

1056-35-913

**Florentina Tone\*** ([ftone@uwf.edu](mailto:ftone@uwf.edu)), Department of Mathematics and Statistics, University of West Florida, 11000 University Parkway, Pensacola, FL 32514. *On the Long-Time H2-Stability of the Implicit Euler Scheme for the 2D Magnetohydrodynamics Equations.*

In this talk we consider the two-dimensional magnetohydrodynamics equations, we discretize these equations in time using the implicit Euler scheme and with the aid of the classical and uniform discrete Gronwall lemma, we prove that the scheme is H2-uniformly stable in time. (Received September 18, 2009)