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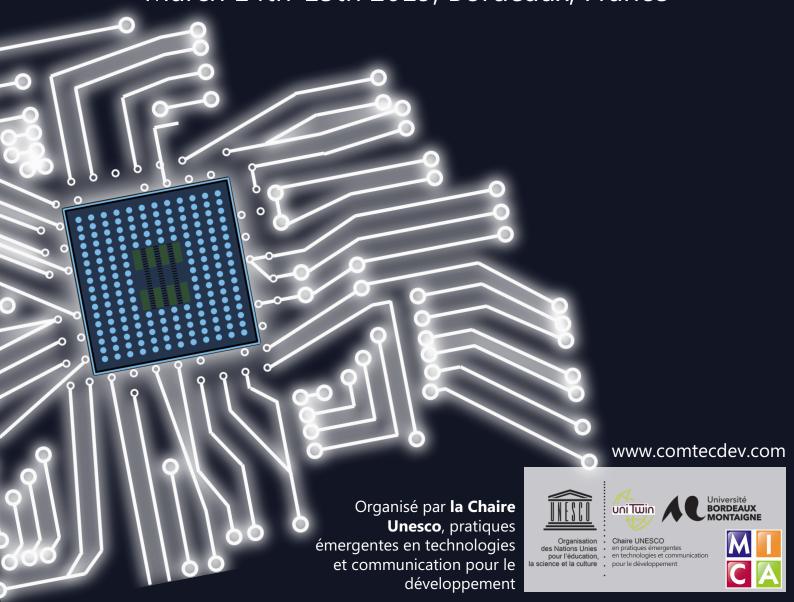
Symposium Comtecdev

GEOSPATIAL DATA, ARTIFICIAL INTELLIGENCE AND DEVELOPMENT

March 14th-15th 2019, Bordeaux, France

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Organisé par **la Chaire Unesco**, pratiques émergentes en technologies et communication pour le développement

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Call for papers

The Internet of Things (IoT) and the rise of smart cities, drones, etc., allows the collect of multiple data which, once analysed, participate in «smart development». Algorithms are parts of systems collecting and organising these information. Indeed, these data allow collaborative robots, also called «cobots», to increase their field of action (co-manipulation, exo-skeleton…). If those practices are still fledging in developing countries, some examples demonstrate the impact of their leverage to improve the living condition of the populations. Beyond the technical achievement, this symposium intends to raise the question of the ownership of those technological innovations in low-infrastructure's contexts. The reflexions could cover all the areas of development, from agriculture to healthcare, from education to industrial production. The aim is really to rethink the question of the Artificial Intelligence (AI) and the human-machine interaction which are obviously to be defined precisely, and to be approached in a critical and holistic manner.

About the symposium

This symposium prolongs the research of the UNESCO chair in Emerging practices in Information and Communication Technologies for the development. Its objectives are stated as follow:

- Question the development and the usage of the gold standards in Artificial Intelligence, by the private, public and civil stakeholders.
- Develop a critical approach on geospatial intelligence, collaborative robotic (cobotic) and Artificial Intelligence (AI).
- Analyse the developments of the informational and communicational practices linked to

Focus 1
Epistemological approach

The topic of human-machine interaction, and by extension of the Artificial Intelligence, concerns numerous fields of study. Humanities and social studies are mostly focusing on its social impact and on the communicational aspects. From these fields' perspective, it seems legitimate to question how the Artificial Intelligence communicates with humans, how these new machines impacts the way of living together, as well as how it interacts with the various areas of the communication. The Artificial Conversational Entities (chatbots), journalists, creatives, will be the focal point of our discussions, which then should also lead to question the changes in the employment and professional practices.

Human-machine interaction, collaborative robotic and economy

Focus 2

If human-machine interaction is around for a while, machine learning and big data analysis increased a quick deployment of the intelligence artificial in new fields and applications. As a result of a powerful mix of the data's availability, the increased computing power, and the complex algorithms, economic growth rates could double before 2035. Developing countries might benefit of a lesser impact if the AI adoption rates were to be weaker there. Regardless of the field, the application of the geospatial intelligence (GEOINT) and the collaborative robotic (Cobotic) constitute an economic reference for traceability and optimisation: localisation of goods and items, but also tracking employees and fleet vehicles, or optimising itineraries and journeys. New hybrid production processes, Internet of Things (IoT) captors and 4D printing are already use by the industrial, agricultural and medical sectors. Digital entrepreneurship,

new side of the economies of the Global South, is not left aside. But, beyond these economic considerations, one of the fundamental questions is to know how the Information and Communication Science can own the concept of spatial intelligence and integrate it in a "communication for the development" approach.

Focus 3

Collaborative robotic and society

On a social aspect, mastering space favours the development of a new research field: the collaborative robotic (Cobot) which gives a glimpse of a new society in which the robots are becoming proper partners for the humans. This focus point includes security and health matters, as well as poverty reduction. In term of security, we should anticipate and manage natural disasters, or to improve the identity checks. The applications are abundant: facial recognition, dangerous products sniffers, land registry rationalisation, etc. In the health sector, Intelligence Artificial (IA) and robotic can deal with specific needs of the healthcare teams. The new developed application are broadening practices, from prophylaxis to physiotherapy, including epidemiology forecasting, diagnosis, medical drugs supply, control and prevention of specific diseases (cancer, malaria, etc.).

Focus 4

Educational robotic

The initial aim of the artificial intelligence was to develop technics to stimulate human intelligence, more precisely technics which mimic the reasoning process itself. Nowadays, Artificial Intelligence is used to reinforce the learning experience and to support interactions with the learners while facilitating the cognitive diagnosis. Keller and Burkman studies suggest that robotic projects would be more attractive and would encourage the learners to participate more actively. Another objective would be to reintroduce formal language learning using logic, through coding classes.

Focus 5

Ethical matters

In any field, on a philosophical point of view, the application of the artificial intelligence - linked to big data - questions the ethics about the necessity to protect individual freedom. Likewise, it questions the responsibility and the legal security required once the human decisions are made by the intelligence artificial bots.

Practicalities

The papers may be written in French, English or Spanish.
Paper abstracts (4000 signs – spaces, titles and bibliography non-included –), must be received by the deadline of June 20th 2018 at chaireunescobx(@)gmail(.)com.

Scientific guidelines: Emphasise theoretical aspects, corpus, methodology, situational analysis, etc.

Selection process: double-blind evaluation
Notification of acceptance: September 5th 2018

Final papers (30 000 signs maximum – notes and spaces included –) must be received by the deadline of January 20th 2019.

Inscription fees are 100 euros for academics, 50 euros for postgraduates.
It includes a copy of the proceedings, lunches and coffee breaks.
The UNESCO chair does not cover for transports and accommodation costs.
The publication of the papers in the proceeding is subject to symposium attendance.

Publication

All final papers will be assessed.
All the articles accepted by the selection board will be published in the symposium proceedings (subject to positive evaluation of the final paper).

Scientific board

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