Translational Motion Concept Map

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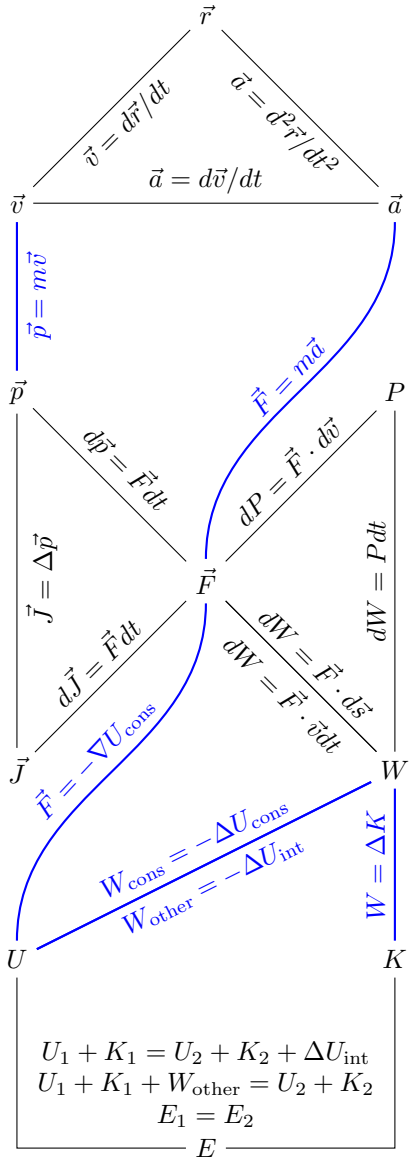

t	time
$\vec{r}$	position
$\vec{v}$	velocity
$\vec{a}$	acceleration
m	mass
$\vec{p}$	momentum
$\vec{F}$	force
P	power
$\vec{J}$	impulse
W	work
U	potential energy
K	kinetic energy
U_{cons}	potential due to conservative interactions
W_{cons}	work done by conservative interactions
U_{int}	internal energy
W_{other}	work done by interactions not accounted for explicitly
E	total energy
q	generic variable for discussion of operations
Δq	difference between final and initial values of q ($\Delta q \equiv q_{\text{final}} - q_{\text{initial}}$)
dq	differential element q
$\vec{q}_1 \cdot \vec{q}_2$	scalar (dot) product between q_1 and q_2 ($\vec{q}_1 \cdot \vec{q}_2 = \lvert\vec{q}_1\rvert\lvert\vec{q}_2\rvert \cos(\phi_{1,2})$)
∇q	gradient of the scalar q