

Towards radical innovation – Firm participation in technology convergence

A joint PhD project between UTS and TU Berlin, Germany

It is envisioned that the PhD enrolls in the UTS and TUB Key Technology Partner Joint PhD program, including an extensive research stay at TU Berlin. The joint supervisory team offers complementary competences for guiding and supporting the PhD:

Dr. Nathalie Sick, Senior Lecturer for Contemporary Technology Management, UTS

Professor Søren Salomo, Professor for Technology and Innovation Management, TU Berlin

The PhD project will be part of a larger initiative of Søren and Nathalie at TUB and UTS in the area of leveraging radical innovation opportunities for firms in a setting of industry convergence. This provides the PhD with the unique opportunity to work within a team of peers as well as experienced researchers.

Research project

Technology convergence is defined as two or more previously disparate fields of technology going together in forming a new technology domain, e.g. nanobiotechnology or functional food. Technology convergence often pushes the limits of previous unconnected technologies' performance, so that novel platforms for radical innovation opportunities present themselves to firms capable of absorbing such a confluence of technologies.

Firms aiming at profiting from technology convergence need to build their absorptive capacity directed at these new technological developments. As converging technologies go beyond the traditional technology domains, access to and understanding of the new platforms becomes critical for identifying radical innovation opportunities. With new technological knowledge being sticky and embedded in the specific development context, networks between firms and universities offer an effective means to internalize such knowledge.

The aim of the PhD project is thus to investigate the best positioning of firms in such a convergence network to build opportunities for radical innovation.

Method

The proposed PhD project is designed as a quantitative large-scale empirical research project drawing primarily on secondary data sources to contrast theory with research and management practice. The project will focus on specific convergence fields and use publication and patent data to establish convergence networks, including industry participation in these networks. To establish radical innovation opportunities from technology confluence, the PhD project intends to make use of industry patents, questionnaires, and expert evaluations measuring innovation potential or realization of innovative new product portfolios.

Desired qualifications and skills

We expect you to have a combination of some of the following skills:

- Expertise and prior experience in innovation and technology management research, particularly with a focus on understanding organizational characteristics of innovating firms
- Knowledge of social network analysis or content analysis
- Knowledge of bibliometric analyses, i.e. patent and publication analyses; and willingness to build competences in advanced methods for data gathering
- Good statistical skills and experience with large amounts of data

Besides, all candidates should have:

- Excellent master's degree or bachelor's degree with honours in management; engineering management or a related area from the engineering or social science field
- Excellent written and spoken English
- Willingness to actively contribute to a thriving academic environment
- Ability to work independently as a researcher and effectively in a team

Application due date for international candidates: 15 January 2020

Commencement date: July 2020

For further information regarding the application process, please refer to the website:

<https://www.uts.edu.au/about/faculty-engineering-and-information-technology/research-faculty-engineering-and-it/research-5>

Interested candidates are welcome to contact

Nathalie Sick via nathalie.sick@uts.edu.au

Søren Salomo via salomo@tu-berlin.de