

1135-65-1203      **Monika Neda\*** ([monika.neda@unlv.edu](mailto:monika.neda@unlv.edu)), Dept. of Mathematical Sciences, Univ. of Nevada Las Vegas (UNLV), 4505 Maryland PKWY, Box 454020, Las Vegas, NV 89154, and **Sean Breckling**.  
*Numerical Studies of Navier-Stokes-alpha model*. Preliminary report.

This talk will present the numerical finite element studies of the Navier-Stokes-alpha model, stability and convergence results of the finite element solution using a specific div-free finite elements. Then, sensitivity analysis based on the filter parameter alpha will be presented as well. The sensitivity analysis is based on the sensitivity equation method discretized with finite element in space. Lastly, the joint energy-helicity cascade exhibited by the model's equations will be discussed. (Received September 20, 2017)