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Sommario/riassunto	As the ultimate information processing device, the brain naturally lends itself to being studied with information theory. The application of information theory to neuroscience has spurred the development of principled theories of brain function, and has led to advances in the study of consciousness, as well as to the development of analytical techniques to crack the neural code—that is, to unveil the language used by neurons to encode and process information. In particular, advances in experimental techniques enabling the precise recording and manipulation of neural activity on a large scale now enable for the first time the precise formulation and the quantitative testing of hypotheses about how the brain encodes and transmits the information used for specific functions across areas. This Special Issue presents twelve original contributions on novel approaches in neuroscience using information theory, and on the development of new information theoretic results inspired by problems in neuroscience.