# Approximation Algorithms

## K. Subramani, LCSEE, West Virginia University

## March 18, 2014

### 1. Bin-Packing

- (a) An inapproximability bound.
- (b) An asymptotic PTAS.

### 2. Scheduling with unrelated parallel machines.

- (i) Problem definition.
- (ii) Factor 2 algorithm.
- (iii) The LPT rule and a  $\frac{4}{3}$  algorithm.
- (iv) Restricted bin-packing.
- (v) Reduction from makespan to Restricted binpacking.