

Abstract Submitted
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Can an E-space Inter-Domain Interaction potential (EIDIP) be the missing block of Unified theory? MICHAEL HWANG¹, None — A Modified Newtonian Gravitational Potential (MNGP) that has a singularity at a two Normalized Spatial Unit (NSU) distance with a modified gravitational field constant in distance greater than 2 NSU region, and a saturated potential for distance less than 2 NSU region, a different E-space domain. The convolution interaction between two MNGPs results an E-space Inter-Domain Interaction potential (EIDIP), a scalar potential. Between two irrotational objects, the gradient of the scalar EIDIP produces a vector field, EIDIPd; whereas between two rotational objects, the angular EIDIP produces a different vector field, EIDIPr. The EIDIP can be used to model the upper bound of nuclear binding energy and its relationship with Higgs boson mass; the EIDIPd can be used to model the repulsive/attractive characteristic of the inter-nucleon nuclear force and inter-molecule covalent bonding force; the EIDIPr can be used to model the short range asymptotic freedom and long range color confinement behavior of the strong force in the inter-atomic range, and to model the anomalies of Pioneer 10/11 spacecraft sunward acceleration and the galaxy rotational velocity curve at the interstellar distance. A list of null hypothesis testing nodes, extracted from these EIDIP application model simulations and empirical data comparisons, indicates that the EIDIP has a 5 sigma confidence level potential to be the missing blocks in completing the Unified theory.

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