

ALMOST CONFORMALLY EINSTEIN MANIFOLDS AND OBSTRUCTIONS

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ABSTRACT. The existence of a conformally Einstein structure is equivalent to the existence of a (suitably generic) parallel section of a certain vector bundle – the so called standard conformal tractor bundle. We show that this provides a systematic approach to constructing obstructions to conformally Einstein metrics. Relaxing the requirement that the parallel tractor field be generic gives a natural generalisation of the Einstein equations.

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