

1154-70-2178      **Gabriel Martins\*** ([g.martins@csus.edu](mailto:g.martins@csus.edu)). *Confining Charged Particles in 3 Dimensions Using Bounded Magnetic Fields.*

We study the problem of confining a charged particle to the interior of a bounded region in 3-space with smooth boundary by using magnetic fields. We show that when considering bounded magnetic fields one may confine particles of low enough energy. This simple model is inspired by the dynamics in the interior of particle accelerators and fusion reactor devices. (Received September 17, 2019)