CDB and CMIS Joint Seminar

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14:30 ~ 16:00 C1F CDB Auditorium,

The plastic brain

The past 40 years have seen a radical change in understanding of the brain. Although its fundamental characteristics are determined genetically, its organization is now known to be 'plastic' – changing as a result of activity passing through neuronal networks. The best-known examples of such plasticity occur in sensory areas of the cerebral cortex during early postnatal 'sensitive periods'. But the cortex retains other forms of plasticity throughout life. The 'mapping' of sensory and motor areas can change rapidly in response to changes of input, local damage and learning. And the cortex can reorganize itself on a massive scale, after stroke or after the onset of blindness. There has been progress in defining the molecular mechanisms underlying some forms of plasticity, but much remains to be learned about adult brain plasticity and whether it can be harnessed to help the brain repair itself after damage or disease.

Dr. Colin Blakemore is Professor of Neuroscience at the Universities of Oxford and Warwick. He studied Medical Sciences at Cambridge, completed a PhD at the University of California, Berkeley and returned to Cambridge for 11 years. In 1979 he moved to Oxford as Waynflete Professor of Physiology. From 2003-2007 he was Chief Executive of the UK Medical Research Council. His research has been concerned with many aspects of vision, early development of the brain and plasticity of the cerebral cortex. He has served as President of the British Neuroscience Association, the Physiological Society and the Biosciences Federation. He is also passionately committed to public communication and engagement, for which he has won many awards, including the Royal Society Michael Faraday Prize. He has been President and Chairman of the British Association for the Advancement of Science.

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