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Simona Paoli* (sp424@le.ac.uk), Department of Mathematics, University Road, Leicester, LE17RH, United Kingdom. *Weak globularity: a new paradigm for weakening higher categorical structures.*

Category theory has seen the development of several models of higher structures. Although quite different in flavour, they have in common the fact that the cells in each dimension form a set. This is also called globularity condition. I will discuss a new method for weakening higher categorical structures in which the set of cells in each dimension is replaced by a more complex structure. This gives rise to so called weakly globular structures. I will discuss these as they first arose in the context of homotopy theory, and I will then indicate some of the progress being made towards the general categorical case. (Received August 14, 2014)