

# A universal model of interaction

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A universal model of interaction is proposed with time as an independent coordinate. The dynamics of the model is determined by a Lagrangian. It leads to conservation equations of energy, total angular momentum and the  $z$  component of the angular momentum. These yield a Keplerian orbit in three dimensions, which gives the observed values of perihelion precession and bending of light by a massive object. An expression for gravitational redshift is derived by accepting the local validity of special relativity. Exact expressions for gravito-magnetic relations, as well as their associated Lorentz-type force, are derived. The model conforms to recent tests of higher order gravitational effects such as those measured by earth satellites and those of binary pulsars.

The model can be applied to derive the fine spectrum of hydrogen and the properties of the nuclear force.