



Algorithms for Medical Image Segmentation

Guest Editor:

Prof. Dr. Tang-Chieh Liu

Department of Electronic
Engineering, Feng Chia
University, Taichung 40724,
Taiwan

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Message from the Guest Editor

Medical image segmentation (MIS) is one of the crucial tasks in diagnosis. It also plays an important role in supporting precise medical treatments, especially for surgeries. Conventionally, this job relies on huge manpower to segment the organ or tissue out of the CT/MRI images. Recently, deep learning techniques have opened the possibility to relieve the burden of this task and speed up the processing time of segmentation. For present studies, it is promising that AI technology would largely reduce conventional needs in human power. However, there are still some critical issues with employing deep neural networks: How can we organize a suitable neural network for specific tissue or tumors? How can we train the network? How can we improve extraction efficiency and accuracy on the target object of medical images? In contrast to segmenting objects in pictures, it is rather difficult to recognize tissues or tumors from medical imaging devices, which invites papers focusing on new methods, new designs in neural network technology for use in medical pictures and attempts to improve performance in medical image segmentation.





Editor-in-Chief

Prof. Dr. Frank Werner

Faculty of Mathematics, Otto-
von-Guericke-University, P.O. Box
4120, D-39016 Magdeburg,
Germany

Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

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Algorithms Editorial Office
MDPI, St. Alban-Anlage 66
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