

figure 6.1. *Toy examples illustrating the ideas in this Chapter. See text for details.*

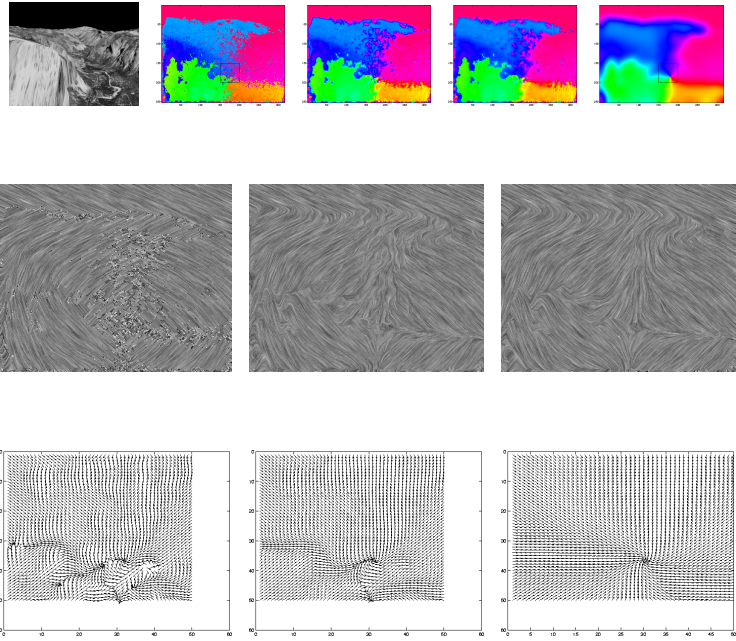


figure 6.2. *Optical flow example. See text for details.*

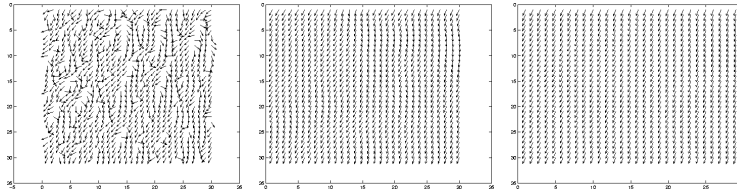
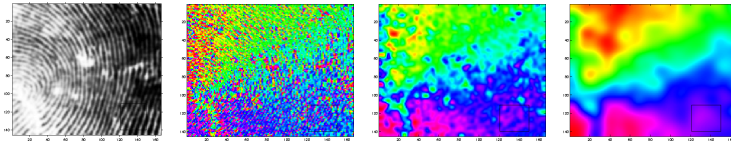


figure 6.3. *Gradient direction example. See text for details.*

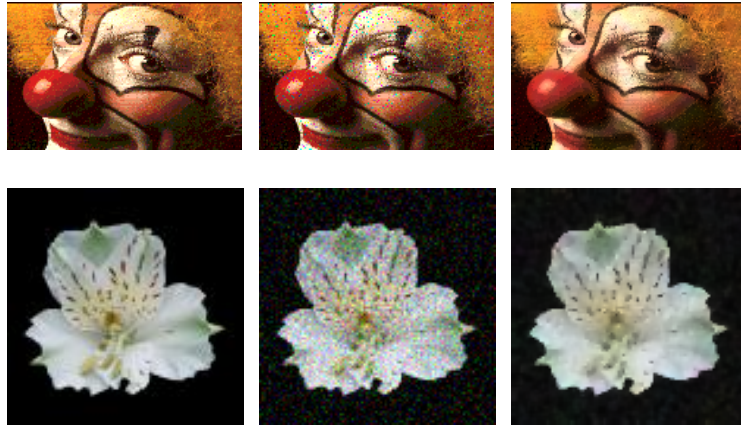


figure 6.4. *Denoising of a color image using 3D directional diffusion. See text for details.*

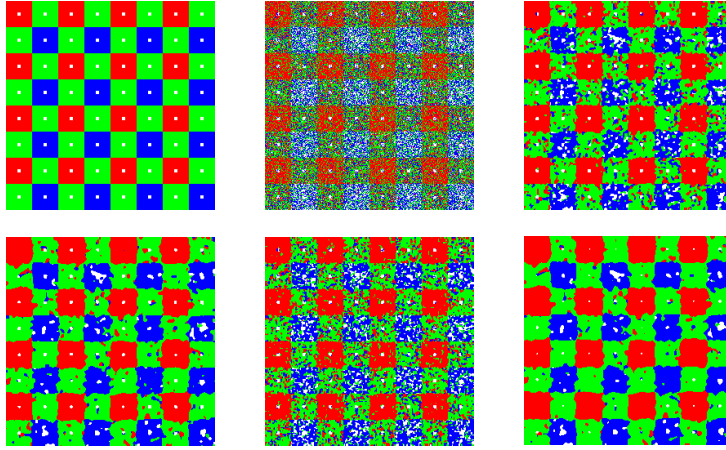


figure 6.5. *Left to right and top to down: Original image, classification without diffusion, results of vector probability diffusion for 18 and 25 iterations respectively, and results of the scalar approach for 10 and 15 iterations.*

Iter.	Class 1	Class 2	Class 3	Class 4	Average
0	53.77	26.67	53.68	27.34	46.65
10	47.63	17.47	47.40	22.46	39.70
15	33.26	4.76	33.30	17.77	26.02
18	24.01	2.33	24.83	15.82	18.95
20	19.75	1.50	20.88	17.77	15.78
25	12.16	0.81	14.39	26.95	10.70
5	53.70	26.51	53.61	27.34	46.55
7	50.02	18.74	49.85	24.90	41.85
10	35.06	6.24	35.03	18.46	27.69
15	17.48	1.51	18.99	24.32	14.40
20	18.11	0.76	13.14	61.04	10.34

figure 6.6. *Classification errors per class and average for the example in the figure above. The first row corresponds to the classical MAP approach, where no diffusion has been applied to the posterior probabilities. The next five rows correspond to four different time steps of the vector probability diffusion approach here presented, followed by five time steps for the scalar approach of Teo et al..*

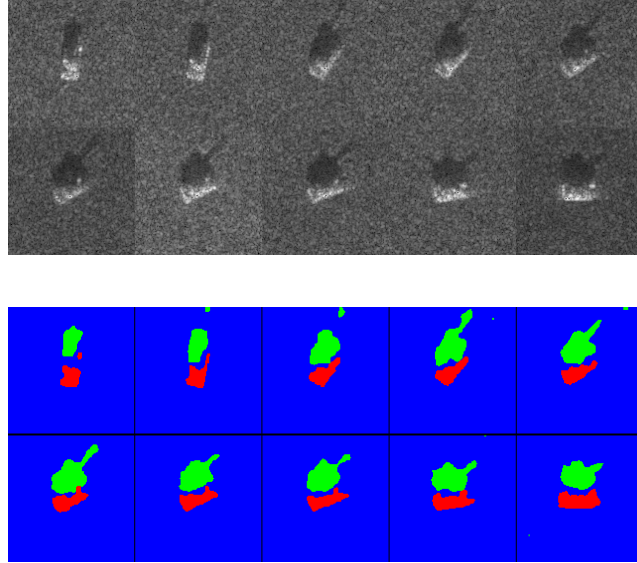


figure 6.7. *Original images and classification results with MAP vector probability diffusion.*