian Networks"

2.3 Total variation, ROF and Tikhonov

1. Rudin, Osher, and Fatemi, "Nonlinear Total Variation Based Noise Removal Algorithms"

2. Antonin Chambolle, "An Algorithm for Total Variation Minimization and Applications"

3. Duran, Coll, and Sbert, "Chambolle's Projection Algorithm for Total Variation Denoising"

4. Burger and Osher, "A Guide to the TV Zoo"

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1. Caselles, Catté, et al., "A geometric model for active contours in image processing"

2. Caselles, Kimmel, and Sapiro, "Geodesic Active Contours"

3. Cohen and Kimmel, "Global Minimum for Active Contour Models: A Minimal Path Approach"

4. Appleton and Talbot, "Globally Optimal Geodesic Active Contours"

5. Peyré et al., "Geodesic Methods in Computer Vision and Graphics"

6. Li et al., "Geodesic Propagation for Semantic Labeling"

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3.2.2 Convex optimization

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2. Strekalovskiy, A. Chambolle, and D. Cremers, "A convex representation for the vectorial Mumford-Shah functional"

3. Grady and Alvino, "The Piecewise Smooth Mumford–Shah Functional on an Arbitrary Graph"

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1. Brox and Daniel Cremers, "On the Statistical Interpretation of the Piecewise Smooth Mumford-Shah Functional"

3.2.3 Continuous Linear programming

3.3 Combinatorial optimization

3.3.1 Pseudo-boolean optimization

1. Rother et al., "Optimizing Binary MRFs via Extended Roof Duality"
2. Boros and Peter L. Hammer, "Pseudo-Boolean optimization"
3. P. L. Hammer, Hansen, and Simeone, "Roof duality, complementation and persistency in quadratic 0–1 optimization"

3.3.2 Graph-cut

1. V. Kolmogorov and Zabin, "What energy functions can be minimized via graph cuts?"
2. Y. Boykov, Veksler, and Zabih, "Fast approximate energy minimization via graph cuts"
3. Yuri Boykov and Vladimir Kolmogorov, "Computing Geodesics and Minimal Surfaces via Graph Cuts"
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1. Klette and Žunić, "Multigrid Convergence of Calculated Features in Image Analysis"

2. Klette, "Multigrid Convergence of Geometric Features"

3. Klette and Žunić, "Multigrid Convergence of Calculated Features in Image Analysis"

5.2 Tangent and perimeter estimators

1. Lachaud, Vialard, and Vieilleville, "Fast, Accurate and Convergent Tangent Estimation on Digital Contours"

2. Coeurjolly, Lachaud, and Roussillon, "Multigrid Convergence of Discrete Geometric Estimators"

5.3 Curvature estimators

1. Coeurjolly, Miguet, and Tougne, "Discrete Curvature Based on Osculating Circle Estimation"

2. Kerautret and Lachaud, "Curvature Estimation along Noisy Digital Contours by Approximate Global Optimization"

3. Coeurjolly, Lachaud, and Levallois, "Integral Based Curvature Estimators in Digital Geometry"

4. Roussillon and Lachaud, "Accurate Curvature Estimation along Digital Contours with Maximal Digital Circular Arcs"

5. Schindele, Massopust, and Forster, "Multigrid Convergence for the MDCA Curvature Estimator"

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