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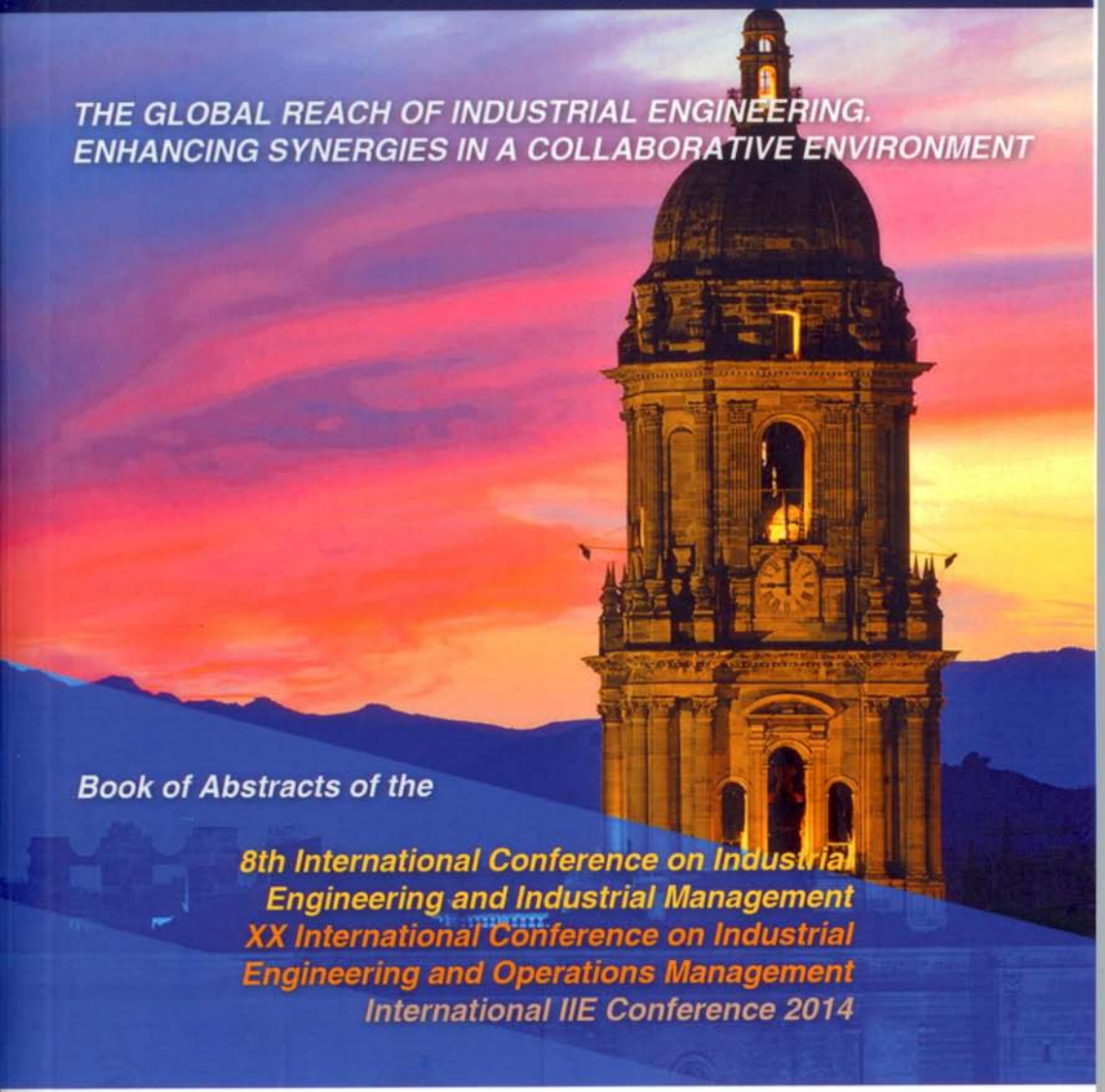
THE GLOBAL REACH OF INDUSTRIAL ENGINEERING. ENHANCING SYNERGIES IN A COLLABORATIVE ENVIRONMENT



Book of Abstracts of the

8th International Conference on Industrial Engineering and Industrial Management
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189 Mixed-Model Sequencing Problem improving labour conditions

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Abstract: It is presented an extension of the mixed-model sequencing problem that considers some working conditions agreed between companies and trade unions. In particular, it is formulated a mathematical model with saturation limits which an operator can have throughout his workday and with the possibility of increasing the work pace of the operators at certain times of the workday. In this way, it is possible to improve labour conditions and line productivity simultaneously. In fact, the proposed model is evaluated by means of a computational experience that allows to observe that an increment of $3.\hat{3}\%$ on the work pace factor of processors reduces the work overload by 62.6% while the saturation conditions imposed by collective agreements are satisfied.

Keywords: Mixed-model assembly line; Work overload; Saturation; Work pace.