

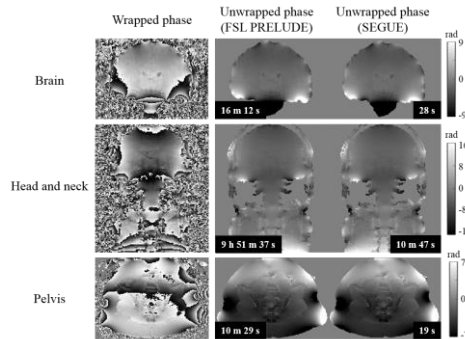
SEGUE: A Speedy rEgion-Growing Algorithm for Unwrapping Estimated Phase

Author: Anita Karsa, PhD and Karin Shmueli, PhD.

Department of Medical Physics and Biomedical Engineering, University College London, UK

Matlab software designed to quickly unwrap 3D MRI phase images without affecting the total magnetic field distribution.

SEGUE has been shown to perform up to 80 times faster than FSL PRELUDE and with equivalent accuracy.



Links: <https://xip.uclb.com/product/SEGUE> Contact: segueUCL@gmail.com
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Developed by Anita Karsa at University College London, SEGUE is a Speedy Region Growing algorithm for Unwrapping Estimated Phase data.

Currently implemented in Matlab, SEGUE is designed to quickly unwrap 3D MRI phase images without affecting the total magnetic field distribution. This means that the resulting unwrapped phase images can be used for distortion correction and as an input for EMTP applications like QSM.

SEGUE has been shown to perform up to 80 times faster than FSL PRELUDE and with equivalent accuracy in MRI phase images of the brain, head-and-neck region, and pelvis (see accompanying figure), especially at longer echo-times where more wraps are present.

SEGUE could be used for spatial phase unwrapping in other applications such as X-ray phase contrast imaging, synthetic aperture radar interferometry, and 3D shape measurement or profilometry.

To register your interest in a python version, please email segueUCL@gmail.com and take a look at our IEEE Transactions on Medical Imaging 2019 paper (link below) for more details.