962-13-1183   **Mikhail K Tchobanou** and **Cynthia J Woodburn*** (`cwoodbur@pittstate.edu`). *Gröbner Bases and the Design and Implementation of Multi-Dimensional Filter Banks.* Preliminary report.

The growing demand for processing and compression of still images and video signals in telecommunications and multi-media technology has increased interest in multi-dimensional digital filters. The theory of Gröbner bases for ideals and modules over a multivariate polynomial ring over a field is applied to solve several problems of interest in multi-dimensional systems and signal processing. (Received October 02, 2000)