

Special Session Call for Papers:

# MRP and Related Systems Approach to Industrial Engineering and Services

Chairs:

#### Prof. Dr. Daria Battini

University of Padua, Department of Management and Engineering, Vicenza, Italy daria.battini@unipd.it

### Prof. Dr. Marija Bogataj

CERRISK and MEDIFAS, Ljubljana, Slovenia marija.bogataj@guest.arnes.si

Researchers are invited to attend this special session and to submit papers for presentation on applications and developments of MRP Theory and related topics. Please send papers to Prof. Dr. Marija Bogataj, marija.bogataj@guest.arnes.si, by June 30, 2017 at the latest. The event marks the twentieth anniversary of the first mini-symposium on MRP Theory (Storlien, Sweden, 1997).

## MRP Theory and related topics

#### Abstract:

Transform methods combined with Input-Output Analysis have been applied for the sake of formulating theoretical descriptions of Material Requirements Planning (MRP) and related formulations concerning divergent material flow systems (transportation, distribution) and systems encompassing recycling (initiated by Robert W. Grubbström). The transform approach has had a fourfold use, (i) it has been useful for describing time developments of the relevant production, demand and inventory properties in a compact way including effects of lead times, (ii) the transform also captures stochastic properties when needed by functioning as a generating function, (iii) it is easily applied for evaluating the resulting cash flows when adopting the Net Present Value principle, and (iv) it can be used for evaluating risk preference functions with constant absolute risk aversion, a combination having been applied in a variety of areas (Grubbström, 2016). It was recognised as very useful approach also when study location opportunities, where timing is important.

Note: When submitting the paper, please, select:

"MRP and Related Systems Approach to Industrial Engineering and Services".