1035-92-1995 **Dawn A. Lott*** (dlott@desu.edu), 1200 N. DuPont Highway, Dover, DE 19904, and **Charles J. Prestigiacomo**, **Anwar Atif**, **Sami Atif** and **Darius Wheeler**. *Mathematical predictions for surgical and endovascular aneurysm repair.*

An aneurysm is a balloon-like dilation found on the walls of a blood vessel. The exact causes of aneurysm formation and rupture vary. For that reason and due to their mere location, intracranial aneurysms require much investigation. Haemodynamic factors such as velocity, pressure, and shear stress play an important role in aneurysm development, growth and rupture. The finite volume technique, FLUENT, in combination with the study of the Navier Stokes equation governing blood flow, are utilized to study two popular approaches for aneurysm repair; surgical and endovascular. Numerical results of aneurysm clipping and microcoils insertion in the aneurysm sac are explored and the optimal techniques predicted mathematically are presented. (Received September 21, 2007)