

## The critical point equation on Kenmotsu and almost Kenmotsu manifolds

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**Abstract.** In this paper, we study the critical point equation (shortly, CPE) within the framework of Kenmotsu and almost Kenmotsu manifolds. First, we prove that a complete Kenmotsu metric satisfying the CPE is Einstein and locally isometric to the hyperbolic space  $\mathbb{H}^{2n+1}$ . In the case of Kenmotsu manifolds, it is possible to determine the potential function explicitly (locally). We also provide some examples of Kenmotsu and almost Kenmotsu manifolds that satisfy the CPE.

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