Researcher CV

Name:

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Personal Statement (maximum 150 words):

My professional goals have always been oriented towards scientific excellence, ethical behaviour and maximization of impact. My natural curiosity and my attraction for science led me to focus on concrete research problems encountered by actors of the public and private sectors, provide a scientific and technical solution to the identified problems and bring the resulting solutions to the market. This way of looking at my professional activities has allowed me and will allow me to flourish within the Luxembourg Institute of Science and Technology.

Personal details – Individual narrative profile (maximum 250 words):

I am currently senior researcher at the Luxembourg Institute of Science and Technology (LIST). I joined the healthcare department of the Henri Tudor research centre (former LIST) after obtaining my PhD from both university of Paris-Sud and University of Luxembourg as post-doctoral fellow to work on applied research questions dealing with semantic interoperability in the health and (Bio)medical domains.

The relationship that I was able to establish with key players of these fields allowed me to identify concrete research problems for which I obtained funding (DynaMO and ELISA national and international projects) to build a team of PhD students (Julio Dos Reis, Emna Mezghani, Veruska Zamborlini and Silvio Cardoso) and researchers (Asma Ben Abacha and Duy Dinh) to work on topics dealing with knowledge representation and evolution. The management of this team and the excellent scientific and technological results obtained in these projects allowed me, on the one hand, to defend an *Habilitation à Diriger des Recherches* (highest diploma in France) only 6 years after the defence of my PhD and, on the other hand, to push the research results to the market through the MAISA and MAISA2 projects that I led.

Last, the recent creation of the Dynaccurate SARL company for the commercialisation and improvement of the evoked technologies shows that I was able to conduct fundamental research (TRL 2-3), to further bring the resulting technology to a higher level of maturity (TRL 4-6) and to participate in the creation of a spin-off company for its commercialization (TRL 7-8).

Key outputs, contributions, and achievements (maximum 200 words per item):

Since the beginning of my PhD and later on during my professional activities my main research interest has been set to knowledge representation with a particular attention paid to issues related to knowledge evolution. In this general context, I have made the following three major contributions.

Contributing to the generation of knowledge

As the representation of knowledge has been the main thread, I have been able to acquire a deep understanding of the problems linked to the evolution of knowledge. These are theoretical ones that I have investigated during my PhD and early career but also practical ones that I have discovered with a constant and close relationship with industrial stakeholders that are facing such problems in their daily activities. With this background I have been able to build a sustainable pipeline of projects acquired through competitive and collaborative funding schemes that has led to successful scientific and technological achievements. Among these results are several scientific publications in major venues and peer-reviewed journal of the fields Semantic Web, (bio)medical informatics, knowledge representation and reasoning as well as Artificial Intelligence. Moreover, these relevant scientific results have conducted to the development of the Dynaccurate platform for knowledge graphs management that has recently been transferred to the Dynaccurate SARL company for commercialization. These results reflect a desire to maximize the impact of the ideas developed in the research projects I have led as principal investigator while focusing on scientific excellence.

Contributing to the development of individuals

The acquired research grants have allowed me to build and manage a research team composed of two post-doctoral fellows and four PhD candidates, who have all successfully defended their PhD, and which I had the honour to co-supervise with Prof. Chantal Reynaud-Delaître from University Paris- Saclay, Prof. Frank van Harmelen from Vrije Universiteit Amsterdam and Dr. Khalil Drira from LAAS-CNRS, three experienced renowned researchers in computer science. The experience I gained during this supervision activity has contributed to the career development of the PhD students since Dr. Julio Dos Reis is now recognized Professor at the university of Campinas (Brazil), Dr. Emna Mezghani is currently researcher at Orange labs, Dr. Veruska Zamborlini is post-doctoral fellow at the university of Amsterdam and Dr. Silvio Cardoso is CTO at Dynaccurate SARL but also post-doctoral researchers since Dr. Asma Ben Abacha is researcher at the National Library of Medicine and Dr. Duy Dinh is IT consultant at Infeurope S.A.

Contributing to the wider research community

The quality of the results I have obtained in the research activity I have conducted, has drastically increased my visibility within the scientific community in particular that of medical informatics and artificial intelligence. This visibility is reflected in particular by my participation in the program committees of the main conferences of these fields, including ISWC, ESWC, AIME, CIKM, AMIA symposium and the WebConf but also as reviewer for major journal including Nature. Moreover, the reputation that I have established has allowed me to be invited as a keynote speaker to various scientific events and to be able to develop several international collaborations with prestigious research groups such as the database group of the University of Leipzig led by Prof. E. Rahm which gave rise to research projects that I was able to manage as principal investigator.