

# Jérôme DELOBELLE

Ph.D. in Computer Sciences

Centre de Recherche en Informatique de Lens - Université d'Artois, UFR des Sciences Jean Perrin,

Rue Jean Souvraz SP 18, F-62307 Lens Cedex, France

☎ +336 31 35 43 72    🌐 [www.cril.univ-artois.fr/~delobelle](http://www.cril.univ-artois.fr/~delobelle)    ✉ [delobelle@cril.fr](mailto:delobelle@cril.fr)

## Current situation

Assistant lecturer in Computer Sciences (Knowledge representation and reasoning)

University : Institut Universitaire Technologique de Lens, Artois University

Laboratory : CRIL UMR CNRS 8188 (<http://www.cril.fr>)

## Academic background

2014-2017 **Ph.D. - Computer Science (Artificial Intelligence)**, Artois University

Centre de Recherche en Informatique de Lens (CRIL)

Ph.D. Thesis : “ *Ranking-based Semantics for Abstract Argumentation* ”

Supervised by ÉLISE BONZON (LIPADE, Université Paris Descartes), SÉBASTIEN KONIECZNY (CRIL, Université d'Artois) et NICOLAS MAUDET (LIP6, Université Pierre et Marie Curie)

Defense held on 12/12/2017 in Lens

2013-2014 **Second year of Master degree – Computer Sciences SIA “Système Intelligents et Applications”**, Artois University, with highest honour.

Master Thesis : “ *Aggregation of Argumentation Frameworks* ”

Supervised by SÉBASTIEN KONIECZNY and SRDJAN VESIC

2012-2013 **First year of Master degree – Computer Sciences**, Artois University, with high honour.

Master Thesis : “ *Three-Valued Possibilistic Networks : Semantics & Inference* ”

Supervised by SALEM BENFERHAT and KARIM TABIA

2009-2012 **Bachelor of Computer Sciences**, Artois University

## Research Topics

- Artificial Intelligence
- Reasoning under uncertainty and/or inconsistency
- Argumentation theory
- Belief merging
- Multi-agents system

## Publications

### International Conferences

[1] Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet - « A Parametrized Ranking-Based Semantics for Persuasion » - *Proceedings of the 11th International Conference on Scalable Uncertainty Management (SUM'17)*, pp 237–251, 2017

[2] Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet - « Argumentation Ranking Semantics based on Propagation » - *Proceedings of the 6th International Conference on Computational Models of Argument (COMMA'16)*, pp 139–150, 2016

[3] Jérôme Delobelle, Adrian Haret, Sébastien Konieczny, Jean-Guy Mailly, Julien Rossit, Stefan Woltran - « Merging of Abstract Argumentation Frameworks » - *Proceedings of the 15th International Conference on Principles of Knowledge Representation and Reasoning (KR'16)*, pp 33–42, 2016

[4] Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet - « A Comparative Study of Ranking-based Semantics for Abstract Argumentation » - *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI'16)*, pp 914–920, 2016

[5] Jérôme Delobelle, Sébastien Konieczny, Srdjan Vesic - « On the Aggregation of Argumentation Frameworks » - *Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI'15)*, pp 2911–2917, 2015

[6] Salem Benferhat, Jérôme Delobelle, Karim Tabia - « Three-valued possibilistic networks : Semantics & inference » - *Proceedings of the 25th International Conference on Tools with Artificial Intelligence (ICTAI'13)*, pp 38–45, 2013

### National Conferences

[7] Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet - « Une Sémantique Graduée Paramétrique pour la Persuasion » - dans *11èmes Journées d'Intelligence Artificielle Fondamentale (JIAF'17)*, 2017

[8] Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet - « Étude Comparative de Sémantiques Graduées pour l'Argumentation Abstraite » - dans *10èmes Journées d'Intelligence Artificielle Fondamentale (JIAF'16)*, 2016

[9] Jérôme Delobelle, Sébastien Konieczny, Srdjan Vesic - « Agrégation de Systèmes d'Argumentation » dans *9èmes Journées d'Intelligence Artificielle Fondamentale (JIAF'15)*, 2015

## Ph.D. Thesis

**Title :** “Ranking-based Semantics for Abstract Argumentation”

**Supervisors :** ÉLISE BONZON (LIPADE, Université Paris Descartes), SÉBASTIEN KONIECZNY (CRIL, Université d'Artois) et NICOLAS MAUDET (LIP6, Université Pierre et Marie Curie)

**Abstract :** Dung’s theory of abstract argumentation is a formalism that represents conflicting information using an argumentation framework which is a directed graph such that its nodes represent the arguments, and the directed edges represent the attacks between arguments. Extension-based semantics have been introduced to determine, given an argumentation framework, the justifiable points of view on the acceptability of the arguments. However, these semantics are not appropriate for some applications. So alternative semantics, called ranking-based semantics, with a more fine-grained assessment of the acceptability status of arguments, have recently been evolved. Such semantics produces, for a given argumentation framework, a ranking on its arguments from the most acceptable to the least one(s). The overall aim of this thesis is to propose and study ranking-based semantics in the context of abstract argumentation. We first define a new family of ranking-based semantics based on a propagation principle which allow us to control the influence of non-attacked arguments on the acceptability of arguments. We investigate the properties of these semantics, the relationships between them but also with other existing semantics. Then, we provide a thorough analysis of ranking-based semantics in two different ways. The first one is an empirical comparison on randomly generated argumentation frameworks which reveals insights into similarities and differences between ranking-based semantics. The second one is an axiomatic comparison of all these semantics with respect to the proposed properties aiming to better understand the behavior of each semantics. At last, we question the ability of the existing ranking-based semantics to capture persuasion settings and introduce a new parametrized ranking-based semantics which is more appropriate in this context.

## Projects

- 2016-2019 Member of the European project H2020 AniAge (High dimensional heterogeneous data based animation techniques for Southeast Asian intangible cultural heritage digital content) regrouping the following laboratories : CRIL (Artois University, France), NCCA (Bournemouth University, UK), HMI (Vietnam National University, Vietnam), CAMT (Chiang Mai University, Thailand), CICT (Can Tho University, Vietnam) et ViCube (Universiti Teknologi, Malaysia) <http://www.euh2020aniage.org>
- 2014-2018 Member of the project ANR AMANDE (Advanced Multilateral Argumentation for DELiberation) regrouping the following laboratories : CRIL (Lens), LAMSADE (Paris Dauphine), LIP6 (Paris 6), IRIT (Toulouse) <http://amande.lip6.fr>

## Teachings

- 2017-2018 **Assistant Lecturer** in the Institute of Technology of Lens, Artois University
- 2015-2016 **Teachings** in the Institute of Technology of Lens, Artois University
- 2014-2015 **Teachings** in the Institute of Technology of Lens, Artois University
- Algorithmic and Programmation Algorithm
  - Conception of Documents and Digital Interfaces
  - Data Structures and Fundamental Algorithms Algorithm
  - Databases
  - Introduction to Human-computer interaction
  - Computer network
  - Object Oriented Design
  - Operating systems

## Other Activities

- 2017 Web co-Chair of the 30th International Conference on Industrial, Engineering, Other Applications of Applied Intelligent Systems (IEA/AIE'17), in Arras, France, 27-30 June 2017
- 2017 Staff member of the International Conference on Digital Arts, Media and Technology (IC-DAMT'17), in Chiang Mai, Thailand, 1-4 March 2017
- 2015 Member of the local organization committee to the Advanced Course on Artificial Intelligence (ACAI'15), in Lille, France, 26-30 October 2015

## Languages

- French **Native language**
- English **Professional competence**

## Computer skills

- Language C, C++, Java, Shell, Prolog, Python, PHP, HTML/CSS, MySQL
- Operating system Unix (Linux, Mac OS X), Windows
- Software L<sup>A</sup>T<sub>E</sub>X, Suite Office (Microsoft and OpenOffice)