NEWTON-SANTILLI ISOEQUATIONS (1996)
Representation IsoSpace

$$\hat{\mathbf{S}}(\hat{\mathbf{t}},\hat{\mathbf{r}},\hat{\mathbf{v}}) = \hat{\mathbf{E}}(\hat{\mathbf{t}},\hat{\delta}_{\mathbf{t}}\hat{\mathbf{I}}_{\mathbf{t}}) \times \hat{\mathbf{E}}(\hat{\mathbf{r}},\hat{\delta}_{\mathbf{r}},\hat{\mathbf{I}}_{\mathbf{r}}) \times \hat{\mathbf{E}}(\hat{\mathbf{v}},\hat{\delta}_{\mathbf{v}},\hat{\mathbf{I}}_{\mathbf{v}})$$

$$\hat{\mathbf{I}}_{\mathbf{tot}} = \hat{\mathbf{I}}_{\mathbf{t}} = 1/\hat{\mathbf{T}}_{\mathbf{t}} \times \hat{\mathbf{I}}_{\mathbf{r}} = 1/\hat{\mathbf{T}}_{\mathbf{r}} \times \hat{\mathbf{I}}_{\mathbf{v}} = 1/\hat{\mathbf{T}}_{\mathbf{v}}$$

$$\hat{\mathbf{t}} = \mathbf{t} \times \hat{\mathbf{I}}_{\mathbf{t}}, \quad \hat{\mathbf{r}} = (\mathbf{r}_{\mathbf{k}} \times \hat{\mathbf{I}}_{\mathbf{r}}), \quad \hat{\mathbf{v}} = (\mathbf{v}_{\mathbf{k}} \times \hat{\mathbf{I}}_{\mathbf{r}})$$

Newton-Santilli IsoEquation

$$\hat{\mathbf{m}}_{\mathbf{k}} \hat{\times} \frac{\hat{\mathbf{d}}\hat{\mathbf{v}}_{\mathbf{k}}}{\hat{\mathbf{d}}\hat{\mathbf{t}}} = \hat{\mathbf{F}}_{\mathbf{k}}^{\mathbf{SA}}(\hat{\mathbf{t}},\hat{\mathbf{r}},\hat{\mathbf{v}})$$

Direct universality of the Newton-Santilli IsoEquation for $\hat{\mathbf{I}}_{\mathbf{t}} = \hat{\mathbf{I}}_{\mathbf{r}} = 1$

$$\mathbf{m}_{\mathbf{k}} \frac{\mathbf{d}(\mathbf{v}_{\mathbf{k}}\mathbf{I}_{\mathbf{k}})}{\mathbf{dt}} = \mathbf{m}_{\mathbf{k}} \frac{\mathbf{dv}_{\mathbf{k}}}{\mathbf{dt}} \hat{\mathbf{I}}_{\mathbf{v}} + \mathbf{m}_{\mathbf{k}}\mathbf{v}_{\mathbf{k}} \frac{\mathbf{d}\hat{\mathbf{I}}_{\mathbf{v}}}{\mathbf{dt}} = [\mathbf{F}_{\mathbf{k}}^{\mathbf{SA}} + \mathbf{F}_{\mathbf{k}}^{\mathbf{NSA}} \hat{\mathbf{I}}_{\mathbf{v}},$$

$$\hat{\mathbf{I}}_{\mathbf{v}} = \mathbf{\Sigma}_{\mathbf{k}=1,2,3} \mathbf{Diag.}(\mathbf{n}_{\mathbf{k}}^{\mathbf{2}} \mathbf{e}^{\mathbf{\Gamma}_{\mathbf{k}}(\mathbf{t},\mathbf{r},\mathbf{v})}, \quad \mathbf{\Gamma}_{\mathbf{k}} = \int \frac{\mathbf{1}}{\mathbf{m}_{\mathbf{k}}\mathbf{v}_{\mathbf{k}}} \mathbf{F}_{\mathbf{k}}^{\mathbf{NSA}} \times \mathbf{dt}.$$

R. M. Santilli, "Nonlocal-Integral Isotopies of Differential Calculus, Mechanics and Geometries," Rend. Circolo Matem. Palermo, Suppl. Vol. 42, 7-82 (1996), http://www.santilli-foundation.org/docs/Santilli-37.pdf

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R. M. Falcon Ganfornina and Juan Nunez Valdes, "Studies on the Tsagas-Sourlas-Santilli Isotopology," Algebras, Groups and Geom. 20, 1 (2003), http://www.santilli-foundation.org/docs/isotopologia.pdf