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**Title:** Schwarzschild-Bach black holes in the Eddington–Finkelstein-like coordinates: explicit solution and its properties

**Abstract:** Spherically symmetric geometries occupy a privileged position within the studies of exact spacetimes in various theories of gravity fairly due to their direct physical interpretations as well as their mathematical simplicity. We analyse such solutions in the framework of the quadratic gravity, representing the GR natural modification, which includes quadratic corrections in the action. We extend previous works employing the Eddington–Finkelstein-like coordinates. This allows to find the explicit solution in the form of power series, analogously to the previous pioneering approach using the conformal-to-Kundt metric form, however, our results provide more direct transition to the classic Schwarzschild-like coordinates and simultaneously naturally elucidate physical and geometrical properties of the resulting solution such as basic aspects of geodesic motion, the quadratic gravity mass contribution, or formation of the cosmological horizon.