



**Swedish Candidate 2:**

**Markus Nilsson, Lund, Sweden**

*Associate senior lecturer. Dept. Diagnostic Radiology, Lund University*

Currently, I am working as an academic scientist (formal title: associate senior lecturer), at the Department of Diagnostic Radiology at Lund University, headed by Professor Pia Sundgren, vice president of the ISMRM.

My research is directed toward developing image-based biomarkers using diffusion-weighted magnetic resonance imaging (dMRI). As PhD candidate at the Department of Medical Radiation Physics at Lund University, I developed neuroimaging methods that employed dMRI for quantification of brain-tissue features such as axon diameters and cell density. In my current position, I have balanced methods development with the application of these powerful techniques in studies of neurodegeneration and tumours.

My future research plans cover development of methods for non-invasive imaging of tissue features in tumours, such as cell sizes and shapes, and validate these using microscopy analysis.

As a member of the board of the Nordic Chapter of ISMRM, I would like to contribute towards the purposes of the chapter. In particular, I would strive to engage as many Nordic sites as possible in the activities of the chapter and, to the extent possible, broaden the engagement with groups working in nearby fields such as mathematical image analysis and machine learning.