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Network-Based Representation of Stock Market Dynamics: An Application to American and Swedish Stock Markets1 Introduction; 2 Notations and Model; 3 Static and Dynamic Behavior of Market Graphs; 4 Conclusion; References; On a Numerically Stable Algorithm for the Analysisof Generalized Volterra Lattice; 1 Volterra Lattice and Inverse Spectral Problem for Jacobi Operator; 2 Generalized Volterra Lattice and Inverse Spectral Problem for Band Hessenberg Operator; 3 Simple Version of Modified Moments Algorithm; 4 Main Result; References How Close to Optimal Are Small World Properties of Human Brain Networks?1 Introduction; 2 Materials and Methods; 3 Results; 3.1 Clustering Coefficient; 3.2 Network Efficiency; 3.3 Characteristic Path Length; 4 Discussion; References; Optimizing Network Topology to Reduce Aggregate Trafficin Systems of Mobile Agents; 1 Introduction; 2 Problem Formulation; 3 Network Topology Reconfiguration Algorithms; 4 Network Topology Optimization Algorithms; 4.1 Optimal Algorithm; 4.2 Simulated Annealing Algorithm; 4.3 Greedy Algorithm; 5 Complexity Analysis; 6 Simulation Results; 7 Conclusion; References Integrated Production Planning, Shift Planning, and Detailed Scheduling in a Tissue Paper Manufacturer1 Introduction; 2 Literature Survey; 3 Planning Environment; 3.1 Characteristics of Competitive Environment; 3.2 Characteristics of Production Environment; 3.2.1 Two-Phase Production; 3.2.2 Multi-facility Production System; 3.2.3 Product Families; 4 Problem Definition; 4.1 Basic Definitions; 4.2 Planning Problem and Problem Architecture; 5 Solution Procedures; 5.1 Capacity Planning Model; 5.2 Shift Planning Model; 5.3 Scheduling Model; 5.3.1 Batch Sizing Model
5.3.2 Sequencing of Production Batches

Sommario/riassunto	This volume contains a selection of contributions from the "First International Conference in Network Analysis," held at the University of Florida, Gainesville, on December 14-16, 2011. The remarkable diversity of fields that take advantage of Network Analysis makes the endeavor of gathering up-to-date material in a single compilation a useful, yet very difficult, task. The purpose of this volume is to overcome this difficulty by collecting the major results found by the participants and combining them in one easily accessible compilation. Network analysis has become a major research topic over the last several years. The broad range of applications that can be described and analyzed by means of a network is bringing together researchers, practitioners and other scientific communities from numerous fields such as Operations Research, Computer Science, Transportation, Energy, Social Sciences, and more. The contributions not only come from different fields, but also cover a broad range of topics relevant to the theory and practice of network analysis, including the reliability of complex networks, software, theory, methodology, and applications.