



## **The Use Of Gis Techniques For Flood Forecasting**

**E. Baltas**

Department of Hydraulics, Soil Science and Agricultural Engineering, School of Agriculture, AUTH, Thessaloniki, Greece, e-mail:baltas@agro.auth.gr, Tel:2310998803

A distributed rainfall-runoff model capable for real time flood forecasting utilizing highly spatial and time resolution data was developed. The study region is equipped with a number of raingage recording stations, a permanent installation for flow measurement and a stage recorder. The entire basin located under the WSR-74 S-band 100 km radar umbrella was digitized and discretized to 2x2 km<sup>2</sup> grid squares by implying GIS techniques. A series of rainfall events recorded producing floods were analyzed and processed. The linear channel parameter assigned to each grid square is based on its location measured by the centroid of the grid square along the channel network. The estimation of the hillslope and the stream velocity are calculated based on GIS procedures.