UNIVERSITÀ POLITECNICA DELLE MARCHE

DII DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE

Avviso di Seminario

Bioimaging and Brain Research
Master Degree in Biomedical Engineering

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FUNCTIONAL TOPOGRAPHY OF HUMAN CORPUS CALLOSUM

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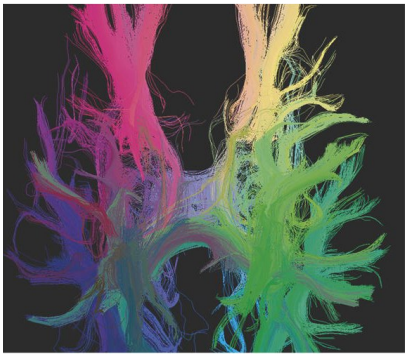

Abstract. A combined approach using diffusion tensor imaging (DTI) and tractography (DTT), two recently developed imaging techniques, and functional magnetic resonance imaging (fMRI), has enabled the detection of fMRI activation evoked by specific sensory or motor tasks in the corpus callosum (CC), and the reconstruction of the trajectory of commissural fibers interconnecting primary cortical area activated by specific tasks. These findings confirm that the CC has a functional topographic organization, and that fMRI may be used to explore it.

Bio. Mara Fabri is Associate Professor in Physiology. Author of more than 100 scientific papers published in international journals, on the following research topics:

1. Interhemispheric connectivity between Mammals cortical areas, studied by neuroanatomical, electrophysiological and functional techniques.
2. Neurotransmitters of projecting neurons of Mammals cerebral cortex, studied by neuroanatomical and immunohistochemical double-labeling technique.
3. Cortical representation of sensory periphery in the somatosensory areas of human cerebral cortex, studied by fMRI.
4. Topography human corpus callosum, studied of with imaging techniques.
5. Cortical representation of gustatory sensitivity in man studied by fMRI.
6. Study of imitative behavior in man, with neuropsychological and imaging techniques.

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