

- [2] Song Guolei, Hou Wei. Overview of SAR image segmentation algorithm[J].Computer Era, 2017(5):1-5.[宋国磊, 侯巍. SAR 图像分割算法综述 [J]. 计算机时代, 2017(5):1-5.]
- [3] Song Wenqing, Wang Yinghua, Lu Hongxi, *et al.* Otsu segmentation algorithm for SAR images based on power transformation[J]. Systems Engineering and Electronics, 2015, 37(7):1504-1511.[宋文青, 王英华, 卢红喜, *等.* 基于幂次变换的 SAR 图像 Otsu 分割法 [J]. 系统工程与电子技术, 2015, 37(7):1504-1511.]
- [4] Wu Yiquan, Meng Tianliang, Wu Shihua. Research Progress of Image Threshdholding Methods in Recent 20 Years(1994-2014) [J]. Journal of Data Acquisition and Processing, 2015, 30(1):1-23.[吴一全, 孟天亮, 吴诗娅. 图像阈值分割方法研究进展 20 年(1994—2014)[J]. 数据采集与处理, 2015, 30(1):1-23.]
- [5] Wu Shihua, Wu Yiquan, Zhou Jianjiang, *et al.* SAR River Image Segmentation Based on Reciprocal Gray Entropy and Improved Chan-Vese Model[J].Acta Geodaetica et Cartographica Sinica, 2015, 44(11): 1255-1262. [吴诗娅, 吴一全, 周建江, *等.* 利用倒数灰度熵和改进 Chan-Vese 模型进行 SAR 河流图像分割[J].测绘学报, 2015, 44(11):1255-1262.]
- [6] Liu Xiuguo, Xu Qiao, Chen Qihao, *et al.* Segmentation of Polarimetric SAR Images Selectively Using Wishart and K Statistical Description[J].Journal of University of Electronic Science and Technology of China, 2016, 45(5):713-719.[刘修国, 徐乔, 陈启浩, *等.* 选择利用 Wishart 和 K 统计描述的极化 SAR 图像分割[J]. 电子科技大学学报, 2016, 45(5):713-719.]
- [7] Kim J, Parra A, Li H, *et al.* Efficient graph-cut tattoo segmentation[J]. Proceedings of SPIE- The International Society for Optical Engineering, 2015, 9410: 94100H-94100H-8.
- [8] Rother C, Kolmogorov V, Blake A. "GrabCut": interactive foreground extraction using iterated graph cuts[C]// ACM SIGGRAPH. ACM, 2004: 309-314.
- [9] Zhang C, Cohen M, Rui Y, *et al.* Image segmentation using spatial-color Gaussian mixture models: US, US 7885463 B2[P]. 2011.
- [10] Nagahashi T, Fujiyoshi H, Kanade T. Image Segmentation Using Iterated Graph Cuts Based on Multi-scale Smoothing[C]// Asian Conference on Computer Vision, Partii. 2007:10-20.
- [11] Zhou Liangfen, He Jiannong. Improved image segmentation algorithm based on GrabCut [J]. Journal of Computer Applications, 2013, 33(1):49-52.周良芬, 何建农. 基于 GrabCut 改进的图像分割算法 [J]. 计算机应用, 2013, 33(1):49-52.
- [12] Boykov Y, Kolmogorov V. An Experimental Comparison of Min-cut/Max-flow Algorithms for Energy Minimization in Vision[C]// International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition. Springer, Berlin,

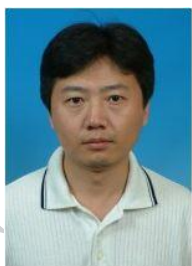
Heidelberg, 2001:359-374.

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