At the interface between machine learning and neuroimaging the papers aim at shedding some light on the state of the art in this interdisciplinary field. They are organized in topical sections on coding and decoding, neuroscience, dynamics, connectivity, and probabilistic models and machine learning. Show all. Table of contents (32 chapters). In December 2011, we organized a workshop to explore the interface between machine learning and neuroimaging, and how this relationship affects the progress of research, the formulation of novel questions, and the recognition and tackling of big open issues in the field of neuroscience. In order to start a discussion among the involved communities, we invited experts from machine learning, biology, neuroscience, and neuroimaging, to share their views on questions they considered most exciting and important. Before the workshop, we asked all participants to contribute questions, in order to assess