

RAFAEL PEÑALOZA

- Objective** Apply my mathematical and computational tools and knowledge to efficiently simulate intelligent tasks, such as uncertain reasoning or diagnosis.
- Education** Instituto Tecnológico Autónomo de México (08/1999 05/2003)
B. Sc. in Applied Mathematics
- Specialized in Computer Science
 - Thesis: “Knowledge-based Systems, probabilistic networks and KAMET”
 - Proposed a method to obtain Bayesian networks from KAMET (Knowledge Acquisition Methodology) models. This method may be applied for two different tasks: creating and validating a Bayesian network; or creating an inference engine for probability-based KAMET models.
 - Graduated with Honourary Mention in 8 semesters
- Publications**
- Peñaloza, R. Hacia la no-existencia del no-pensamiento (To non-existence from non-thinking). *Laberintos e Infinitos* **9**. Summer 2004.
- Peñaloza, R. Apología de los algoritmos genéticos (Eulogy of Genetic Algorithms). *Laberintos e Infinitos* **8**. Spring 2004.
- Cairó, O. and Peñaloza, R. Creating a Bayesian Inference Engine for KAMET. *Proceedings of the X Congress of the Spanish Association for Artificial Intelligence*. Servicio editorial Universidad del País Vasco. November 2003.
- Cairó, O. and Peñaloza, R. Using Bayesian Networks as an Inference Engine in KAMET. *Proceedings of the XXIII International Conference of the Chilean Computer Science Society*. IEEE Press. November 2003.
- Kuri, Ortiz, Zenteno and Peñaloza. Classification of sperm cells according to their chromosomic content. *Proceedings of the 25th annual International Conference of the IEEE Engineering in Medicine and Biology Society*. IEEE Press. August 2003.
- Peñaloza, Sandoval and Soto. El universo no puede verse como un todo (Universe may not be seen as a whole). *Laberintos e Infinitos* **4**. Autumn 2003.
- Conferences**
- Poincare Seminar (15/04/2004)
ITAM, Mexico
- *Determinación probabilista de pruebas para diagnosis* (Probabilistic determination of diagnosis tests)
 - An application of Bayesian networks and Genetic Algorithms
- X Congress of the Spanish Association for Artificial Intelligence (11/2003)
San Sebastián, Spain
- Exposed the application of Bayesian networks to knowledge acquisition.
- XXIII International Congress of the Chilean Computer Science Society (11/2003)
Chillan, Chile
- Exposed an algorithm for knowledge bases to Bayesian network transformations.
- First Interuniversity Meeting of Mathematics (04/2003)
ITAM, Mexico
- Introducción a la lógica probabilista (Introduction to probabilistic logic)

Professional Experience

Inffinix Software (12/01/2003 to 9/30/2004)

Consulter Analyst

- Develop methods for extracting relevant information contained in data bases
- Data base migration from Oracle to DB2
- Leader developer on a new School Administration System (*Schola*)
- Leader GeneXus Programmer

KAMET (11/2002 to 11/2003)

Thesist

- Project: Knowledge Modeling (sponsored by CONACYT)
- Bayesian Network implementation

Mexican Academy of Science (7/2001 to 10/2002)

Teacher for 10 National Mathematic Olympics participants

- 5 of them qualified to the international contest in Hong Kong and obtained 3rd place by teams.

Computational tools

Packages:

- Windows, Office, SPSS, Matlab

Programming languages:

- C, C++, Lisp, Prolog, Visual Basic. Basic knowledge of Java and HTML

Other tools:

- SQL (Oracle & DB2), Oracle Forms, WebSphere, GeneXus

Languages

Fluent in English and Spanish

German: Zertifikat Deutsch "gut bestanden"

Interests

Logic, Uncertain Reasoning and Artificial Intelligence.