

[Home](#) [Evolutionary Intelligence](#) [Article](#)

Quantum Entanglement inspired Grey Wolf optimization algorithm and its application

Research Paper Published: 13 April 2022 16,1097–1114 (2023)

[Download PDF](#) 

Access provided by Swami Keshva

[Evolutionary Intelligence](#)[Aims and scope](#)[Submit manuscript](#)**Rajesh Kumar**Department of Electrical Engineering, Malaviya National
Institute of Technology Jaipur, Jaipur, India[View author publications](#)

You can also search for this author in

[PubMed](#) | [Google Scholar](#)[Nagraj Deshmukh](#), [Rujuta Vaze](#), [Rajesh Kumar](#) & [Akash Saxena](#)  **362** Accesses  **1** Citation  **1** Altmetric [Explore all metrics](#) →[Cite this article](#)

Abstract

Meta-heuristic optimization algorithms are becoming increasingly popular for their simplicity and efficiency. Grey wolf Optimizer (GWO) is one such effective algorithm that was proposed recently. It has been researched extensively owing to its impressive characteristics—easy to understand and implement, few parameters to be tuned, capability to balance exploration and exploitation and high solution accuracy. But in solving high dependence or complex optimization problems, GWO can stagnate into local optima owing to poor exploration strategy and can converge prematurely. To overcome these drawbacks of GWO, we propose Quantum Entanglement enhanced Grey Wolf Optimizer (QEGWO). Quantum Entanglement is particularly useful in significantly improving the treatment of multimodal and high dependence problems.