

1020-47-273

**A Rajput\*** ([dranilrajput@hotmail.com](mailto:dranilrajput@hotmail.com)), Department of Mathematics and Computer Scienc,  
Sadhu Vaswani College, Bairagarh Bhopal-30, India. *Fixed Point Theory and Its Applications*.

The primary goal of this talk is to give the application and examples of fixed point theorems constitute substantial branch of mathematics and have many applications in mathematics and other areas, including economics. Most theorems that ensure the existence of solutions of differential equations can be reduced to fixed point theorems.

Fixed point semantics of recursive programs provides the mathematical setting for Anil inheritance model for Anil object- oriented language (like C++). By using fixed point technique, recursive definitions can be transformed into a non-recursive form.

There are effective ways to calculate approximation Brouwer fixed points and these techniques are important in a multitude of applications including the calculation of economic equilibria. The conditions for convergency to market equilibrium are examined applying Banach fixed point principle and relevant iteration process.

We also discussed the fixed point theorems for multifunctions in Banach spaces are presented and a method is developed indicating how to use approximate fixed point theorems in proving the existence of approximate Nash equilibria for non-cooperative games. (Received August 30, 2006)