

June 2016



## Research Success Story

University of Fribourg

### LONG-TERM RESEARCH TO ENABLE THE MANAGEMENT OF BIG DATA

*Integrating and analyzing Big Data is the aim of the Horizon 2020 ERC-project “GraphInt”. Prof. Philippe Cudré-Mauroux from the Department of Informatics, University of Fribourg and his team are working on designing, implementing, deploying and evaluating new algorithms and systems to manage Big Data.*

Philippe Cudré-Mauroux is a Professor in the Department of Informatics at the University of Fribourg, leading the eXascale Infolab research group. At prestigious institutes like IBM T.J. Watson Research, U.C. Berkeley, Microsoft Research Asia and MIT, he gained a broad experience in the field of Big Data. During the last 10 years, there has been a series of groundbreaking developments in this field. The volume of digital information has literally exploded. “It is today possible to store vast amounts of data. However, it is not yet possible to integrate the data properly and there is a big need for it”, explains Philippe Cudré-Mauroux. “To date, there is a lot of manual work involved when assembling heterogeneous pieces of data, and I would like to automate this process.”

#### **Fundamental research**

The challenges posed by this project are massive, as today’s datasets are extremely diverse.

*“There is a lot of manual work involved when assembling heterogeneous pieces of data, and I would like to automate this process.”*

“The goal is to develop a system which is able to integrate and analyze automatically all kinds of different data like textual data, social networks data or GPS data.”

While the research is quite theoretic and algorithmic, the applications certainly are very concrete.

#### **Valuable funding**

“This ERC Consolidator Grant gives me the invaluable opportunity to work for the next five years on designing, implementing and evaluating next-generation algorithms and infrastructures to manage Big Data.” This will enable both institutions and companies to manage their big data more effectively, as well as to create more accurate models, for example to better predict consumer behavior, online fraud, or traffic jams.

# About GraphInt



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**Prof. Cudré-Mauroux**  
Department of Informatics,  
University of Fribourg

## CONTENT SUMMARY

The Horizon 2020 project GraphInt aims at automating the integration and analysis of Big Data. In the long run, Prof. Cudré-Mauroux and his team seek to develop new techniques to enable companies and institutions to dynamically and automatically integrate heterogeneous pieces of data. This will make it possible to create more accurate forecasts based on the combination of various kinds of data like textual data, social networks data and GPS data.

## FACTS AND FIGURES

**Project Name**  
GraphInt

**Research Area**  
Big Data

**Organisation**  
University of Fribourg

**Start Date – End Date**  
01.08.2016 - 31.07.2021

**Duration**  
5 years

**Project Cost**  
€2 million

**Project Funding**  
€2 million

**Programme**  
Horizon 2020 Excellent Science: ERC Consolidator Grant

**More Information**  
[exascale.info/projects/GraphInt/](http://exascale.info/projects/GraphInt/)

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