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Ulrike Tillmann* (tillmann@maths.ox.ac.uk). *Commutative K-Theory*.

Vector bundles over a compact manifold can be defined via transition functions to a linear group. Often one imposes conditions on this structure group. For example for real vector bundles one may ask that all transition functions lie in the special orthogonal group to encode orientability. Commutative K -theory arises when we impose the condition that the transition functions commute with each other whenever they are simultaneously defined. We will introduce commutative K -theory and some natural variants of it, and will show that they give rise to new generalised cohomology theories.

This is joint work with Adem, Gomez and Lind building on previous work by Adem, F. Cohen, and Gomez. (Received September 10, 2014)