Research options available for topic A

Research topics a) and b) offered by every Doctoral Course involved in UNIPhD are frameworks within which every applicant has to present an original research project in collaboration with a Supervisor at the University of Padua.

Potential Supervisors at Unipd have proposed the following detailed research options, which are related to the research topic. They are offered as a guideline and should facilitate your contact with potential Supervisors. Supervisors' e-mail is specified in every research option table. You are welcome to contact them directly.

Note that this research option list is not at all exhaustive and, within the topic you have chosen, you are free to propose a different research project.

Doctoral Course	**MANAGEMENT ENGINEERING AND REAL ESTATE ECONOMICS**
Macro-area	Physical Sciences and Engineering
Department name	Department of Management and Engineering
Webpage	*http://www.gest.unipd.it/en/research/phd-programmes/management-engineering-and-real-estate-economics?set_language=en*
Research topic A	**Innovations of operations and technology management** The topic "Innovation of operations and technology management" concerns the study of the managerial issues related to the adoption of innovative digital technologies. In particular, the research will give particular attention to how managerial practices should change to take effective advantages from digitization challenges.
Link to the UNIPhD Call (Academic Year 2022/2023)	*https://www.unipd.it/en/uniphd*
Latest Update	*12.01.2022*
#Number of available Research Options	*2* *Scroll down to see all the Research Options*

#1 Research Option Description

Doctoral Course	**Management Engineering and Real Estate Economics**
Department name	Department of Management and Engineering (DTG)
Research topic A	Innovation of operations and technology management
Research option	Performance measurement and management practices to face digital transformation in SMEs
Supervisor	Patrizia Garengo, (Research group members: Umit Bititci, U.S.Bititci@hw.ac.uk Heriot-Watt University; Andrea Vinelli andrea.vinelli@unipd.it University of Padua; Juhani Ukko Juhani.Ukko@lut.fi LUT University, Finland)
Webpage	PhD course: http://www.gest.unipd.it/it/ricerca/corsi-di-dottorato/ingegneria-economico-gestionale
Context of the research activity and objectives	In the last few years, enterprises of all sizes have been increasingly implementing digital technologies to remain competitive in a globalised scenario. Despite the recognized role of digitalization in supporting business performance, numerous researches underline that manufacturing companies devote much of their attention to technological innovation while neglecting operational and managerial processes (Garengo and Bernardi 2007; Garengo, 2009; Bititci et al., 2012; Trotta and Garengo 2020). Recent studies emphasise, the new business trend requires, more than ever, the development of managerial innovation with particular attention to performance measurement and management practices (PMM) to favour effective digital transformation in all companies and particularly in SMEs (Bititci et al., 2015; Nudurupati et al., 2021; De Toni and De Zan, 2015). Given these premises, the significant challenge is to identify and codify the operational and managerial best practices to support SMEs in designing and implementing performance measurement and management practices (PMM) consistent with the new digital technologies. This grant aims to develop knowledge about the effective PMM practices for SMEs in digitalized environment. In particular, the project will investigate how SMEs can develop PMM to take effective advantage of investments in digital technologies. Using theoretical and empirical research, the research project has to a) identify the best PMM practices supporting the adoption of digital technologies; b) design a theoretical model to make explicit the relationship between PMM and the adoption of digital technologies in SMEs.
Infrastructures	LABs and libraries of the University of Padua and online databases of scientific journals Library of the Edinburg Business School Heriot-Watt University, Edinburgh
Skills and competencies for the development of the activity	The researcher must have had suitable professional training, experience and the attitude to effectively carry out the activities and tasks of the project under the direction of the principal investigator. In particular, the characteristics listed below are preferable: - a first-class honours degree in business or management that includes training in management/social sciences research methods - some practical experience in management

Training offer	- PhD seminar courses delivered by the doctoral school (University of Padua, Italy) - EurOMA Doctoral Seminar - Advances in Production Management Systems (APMS) doctoral symposium - AiIG summer school (Italy) - British Academy of Management Doctoral Symposium (UK) - AIMAC doctoral symposium, University of Cambridge-Judge Business School (UK)
Possible Secondments	- six-month research at the Edinburgh Business School, Heriot-Watt University, Edinburgh, under the supervision of Prof. Umit Bititci. During this period researcher will stay also at the National Robotarium, to be based at Heriot-Watt's Edinburgh Campus. - three-months research at the Performance measurement lab of the Department of Industrial Engineering and Management, LUT University, Finland under the supervision of Prof. Juhani Ukko - three-month work placement at a participating manufacturing organisation.

#2 Research Option Description

Doctoral Course	Management Engineering and Real Estate Economics
Department name	Department of Management and Engineering (DTG)
Research topic A	Innovation of operations and technology management
Research option	Performance Measurement and Management Practise in Industry 4.0
Supervisor	Patrizia Garengo (Research group members: Luisa Huatuco, luisa.huatuco@york.ac.uk University of York Management School, Thanos Papadopoulos; Andrea Vinelli andrea.vinelli@unipd.it University of Padua, A.Papadopoulos@kent.ac.uk University of Kent)
Webpage	PhD course: http://www.gest.unipd.it/it/ricerca/corsi-di-dottorato/ingegneria-economico-gestionale
Context of the research activity and objectives	In the last few years, a new industrial revolution has been emerging termed the Fourth Industrial Revolution, or Industry 4.0. It is recognized as a great challenge for all organization types and many countries are planning huge investments to increase the adoption of a set of innovative technologies (i.e. Big Data Analytics, Cloud Services, 3D-Printing, Cyber Security, Autonomous Robots, Internet of Things, Augmented Reality, Simulation, Horizontal and Vertical Integration) to transit toward this new industrial paradigm. Whilst the important role of the Industry 4.0 phenomenon on organizations is widely recognized by scholars and practitioners, the impact of business digitalization on performance measurement and management is not enough explored. Among scholars, there is a large consensus concerning the fact that investment in digitalization will significantly affect the way we manage the performance of our businesses, operations and supply chains. However, despite the relevance of new business trends and their impact on all managerial practices, the literature does not provide sufficient insight into the understanding of how digitalization influences managerial issues. This research project aims to develop knowledge about the impact of the use of digital technologies in performance measurement and management practices. In particular, the project will investigate how manufacturing firms can develop effective managerial practices to take effective advantage of investments in Industry 4.0 digital technologies. The research project will a) identify the effective performance measurement and management practices supporting the adoption of Industry 4.0 digital technologies; b) design a theoretical model to make explicit the relationship between performance management and the adoption of Industry 4.0 digital technologies c) provide practitioners with pathways to improve their application of Industry 4.0 digital technologies.
Infrastructures	LABs and libraries of the University of Padua and online databases of scientific journals Library of the University of York Management School, UK. Inter-disciplinary collaboration with other departments across both Universities and networks.

Skills and competencies for the development of the activity	The researcher must have had suitable professional training, experience and the attitude to effectively carry out the activities and tasks of the project under the direction of the PhD supervisors. In particular, the characteristics listed below are preferable: - A first-class honours degree in business or management that includes training in management/social sciences research methods. - Masters level degree in related subject area. - Some practical experience in management.
Training offer	- PhD seminar courses delivered by the doctoral school (University of Padua, Italy) - EurOMA Doctoral Seminar - Advances in Production Management Systems (APMS) doctoral symposium - AiIG summer school (Italy) - British Academy of Management Doctoral Symposium (UK) - AIMAC doctoral symposium, University of Cambridge-Judge Business School (UK) -White Rose Network/ N8 where the University of York, is a member, with activities/events and training for PhD students.
Possible Secondments	- Six-month research at the Centre for Technology, Innovation, Management and Enterprise (TIME), University of Kent (UK) under the supervision of Professor Thanos Papadopoulos, the Director of TIME - Three-month visiting research stay at the University of York Management School, under the supervision of Dr Luisa Huatuco. - Three-month work placement at a participating manufacturing organisation.