Nianpeng Li and Abdul-Aziz Yakubu* (ayakubu@howard.edu), Department of Mathematics, 2441 6th Street NW, Washington, DC 20059. A Discrete-Time Age-Structured Model Of Exploited Fishery Systems.

In this talk, we will introduce a juvenile-adult age-structured production exploited fishery model with a very general recruitment function. As case studies, we will use our model results and historical fish population data from Georges Bank to investigate the impact of recent harvesting levels on the sustainability of cod fishery. We will show that a constant harvesting policy with the historical harvesting rates would lead to the recovery and sustainability of Georges Bank cod fishery. (Received September 19, 2011)