# Logic-used Methods Solving Uncertainty and Inconsistency in Knowledge Intergration and Applications

## Nguyễn Thị Hồng Khánh
## NCS ngành Hệ thống thông tin, Khóa 2013-2016

Resolving the uncertainty and inconsistency closely linked to challenge themselves and challenge the knowledge integration knowledge representation in the process of integrating knowledge. several methods of data representation and knowledge as (XML, Description Logics, The Semantic Web) to combine the uncertainty in data integration[5,6]. The participation of logical theory description (Description Logics) in particular and the general theory of logic in solving compute unsure authors assert[7,8].

Essential research target of the thesis is proposed to be the new way to use the logic of uncertainty and inconsistency in the integrated design knowledge and applied model test method has been propose.

- Survey, analysis and systematization of the contents of the relevant scientific literature on the integration of knowledge, methods of solving the uncertainty and inconsistency, to the document focuses on methods using logic the uncertainty and inconsistency in the knowledge integration.
- Designing and implementing experimental evaluation of the proposed method to demonstrate efficacy.

The results of research and knowledge integration testing, methods using logic solutions uncertainty and inconsistency in the logic-based integrated semantics were presented in a number of published [1, 2,3,4,5].

-Two-stage model-based approach for belief merging by negotiation[7]. The first stage lets each agent build its own preference on the set of possible outcomes from its stratified belief base and an ordering strategy. The second stage allows the agents to negotiate with each other based on the constructed preferences to reach agreement as the result of merging. A set of rational axioms for merging by negotiation is proposed and analyzed and a negotiation solution that satisfies these axioms is identified. Especially, several significant computational complexity results are also presented, evaluated, and discussed[8].

We have presented some uncertain logic, allows performers and conflict management in the knowledge system. We also consider a method to measure the link, this is useful in evaluating a quantitative reliability and efficiency in a knowledge-based system.

[1]. Nguyễn Thị Hồng Khánh (2009), "Một số logic cho các hệ tri thức mâu thuẫn", *Tạp chí công nghiệp,* số tháng 9+10/2009, trang 58-61,75.

[2]. Nguyễn Thị Hồng Khánh (2012), "Học tăng cường trong hệ đa tác nhân có điều chỉnh tần suất", *Tạp chí công nghiệp,* số tháng 4/2012, trang 39-43.

[3]. Nguyễn Thị Hồng Khánh (2013), "Tích hợp tri thức bằng đàm phán", *FAIR 2013*, 20-21/6/2013, Huế.

[4]. Trong Hieu Tran, Quoc Bao Vo, Thi Hong Khanh Nguyen, "On the Belief Merging by Negotiation", KES 2014: 147-155

[5]. Nguyễn Thị Hồng Khánh, Trần Trọng Hiếu, Hà Quang Thụy, "Mô hình tiên đề cho tích hợp tri thức bằng đàm phán", Một số vấn đề chọn lọn của CNTT&TT 2015, TP Hồ Chí Minh.

[6]. Trong Hieu Tran, Thi Hong Khanh Nguyen, Quang Thuy Ha, Ngoc Trinh Vu, "Argumentation Framework for Merging Stratified Belief Bases", ACIIDS (1) 2016: 43-53.

[7]. L. Nguyen, "Paraconsistent and approximate semantics for the OWL 2 Web Ontology Language," in Proceedings of RSCTC'2010, ser. LNAI, M. S. et al., Ed., vol. 6086. Springer, 2010, pp. 710–720. [8].

[8]. L. Nguyen and A. Szałas, "Three-valued paraconsistent reasoning for Semantic Web agents," in Proceedings of KES-AMSTA 2010, Part I, ser. LNAI, P. J. et al., Ed., vol. 6070. Springer, 2010, pp. 152–162.