Medical Imaging Summer School 2014

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Medical Imaging meets Computer Vision

Herve Delingette
INRIA, France

Lecture 1: Personalized Growth Modeling of Brain Tumours

The analysis of brain tumours and their evolution remains a challenging task due the subtle appearance of tumor lesions in MR imaging. Of particular interest are the gliomas which have a different infiltrative behaviour between grey matter and white matter. This lecture presents various image analysis tools that can help oncologists or radiotherapists to evaluate the extent and the growth of brain tumours. Specific focus is given to biophysical models that can describe the growth of tumors at various level of complexity and that can be personalized from times series of MR images.