Additive filters for LES MASSIMO GERMANO, Politecnico di Torino - Italy — In the framework of a research devoted to analyze the algebraic properties of the filtering operators and the possible constraints that they impose on the filtered terms, some recent results concerning the additive filters are presented. These filters are produced by summing two or more generic filters and in a sense they are dual of the product filters that have been usefully employed in the dynamic modeling procedures. In this contribution we present particular additive RANS/LES and RANS/DNS filters and their properties are discussed in detail. As regards the possible applications it is interesting to remark that the associated subgrid stresses are derived by mixing filters, and not by mixing models. As such they seem appropriate to the development of controlled hybrid RANS/LES and RANS/DNS filtering procedures that gradually match different computational zones.