



INDUSTRIAL MANAGEMENT



Seminario Permanente en Diseño, Gestión y Optimización de Procesos  
Industriales y de Servicios

*Seminar on Design, Management and Optimization of Processes in Industry  
and Services*

## “The influence of diverse processing times in permutation flow shop scheduling”

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**Summary:** The processing times in deterministic job scheduling problems often refer to a uniform distribution  $U[1,99]$ , i.e. the processing times for each job on each machine are not equal. This heterogeneity is referred to as diversity of processing times. It is well-known from queueing theory that every non-uniformity in a production system has to be buffered by inventory, capacity and/or time. We will show that these buffers are also necessary in deterministic flow job scheduling with diverse processing times. Furthermore, we will discuss the relationships between buffers and diversity and how these interdependencies can be influenced.