

Successful projects are managed.  
They seldom just happen!



# PhD vacancy

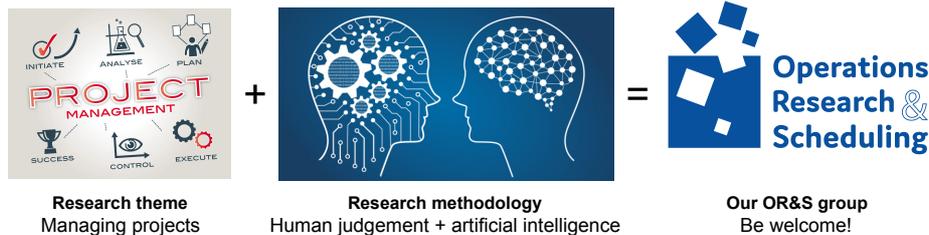
OR&S searches motivated researchers (m/f)

*"Curiosity is one of the permanent and certain characteristics of a vigorous intellect" (Samuel Johnson)*

## Research description

The Operations Research and Scheduling (OR&S) group at the faculty of Economics and Business Administration (Ghent University) develops decision support systems for academic purposes, based on a well-balanced combination between **academic state-of-the-art knowledge** and **practical relevance**. The OR&S group searches for new, young and dynamic researchers for the project entitled "Searching for static and dynamic project drivers to predict and control the impact of management/contingency reserve on a project's success".

The research topic will be devoted to **Data-driven Project Management** using well-known as well as novel project management tools and techniques, and includes the construction of a baseline schedule, the analysis of project risk as well as the improvement of project control. Other topics are project **contracting** (using concepts from **behavioural economics**), **human behaviour** in decision making (inspired by the theories from Daniel Kahneman) and optimisation for project **portfolio** management. The methodology used for the research consists of a mix of [big] data analysis, simulation, optimisation, using state-of-the-art machine learning tools and artificial intelligence techniques. This methodology, known as **Management Science/Operations Research** is applicable to many complex business processes. Topics such as project scheduling, resource allocations, project contracting, project monitoring and control, project portfolio management and many more belong to the core expertise of the research group.



## Job description

You carry out academic and/or applied research in the field of Data-driven Project Management and you aim at holding a **doctoral degree**, after approximately 4 years research. You participate in the international debate on research and practitioner conferences across the world and you publish your research papers in international top flag journals. You are prepared to give exercise sessions (in English and preferably also in Dutch) to classes with business engineering and/or civil engineering students.

## Your profile

You have an enthusiastic personality and a quantitative mind and you are holder of a university degree (preferably business engineering, applied economic sciences, civil engineering, bio engineering or a master's degree in mathematics, IT or computer science). You have a wide interest in optimisation applications and you really want to complete research in this field. You are familiar with at least one higher program language (e.g. C, C++, Visual Basic, Java) or you are prepared to make efforts for learning a program language. You can work independently, accurately and systematically. You have a very good knowledge of the English language (both orally and in writing).

## Our offer

A contract as full-time scientific employee within the Ghent University with a young, dynamic and enthusiastic team of researchers (meet them at [www.projectmanagement.ugent.be/staff/members](http://www.projectmanagement.ugent.be/staff/members)). You will get in contact with prominent national and international research groups and companies, and you will have the possibility to present research results on important international conferences.

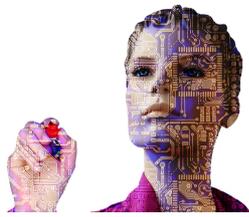
## Interested?

Feel free to contact **Mario Vanhoucke**, promotor of these research projects, by e-mail to [mario.vanhoucke@ugent.be](mailto:mario.vanhoucke@ugent.be) or send your CV to Faculty of Economics and Business Administration, Secretariat Department EBO8, to the attention of Mario Vanhoucke, Tweekerkenstraat 2, B-9000 Ghent (Belgium).

**OR&S: Operations Research and Scheduling Group**

In collaboration with OR-AS: Operations Research - Applications and Solutions

Contact us: [www.projectmanagement.ugent.be](http://www.projectmanagement.ugent.be) or [www.or-as.be](http://www.or-as.be)



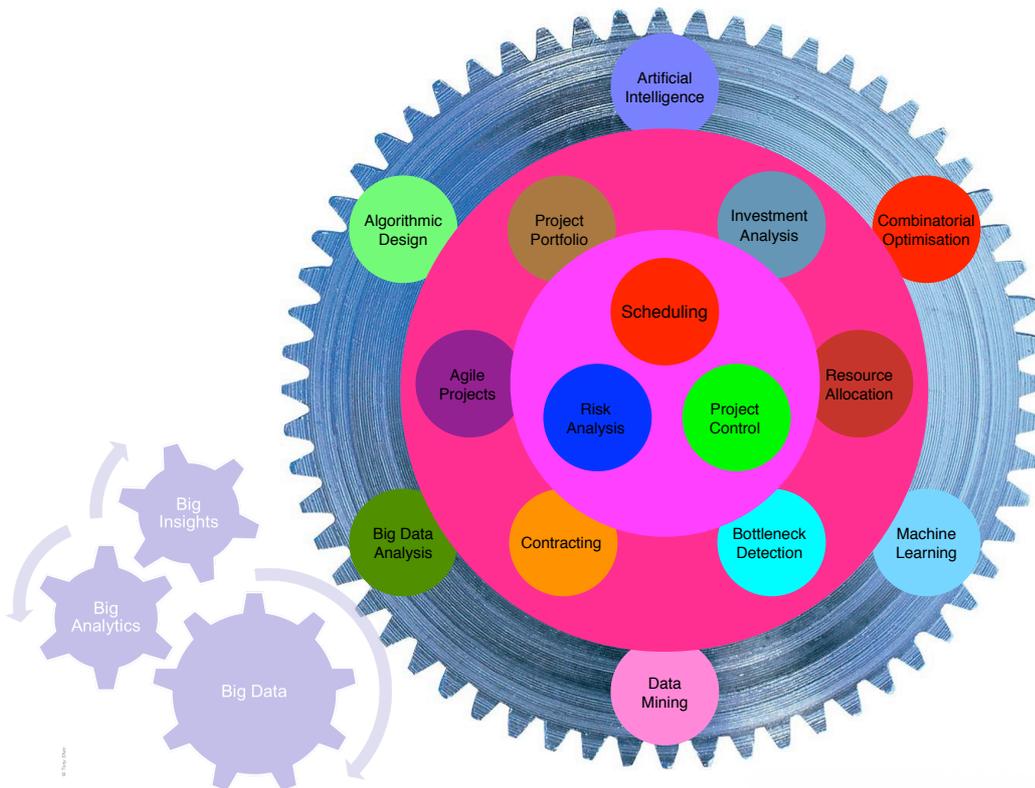
## Concerted Research Actions

A researcher at the OR&S group is part of the so-called **concerted research action** project that aims at **scientific excellence** on the basis of objective data – more specifically on the basis of publications and other indicators that show the scientific quality of the research group.

In order to assure that the research has practical business relevance, we don't work on an island. This “more than a million euro” research project is strongly supported by various professional organisations, such as EVM Europe, the Belgian chapter of the Project Management Institute ([www.pmi-belgium.be](http://www.pmi-belgium.be)), the College of Performance Management (US, [www.mycpm.org](http://www.mycpm.org)), CERN (Switzerland, [www.cern.ch](http://www.cern.ch)), and by recognised universities such as the George Washington University (US), UCL School of Management from University College London (UK), and the University of Lisbon (Portugal).

## Data-driven Project Management ...

Data-driven Project Management, often referred to as **Dynamic Scheduling**, is the integration of baseline scheduling, risk analysis and project control and aims at understanding static and dynamic drivers of project success. You will be part of this ambitious research project to carry out different experiments on fictitious and empirical project data. The aim is to write top academic papers as well as more practical oriented guidelines that bring value to the project management discipline.



Research topics at OR&S

## ... And beyond

The research topics are not restricted to the dynamic scheduling themes, but go far beyond this discipline and contain topics such as project contracting, portfolio management, resource allocation, human behaviour in decision-making, and much more (see figure). The underlying methodology is a data-driven approach including analytics and optimisation algorithms, artificial intelligence methods, and machine learning procedures in order to create disruptive research and novel project management systems for the complex, interconnected world of the future.

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