S_{ni}^{dg} GF GC Mi Mj D fit Bad Good d IL (d) Is ILO	Gravitational Constant Mass of object i Mass of object j Distance between objects fitness high power loss low power loss dimension Intensity of light at d distance Source Intensity Original IL	Greek symbol δ_{mi} δ_{ni} θ ni η β α_0 δ_{mi}	mi bus voltage phase angle ni bus voltage phase angle angle of admittance of $Y_i = Y_{ni} \angle \theta_{ni}$ density factor Absorption coefficient attractiveness at $d = 0$ mi bus voltage phase angle
		FA GSA DG FW/BW PV	Firefly Algorithm Gravitational Search Algorithm Distributed Generation Forward and Backward Photo Voltaic