



INVESTMENTS IN EDUCATION DEVELOPMENT

## The Tenth International Conference on Concept Lattices and Their Applications, CLA 2013

Jan Konečný, Martin Trnečka, Markéta Krmelová

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# The Tenth International Conference on Concept Lattices and Their Applications, CLA 2013

## Conference

- held in: La Rochelle, France, October 15-18, 2013
- organized by: Laboratory L3i – University of La Rochelle, France



# Our talks

Jan Konečný, Manuel Ojeda-Aciego: Isotone  $\mathbf{L}$ -bonds.

- study of intercontextual relations formalized as bonds,
- properties of bonds,
- attempt to remove the need of DNL from the antitone case,
- direct product,
- proper explanation why not all bonds are direct product.
- relationship to results antitone case with DNL.

## Martin Trnečka, Markéta Krmelová: Boolean Factor Analysis of Multi-Relational Data.

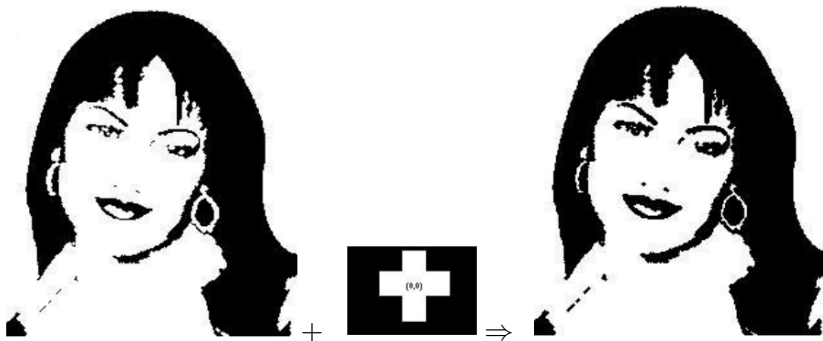
- BFA, in classical setting can handle only one simple data table.
- Usually modern database are composed from many data tables and are interconnected via relations, i.e. multi-relational data.
- In this paper were proposed new method for multi-relational data and various interpretation of results.
- New method was demonstrated on simple examples.

Jan Outrata: A lattice-free concept lattice update algorithm based on \*CbO  
... will be covered in his presentation.

## Interesting talks

Cristina Alcalde, Ana Burusco, Juan Carlos Daz, Ramon Fuentes-Gonzalez, Jess Medina :  
On information retrieval in morphological image and signal processing

- continuation of papers on relationship of FFCA with isotone GC and mathematical morphology (image = set, structuring element = context; isotone concept-forming operators = erosion, dilation).



## Further interesting talks

Ondrej Krdlo, Patrik Mihalín, Stanislav Kraji, Lubomír Antoni: Formal Concept Analysis of higher order (best paper award)

- Interconnecting formal contexts via bonds and chu-correspondences.
- Connection to heterogeneous formal contexts and connections to standard homogenic fuzzy operators.

**Prof. Dr. Ralph Freese (University of Hawaii, USA)**

**Projective Lattices with applications to isotope maps and databases**

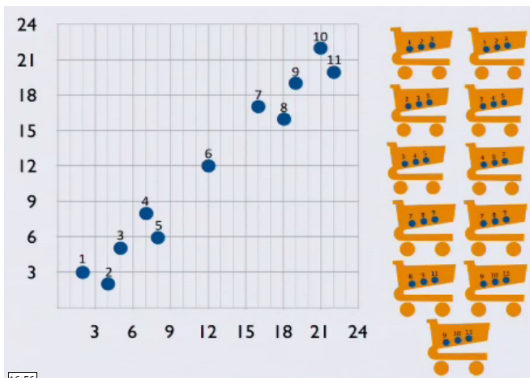
- Presentation of UCalc: Universal Algebra Calculator <http://uacalc.org>
- Projective lattices, join dependency relation.



Prof. Dr. Bart Goethals (University of Antwerp, Belgium)

## Cartification – turning similarities into itemset frequencies or how to turn every database into a supermarket

- relationship between clustering and frequent itemset mining.



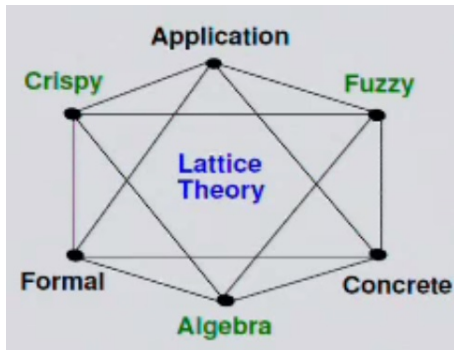
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**Prof. Dr. Michel Grabisch (Universite Paris I Pantheon-Sorbonne, France)**  
**Cooperative games on lattices**

- Motivated by game theory and
- Games with Restricted domain
- The Core of Games with Restricted Domain
- Games on Concept Lattices

## Prof. Dr. Vincent Duquenne (Université Pierre et Marie Curie, France) Some Applications of Lattice Analysis (1983-2013)

- Applications of Lattice Analysis: Implication models, Simplifying scientific languages
- Scalability of LA/FCA algorithms
- Relationship of LA and FCA.



## Want to know more?

- Videorecords available: <http://portail-video.univ-lr.fr/CLA2013>.
- Papers available: <http://cla.inf.upol.cz/papers.html>.

## Group photo (Kony not included)



**THANK YOU!**