

## EDITORIAL

We are proud to publish this issue of the Information - Interaction - Intelligence (I3) international journal. The present issue contains three papers: two of them are written in French, while the third one is written in English.

The first paper, in English, and entitled "Causal Discovery in Non-Ideal Frameworks" is by Stijn Meganck, Philippe Leray and Bernard Manderick. This paper deals with an important problem in Artificial Intelligence area and concerns the handling of causal information. The authors are interested in using graphical models frameworks. Recently, the concept of intervention or manipulation, symbolised by the "do" operator, has been introduced in order to distinguish causality from a mere correlation. The authors propose two approaches for discovering causal relations between variables, using experimental and interventional data (and not only passive data obtained from observations). These two approaches are particularly appropriate when insufficient data is present to perform statistical tests reliably and when there are latent variables respectively.

The second paper, in French, also concerns graphical models and bayesian networks. It is entitled "Détection d'attaques élémentaires et coordonnées à base de réseaux Bayésiens naïfs", by Tayeb Kenaza, Karim Tabia and Aicha Mokhtari. Bayesian networks are important and powerful tools to reason under uncertainty. The authors study two approaches, based on naive bayes, applied to the problem of detecting elementary and coordinated attacks. Some of the results contained in this paper won "best student paper award" in SECRIPT 2008 conference (International Conference on Security and Cryptography), held in Porto, July 2008. In this paper, the two proposed approaches take advantage of available data to provide efficient algorithms for predicting plausible attacks. The authors also show how decision rules, used in naive bayes classifiers, can be improved to detect novel attacks and novel normal activities. Experimental results, done on both existing benchmarks and real data, show the efficiency of the proposed approaches.

The third paper<sup>1</sup>, in French, entitled "Une inférence lexicographique à partir de bases de croyances partiellement pré-ordonnées" by Safa Yahi, Sylvain Lagrue, Mariette Sérayet and Odile Papini. This paper, which is an extended version of a communication presented at IAF-08, deals with the problem of handling inconsistencies in belief bases. The authors proposed two solutions to

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<sup>1</sup> This paper was originally planned to appear in a special issue gathering extended and revised versions of papers presented at the national IAF-08 meeting "Journées d'Intelligence Artificielle Fondamentale", held in Paris, October 2008. We wish to thank the guest editors Sébastien Konieczny and Laurence Cholvy for taking in charge the review of this paper.

analyse the lexicographic inference, or cardinality-based inference, in situations where available pieces of information are only partially pre-ordered. The first solution is based on the concept of totally pre-ordered compatible bases while the second solution directly compares coherent sub-bases of the initial inconsistent base. The two solutions are illustrated with an example inspired from an application within the framework of the European VENUS project regarding managing archaeological information.

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