

# APPROXIMATION SPACES

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**Abstract.** Approximation spaces are a simple and elegant construction which allows to establish at the same time interesting results for sequence spaces, function spaces and operator spaces. In this talk we review the construction of approximation spaces, including not only the classical case but also the limit spaces and their basic properties are studied. We also show their connection with the real interpolation method defined by the  $K$ -functional. It turns out that the behaviour of limiting approximation spaces for a number of properties is often quite different from the behaviour of classical approximation spaces.