

**EXISTENCE OF STABLE SOLUTIONS TO $(-\Delta)^m u = e^u$ IN \mathbb{R}^N WITH
 $m \geq 3$ AND $N > 2m$**

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ABSTRACT. We consider the polyharmonic equation $(-\Delta)^m u = e^u$ in \mathbb{R}^N with $m \geq 3$ and $N > 2m$. We prove the existence of many entire stable solutions. This answers some questions raised by Farina and Ferrero's work.

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