

## CALL FOR APPLICATIONS

### Job:

<b>Job reference:</b>	AE2016-0366 (DM4Manufacturing-1 - CESE) INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência
<b>Position:</b>	Research Grants (BI)
<b>City:</b>	Porto
<b>Research field:</b>	Main: ENGINEERING Sub: Industrial engineering

### Job summary:

**INESC TEC is accepting applications to award 1 Research Grant for MSC.**

<b>Project:</b>	DM4Manufacturing: Aligning Manufacturing Decision Making with Advanced Manufacturing Technologies
<b>Scientific Advisor:</b>	Samuel Moniz
<b>Duration Grant:</b>	from 2017-01-09 to 2018-01-08 (12) - Eventually renewable until the project conclusion or budget.
<b>Location:</b>	INESC TEC, Porto, Portugal

### Job description:

**Work Area:** Simulation and optimization methods for flexible industrial layout design and production planning

**Project overview:** Industrial Layouts require to be flexible so that they can easily adapt to different production mixes. The design of flexible layouts must consider then some dynamic characteristics of the production systems such as material flows, material handling and transportation tasks, work in process, queuing, and throughput rate. The detail modelling of this problem, which for some variables is strongly stochastic, can be done by linking optimization and simulation methods.

**Objectives:** The main purpose of this project is to develop hybrid simulation-optimization modelling approaches for designing flexible layouts, having superior levels of automation of the transportation tasks. Moreover, the integration of layout design and production planning and internal logistics decisions shall be addressed in this research, so as to investigate new solutions for efficiently dealing with low production volumes, high variety and high variability systems.

<b>Academic Qualifications:</b>	MSc in Engineering and Industrial Management, Computer Engineering or similar
<b>Minimum Profile required:</b>	Skills in optimization and simulation modelling; Strong interest in solving complex problems; Ability to work in multidisciplinary research projects; Proficiency in English.
<b>Preference factors:</b>	Motivation for conducting a PhD in the scope of the project; competences in optimization models and/or discrete-event simulation models (SIMIO or ANYLOGIC); proficiency in programming languages.
<b>Monthly Grant:</b>	€980,00 (MSC) according to the Stipends values of the grants awarded directly by the FCT, paid by bank transfer. The grant holder can receive additional payments by participating in complementary contracts or projects that contribute to the work plan (Clauses 12 and 13 of INESC TEC Grants Regulation and Annex II), in accordance with paragraph 4 of article 5 of Research Grant Holder Statute, approved by Law nº 40/2004, dated 18 August, up to a maximum of 50% of the monthly grant.

<b>Project duration:</b>	2016-11-01 a 2019-10-31
<b>Funding Entity:</b>	FCT (POCI-01-0145-FEDER-016418)
The grant contract shall be submitted to the legislation concerning the Research Grant Holder Statute , approved by Law n 40/2004, dated 18 August, amended and republished by Decree-Law No. 202/2012 of 27 August and amended by Decree-Law No. 233/2012 of 29 October and by Law No. 12/2013, of January 29, and Decree-Law No. 89/2013 of July 9 as well as by INESC TEC Grant Regulation , approved by FCT - Fundação para a Ciência e a Tecnologia (Science and Technology Foundation) in 12 January 2011 and FCT current Grant Regulation. Additional information about <a href="#">INESC TEC Grants Regulation</a> and relating annexes may be found at <a href="http://www.inesctec.pt/grants">www.inesctec.pt/grants</a>	

<b>Selection Criteria:</b>	Curriculum evaluation based on the criteria referred to in Clause 7º <a href="#">INESC TEC Grants Regulation</a> and will include individual interviews in the final stage of the selection process, with its valuation: 75% curriculum evaluation (30% CV, 25% scientific domains and 20% Expertise) and 25% interview.
<b>Selection Jury:</b>	President of the Jury: Prof. Américo Azevedo; Permanent Member: Prof. Samuel Moniz; Substitute Member: Prof. Alexandra Sofia Marques;
<b>Notification of results:</b>	The results of the selection process will be disseminated to interested parties by mail, as referred to in Clause 8 of <a href="#">INESC TEC Grants Regulation</a> .
<b>Application period:</b>	From 2016-12-21 to 2017-01-03
<b>Application submission:</b>	Fill in the electronic form in the section <a href="#">Work with Us</a> at <a href="http://www.inesctec.pt">www.inesctec.pt</a>

