



## **UNNC - ZUFE Doctoral Training Partnership**

## Research areas

- Digital Economy
  Innovation and Entrepreneurship
- 3. Financial Management and Fintech
- 4. Organisation and Operations Management
- 5. Public Management and Smart City

## **Available PhD topics (updating)**

(Formal applications should follow the instructions in 'How to apply' section)

PhD topic	Academic Entrepreneurship		
UNNC Supervisor(s)	Cong Cao & Yi Ruan		
ZUFE Supervisor	<u>Kai Sun</u>		
Short introduction & description of the PhD project	Academic entrepreneurship links academic research and technology commercialisation. It is defined as the engagement of academics in entrepreneurial activities through setting up start-ups, tranferring research results, providing consultation to firms, among others. In doing so, academic researchers directly or indirectly generate innovation, promote regional econoimc development, create values, as well as helping sustain and justify their research. The success of Silicon Valley sigifies the significant impacts of Stanford University, University of California Berkeley and other academic institutions on the development of the Valley and provides a role model for the establishment of such high-tech hubs worldwide.		
	Supervisors from both universities have long-standing interests in academic entrepreneurship. In particular, we have been collecting and analysing the publication, patent, and commercialising data of university faculty members from universities in different countries and regions to investigate the relationship between basic research, innovation, and entrepreneurship. We aim to expand the scope of data collection and conduct field study (interview and survey) among these faculty members to collect more personal data for further research. We also will talk to university administrators and policymakers to better understand this imporatnt pheonomenon and the circumstances under which academics pursue academic entrepreneurship.		
	This PhD project will not only enrich scholarly understanding of academic entrepreneurship, which is emerging, but also have implications for policymaking pertaining to stimulate such activities.		
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	Dr Yi Ruan (Yi.Ruan@nottingham.edu.cn)		
	Prof Kai Sun (sunkai75@163.com)		
PhD topic	Artificial intelligence and big data in entrepreneurship		
UNNC Supervisor(s)	Xiaodan Yu		

ZUFE Supervisor	<u>Liqun You</u>		
Short introduction & description of the PhD project	The rapid creation and diffusion of artificial intelligence and big technologies have been receiving increasing attention in the fie entrepreneruship studies. This PhD project can target three very diff directions.		
	The first direction is to study the relative contributions of entrepreneurial companies and incumbents in developing AI and big data technologies. What are the relative advantages and obstables for entrepreneruial companies and incumbents? What are the roles played by Chinese companies?		
	The second direction is about constructing new big data-based metrics of entrepreneurial activity and quality; the prediction of survival, high-growth and persistent high-growth firms using Al and other big data techniques based on both structured and unstructured data (e.g. collected from social media); the identification and prediction of entrepreneurial characteristics and performance outcomes of individuals using Al and big data techniques.		
	The third direction is to understand the interactions between human intelligence (from entrepreneurs) and machine intelligence (relying on Al and big data technologies) in entrepreneurial.		
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	Prof Liqun You (youliqun@zufe.edu.cn)		
PhD topic	Artificial intelligence and organizational capability accumulation in a catching-up economy		
UNNC Supervisor(s)	<u>Xiaodan Yu</u>		
ZUFE Supervisor	Xingwu Luo		
Short introduction & description of the PhD project	Artifical intelligence (AI), as a key enabling technology in the Fourth Industrial Revolution, has been increasingly employed in companies and displays the potential to foundamentally transform all aspects of organizations. Scholars in the economics and management of innovation start to inviestigate the impact of the adoption of AI on firm's financial performance, market value, innovaton performance, innovation process, employment and wage dynamics, employer-employee relationships and etc.		
	In light of this stream of research, this project aims to understand the relationship between AI adoption and firm dynamics in a catching-up economy. First, this project aims to document the stylized facts about the pattern of (technological) knolwedge accumulation in AI-adopted firms and summarize the key differences. Second, this project aims to investigate the relationship between AI adoption and the pace and direction of knowledge accumulation empirically. For example, Can AI stimulates radical innovation within firms? Can AI faciliate non-local organizational learning? Finally, this project aims to unfold the underlying mechanisms about how AI drives knolwedge accumulation within firms. For example, how the adoption of AI transforms the innovation process?		
Contact points	Dr Xiaodan Yu (xiaodan.yu@nottingham.edu.cn)		
	Prof Xingwu Luo (lxw@zufe.edu.cn)		
PhD topic	The Innovation and Digitalisation of Single Champion SMEs in Chinese Manufacturing Industries		
UNNC Supervisor(s)	<u>Yi Ruan</u>		
ZUFE Supervisor	<u>Kai Sun</u>		
Short introduction & description of the PhD project	Chinese high-tech enterprises have been essential for the economic development in China. The growth and development of the Chinese high-tech sector has been quite phenomenal in recent years. In Zhejiang Province, for example, the total R&D investment increased by 14% in 2019 with tens of thousands of high-tech companies being established. Among		

	others, a good number of Single Champion SMEs have emerged. Despite the anecdotal evidence of many Chinese high-tech companies' efforts to undertake their innovative activities as well as the extensive empirical studies on the antecedents and consequences of innovation projects, little is known about their context-specific innovation and digitalisation processes which are presumably aligned with their characteristics and industrial environments.
	We have been collecting secondary data about all the Single Champion SMEs in Yangtz River Delta area and conducting case studies in a few such companies in Ningbo. We aim to conduct a few more case studies in selected companies to further investigate how the leadership teams had been making their innovation strategies, how these companies had been transforming their business by digitalisation, and how these companies had been building and expanding their value network to lead the changes in the business ecosystem.
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