Abstract: Conference Bosnia-Herzegovina:

Title of the presentation:(45 Minutes)

**"To overcome Non-use learning for recovery of the upper limb for reach and grasp - The Bobath Concept"**

After stroke patients are often brought up in gravity very fast, “forced” to walk using an aid to be independent in daily life. If this is done without taking postural control into consideration it affects therecovery of the upper limb and supports Non-use learning. In stroke population most of the patients have no possibilities to use the affected upper limb in daily life at all or only with great compensation strategies. Which leads to less function.

This may occur because in physiotherapy the understanding of the system interaction is not really taken into consideration. A lot of research addresses the recovery of walking, postural control or function of the upper limb separatelyand the therapist must have an understanding to bring them all together to gain upper limb function in daily life.

The presentation will show the interconnections of the different central systems that need to be addressed to develop the prerequisites for reach, grasp and dexterity.

The discussion will relate to the postural control, which enable us to activate the straight-line pathway in reach and grasp. Further on we will discuss the consequences of diminution of sensory afferent input in regard to Non-use learning.

New research shows that the body schema is the basis for motor planning which is a critical point we have to meet in the rehabilitation of stroke patients.

Understanding the system control and include this into clinical practise with a specific activation and sensory afferent Input will enrich the body schema, create postural control and give the patient an opportunity to recover upper limb function.

Title of the workshop: 90 Minutes (partly theory and partly practical)

**"Implication of afferent sensory Input and multimodal integration for reach and grasp - The Bobath Concept"**

Human beingsdevelop their potential for moving and function on the basis of the development of the body schema. Afferent sensory Information out of all modalities are interconnected to a three dimensional picture in the parietal temporal lobe. The body schema needs a constant up date through sensory afferent input of internal and external resources to plan the adequate movement strategy in that moment in time and in theenvironment.

New research shows that the body schema is highly adaptable and this is depending on sensory afferent information through active movement. Non-use of paralysed limbs will reduce the body schema dramatically within 12 hours and this will cause great difficulties in activation of the motor areas of the paralysed limbs.

In this workshop we will learn which possibilities the physiotherapy has to intervene in patients after stroke to enrich the bodyschema. Through which pathways and interconnections we can influence the sensory integration in the CNS to improve motor control.

A case report and a personal lab will underpin this.