

# Negotiating and Sharing Capacities of Large Additive Manufacturing Networks

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## Abstract

This paper focuses on dynamics of productive and demanding nodes for Scattered Manufacturing Networks within 3D Printings contexts. The various nodes issue orders or sell production slots in order to achieve their own aims. An orchestrator coordinates the dynamics along the network according to principles of sustainability, equated shared resources and transparency by managing communication activities among nodes. In particular, suitable tradeoffs occur by a unique framework that, with the aim of optimizing the overall costs, suggests either logistics paths along the network or negotiation policies among nodes in order to reallocate resources. Numerical examples present the proposed approach.