Special Issue

Deformable Image Registration and Image Segmentation for Radiation Therapy

Message from the Guest Editors

Deformable image registration and image segmentation are two imperative techniques that enable current state-of-the-art radiation therapy with improved accuracy and precision in treatment planning. In radiation therapy, deformable image registration is commonly used for contour propagation and dose accumulation to power up efficient adaptive radiation therapy. This allows for more precise targeting of the tumor and better sparing of normal tissue in radiation treatment. On the other hand, image segmentation plays a crucial role in treatment planning by automatically identifying and outlining the tumor and surrounding organs at risk for modern radiation treatment planning techniques. Automatic image segmentation also facilitates the management of radiation-induced toxicity and the evaluation of potential risks and benefits of different treatment options.

This Special Issue aims to disseminate recent state-of-the-art artificial-intelligence-based deformable image registration and image segmentation techniques in the application of radiation therapy.

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Editor-in-Chief

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