

Download Leibniz And Dynamics

Biography Early life. Gottfried Leibniz was born on 1 July 1646, toward the end of the Thirty Years' War, in Leipzig, Saxony, to Friedrich Leibniz and Catharina Schmuck. Friedrich noted in his family journal: 21. Juny am Sontag 1646 Ist mein Sohn Gottfried Wilhelm, post sextam vespertinam 1/4 uff 7 uhr abents zur welt gebohren, im Wassermann. Gottfried Wilhelm Leibniz: Gottfried Wilhelm Leibniz, German philosopher, mathematician, and political adviser, important both as a metaphysician and as a logician and distinguished also for his invention of the differential and integral calculus independent of Sir Isaac Newton. Dynamics: Dynamics, branch of physical science and subdivision of mechanics that is concerned with the motion of material objects in relation to the physical factors that affect them: force, mass, momentum, energy. A brief treatment of dynamics follows. For full treatment, see mechanics. Dynamics can be A Leibniz integral rule for a two dimensional surface moving in three dimensional space is $\frac{d}{dt} \int_S \rho(\mathbf{r}, t) \mathbf{v}(\mathbf{r}, t) \cdot d\mathbf{A} = \int_S \rho(\mathbf{r}, t) \frac{d\mathbf{v}}{dt} \cdot d\mathbf{A} + \int_{\partial S} \rho(\mathbf{r}, t) \mathbf{v}(\mathbf{r}, t) \cdot d\mathbf{s} \times \mathbf{v}(\mathbf{r}, t)$, where: $\mathbf{F}(\mathbf{r}, t)$ is a vector field at the spatial position \mathbf{r} at time t , S is a surface bounded by the closed curve ∂S , $d\mathbf{A}$ is a vector element of the surface S , $d\mathbf{s}$ is a vector element of the curve ∂S .