



Neuroștiințe, boli neurologice, sănătate mintală și neurotehnologii – BRAIN

1. Neuroanatomy: external and internal structures of human brain
2. Neural signaling: synapses, excitability and signal propagation:
3. The neurotransmitter system in the neocortex:
4. Neuronal and glial cell biology and function:
5. Motor control: upper and lower motor neurons
6. Sensory systems: general principles, visual, somatic sensation
7. Complex brain functions: speech, sleep, memory
8. Aging neurobiology

Suggested reading:

1. Omme Fatema Sultana, Madhuri Bandaru, Md Ariful Islam, P. Hemachandra Reddy, Unraveling the complexity of human brain: Structure, function in healthy and disease states, *Ageing Research Reviews*, Volume 100, 2024,
2. Purves D, Augustine GJ, Fitzpatrick D, et al., editors. *Neuroscience*. 2nd edition. Sunderland (MA): Sinauer Associates; 2001. Part I, Neural Signaling.
3. Hansen, J.Y., Shafiei, G., Markello, R.D. *et al.* Mapping neurotransmitter systems to the structural and functional organization of the human neocortex. *Nat Neurosci* **25**, 1569–1581 (2022)
4. Levitan, Irwin B, and Leonard K Kaczmarek. *The Neuron : Cell and Molecular Biology*. Fourth edition. Oxford ; Oxford University Press, 2015.

