

**ANR FUNDED PhD POST:**

*Ludic and participative methods and tools for modeling of the knowledge absorption process in innovation projects within collaborative networks*



**Job Specification**

*We are looking for a PhD candidate to work on a project funded by the French funding body ANR (French Research National Agency). The project primarily in the field of information systems is multi-disciplinary involving collaboration between the Computing LIG (Laboratoire d'Informatique de Grenoble) and the Management CERAG (Centre d'Etudes et de Recherches Appliquées à la Gestion) research labs at the **Université de Grenoble**. This PhD will be based at the **Université de Grenoble Alpes** for the duration of **3 years** and involves an international dimension involving travel to the UK as well as France.*

**Job Title:** PhD in Information Systems Engineering and Management

**Location:** Université de Grenoble Alpes, Grenoble, France. Campus of Saint Martin d'Hères

**Salary:** 1972€ gross income

**Hours of work:** Full-time

**Duration:** 3 years (2015-2018)

**Closing Date:** 31<sup>st</sup> October, 2014 (applications should be sent before this date)

**Application Procedure:**

Applications should comprise

\* A copy of your full curriculum vitae

\* A statement indicating the reasons for applying for this post and how your training and experience is relevant.

**These should be sent by e-mail to Dr Agnes Front** [agnes.front@imag.fr](mailto:agnes.front@imag.fr) (LIG) **AND** Professor Carine Dominguez-Péry [carine.dominguez-pery@iae-grenoble.fr](mailto:carine.dominguez-pery@iae-grenoble.fr) (CERAG) who are co-directing this PhD.

Candidates that will be pre selected will be contacted for an interview.

*Informal enquiries can be made to Professor Carine Dominguez-Péry and Dr Agnes Front in the first instance by e-mail.*

**Employee Specification**

	<b>Essential</b>	<b>Desirable</b>
<b>Experience</b>	<ul style="list-style-type: none"> <li>Conducting academic research</li> <li>Information systems modeling techniques (UML, BPMN in particular) and/or management of information systems</li> </ul>	<ul style="list-style-type: none"> <li>Working with industry partners</li> <li>Working/studying in France and the UK</li> </ul>
<b>Education Qualifications</b>	<ul style="list-style-type: none"> <li>Good first degree in Computing/information systems/management</li> <li>Masters degree in Informatics/Management</li> </ul>	
<b>Skills, Special and Knowledge</b>	<ul style="list-style-type: none"> <li>English (written and spoken to a very good academic standard)</li> <li>French (written and spoken to a very good academic standard)</li> <li>Information systems modeling techniques (UML, BPMN)</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge management Primary data collection skills (interviews/surveys) – Research Master degree</li> <li>Supply chain networks</li> <li>Innovation</li> </ul>
<b>Personal Attributes</b>	<ul style="list-style-type: none"> <li>Flexible and adaptable to the working environment in 2 labs</li> <li>Ability to work co-operatively and effectively with colleagues across two disciplines</li> <li>Creativity, imagination</li> </ul>	

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### **Project Background**

The ANR project ACIC (Absorptive Capacity for Innovation in Companies) is a **multi-disciplinary project** aiming to understand and develop absorptive capacity in collaborative networks to foster innovation in SMEs. Innovation in SMEs is widely acknowledged to be the catalyst to economic growth and both have been the focus of European policy makers as a means of improving international competitiveness and consolidating industrial renewal. To counter the problem of increased global competition, for SMEs with limited resources, innovation projects within collaborative networks (CNs) are increasingly considered to be a way in which they can compete and grow. The literature has shown that collaborative interactions can improve SME innovativeness and competitiveness. But not much is understood of how SMEs should concretely use the resources embedded in CNs within their own organization, and how they should interact with other SMEs to pursue successful innovation projects.

The major aims of the ACIC project are to provide SMEs operating within CNs in industrial clusters, with a novel cost-effective approach and associated tools to enhance innovation within their organizations.

The ACIC project will adopt a multi-disciplinary (management, engineering and informatics) and multi-methodological approach (qualitative and quantitative to build in-depth case studies, and group experimentation to develop applied tools) in close collaboration between industry practitioners and academics. The tools that will be developed as a result of this project will be applied in real-life contexts with the objective of impacting SMEs innovation projects embedded in CNs.

### **Objectives of the PhD**

In this context, the purpose of this PhD is to develop a method and an organizing tool allowing SME actors to co-construct absorption process models to gauge their performance in innovation projects. **Participative and ludic techniques** will be used in order to make the method and the organizing tool usable and useful for end-users (SMEs).

The proposed method will be an extension of the **ISEA method** (Identification, Simulation, Evaluation, Amelioration (<http://www.iseamethod.com/>), a ludic and participative approach for business process cartographies developed by the partner LIG. ISEA allows modeling, evaluating and improving business processes based on three perspectives. The informational perspective incorporates information compiled during the modeling of the process identified from the organizational perspective. The interactional perspective, allows actors to create customized interface sketches to test the user interface navigability and the coherence with the process. Based on a managerial literature, social interactions using the organizing tool, that favor absorption, will be highlighted.

### **The Research**

The research project will follow the design science in information systems guidelines and user-centered approaches, and will be iterative.

An initial step will be based on participative sessions including all the case study SME actors involved in an innovation project. Participants will contribute to the process modeling through the role-playing simulation game ISEAsy where participants assume a role and act out a real-life situation to provide an in-situ description of the absorption process as they currently exist within the organization.

The second step will be to integrate the absorption models captured from previous task into new innovation projects in order to identify best practices that SMEs could follow when engaging in new innovation projects and different CNs.

Finally, an organizing tool (evolution of the software tool ISEASY) will be developed.

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Information about the University



**Université de Grenoble Alpes, Grenoble, France.**

The "Communauté d'universités et d'établissements" Université de Grenoble has brought together the university institutions of the French Alpine Corridor' into one single structure with the aim of consolidating the different research, teaching and training in the area. **Université de Grenoble** (<http://www.grenoble-univ.fr/>) **provides access to a whole range of disciplines within the French Alpine Corridor stretching from Valence to Annecy.** It is made up of:

- [Université Joseph Fourier \(UJF\)](#): science and technology and health.
- [Université Pierre-Mendès-France \(UPMF\)](#): human and social sciences.
- [Université Stendhal](#): arts and letters, languages, linguistics and communication.
- [Université de Savoie](#): science and technology, languages, arts and letters, human and social sciences.
- [Grenoble Institute of Technology \(Grenoble INP\)](#) with its 6 engineering schools:
  - Ense3 : école nationale supérieure of energy, water and environment studies.
  - Ensimag: école nationale supérieure of informatics and applied mathematics.
  - Esisar: école nationale supérieure in advanced systems and networks.
  - Génie industriel: école nationale supérieure of industrial engineering.
  - Pagora: International School of Paper, printed communication and biomaterials.
  - Phelma: école nationale supérieure of physics, electronics and materials.
- [Sciences Po Grenoble](#): political sciences.

The candidate for this project will be working within these two research centres:

**CERAG** ("Centre d'Etudes et de Recherches Appliquées à la Gestion" - Grenoble Laboratory of Management) (UMR CNRS 5820) is a research centre with 173 researchers, working in the field of management studies including information systems, strategy and marketing. It will bring its competencies in the field of management specializing in knowledge management, strategy of SMEs, innovation and management of information systems.

See: <http://cerag.in2p3.fr/?q=node/110#SI>

**LIG** (Laboratory of Informatics of Grenoble) (UMR 5217) is a Computer Science research laboratory with collaborating researchers from regional universities and national research organizations. The SIGMA group brings its competencies on information systems engineering based on role-playing games and serious games, and on tool support for innovative system.

See: <http://www.liglab.fr/>