



UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional

Designação do projeto | FAST-manufacturing – Flexible and SusTainable Manufacturing
Código do projeto | POCI-01-0145-FEDER-031165 - PTDC/EEI-EEE/31165/2017
Objetivo principal | Propor modelos matemáticos e métodos de resolução para problemas de sequenciamento da produção em sistemas de produção flexíveis e por esta via contribuir para a produção sustentável quer na dimensão económica quer na dimensão ambiental.
Região de intervenção | Norte
Entidade beneficiária | INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência

Data de aprovação | 24-04-2018

Data de início | 01-07-2018

Data de conclusão | 30-06-2021

Custo total elegível | 226 481,96€

Apoio financeiro da União Europeia | FEDER: 192 509,67€

Apoio financeiro público nacional/regional | 33 972,29€

The project aims :

This project focus on manufacturing flexibility and sustainability. The former is researched by optimizing scheduling operations in flexible manufacturing systems through the cumulative integration of the several sub-problems faced in manufacturing flexible systems.

Sustainability is promoted via optimizing resource consumption and pollutant emissions along with the usual efficiency measures (makespan, tardiness, workload, etc.) for production operations scheduling problems.

Regarding the emissions, it also accounts for the possibility of buying and/or selling pollution permits.

This project aims at developing mathematical programming models as well solutions methods to solve them for the aforementioned problems.

In addition, and due to the NP-hardness nature of the problems under consideration, we also aim at proposing solution approaches based on evolutionary algorithms that are capable of finding good solutions in a reasonable are also proposed.