

Special Issue

Whole Body MRI: Restoration and Analysis with Signal/Image Processing Principles

Message from the Guest Editors

Whole-body MRI (WB-MRI) has a large field-of-view (FoV) that covers the entire body. Due to its broad data acquisition in high anatomical resolution, WB-MRI is a competitive image expedition tool to both cover conventional clinical needs and enable novel observations. Current indications span over a spectrum of physiology and pathology. An example for physiology is the monitoring of the body elemental compartments using fat and muscle segmentation in sports medicine applications. An expanding list of indications for WB-MRI in clinical oncology and the evidence collected so far argument towards a future first-line indication of WB-MRI in cancer staging and follow up. Implementations for bone metastatic disease detection reveal equal or higher sensitivity and specificity of the WB-MRI compared to classical radiation-base methods such as the bone scans with Tc99m-based radiopharmaceuticals and positron emission tomography CT (PET-CT). Thus, MRI with T1-weighting, T2-weighting and other contrasts offers a screening solution with high anatomical resolution, free of ionizing radiation and, eventually, free of Contrast Enhancing (CE) agents...

Guest Editors

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Deadline for manuscript submissions

closed (31 January 2024)



Signals

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CiteScore 4.6



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Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

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