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Sommario/riassunto	The aim of this Research Topic is to examine theoretical and experimental work directed at a detailed and comprehensive quantitative understanding of neuroanatomy. Integrating such knowledge with functional data should provide a more complete understanding of how the nervous system in different animal species is organized to generate appropriate behaviour. Three main areas will be covered in this issue. Firstly, progress in understanding neuroanatomical structures from applying novel mathematical and statistical methods. Secondly, experimental or computational work providing a quantitative analysis of microcircuit anatomy, cell distributions, cell morphologies, intracellular compartmentalization etc. Thirdly, experimental or computational studies of structural plasticity, and its effect on neural computations, e.g., changes in spine size and synaptic plasticity; changes in axonal projection patterns and cortical representations. Structural plasticity includes plasticity during development, in response to injury or disease and experience-induced plasticity.