Convergence of Double Auctions to Pareto Optimal Allocations in the Edgeworth Box

Dan K. Gode, New York University
Stephen E. Spear, Carnegie Mellon University
Shyam Sunder, Yale University

Abstract
Double auctions with profit-motivated human traders as well as “zero-intelligence” programmed traders have previously been shown to converge to Pareto optimal allocations in partial equilibrium settings. We show that these results remain robust in two-good general equilibrium settings and elucidate how market structure, not optimization by traders, guides efficient resource allocation.

Keywords: Pareto optimal allocations, Edgeworth Box, Double auction, Zero-intelligence traders

JEL Codes: C63, C68, D44, D51, D58, D61

First Draft: June 1993
Revised Draft: May 2004

Please do not quote without the authors’ permission. Email dgode@stern.nyu.edu, ss1f@andrew.cmu.edu, or shyam.sunder@yale.edu.