

Curriculum Vitae



NOMBRE:	HUGO JAIR ESCALANTE
TITULO:	PhD. in Computer Science
SNI:	Member Candidate level.
EDAD:	29 years old
DIRECCION:	UANL, AP 34-F, Cd. Universitaria, San Nicolás de los Garza, Nuevo León, 66450, México
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INSTITUCION:	Universidad Autónoma de Nuevo León
DEPARTAMENTO:	Facultad de Ingeniería Mecánica y Eléctrica, Programa de Posgrado en Ingeniería en Sistemas
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Información académica

Postdoctoral researcher

**National Institute of Astrophysics, Optics and Electronics,
Computer Science Department**
Puebla, Mexico

April-August 2010

Ph.D. in Computer Science

**National Institute of Astrophysics, Optics and Electronics,
Computer Science Department**
Puebla, Mexico

2006- 2010

Master in Computer Science

**National Institute of Astrophysics, Optics and Electronics,
Computer Science Department**
Puebla, Mexico

2003- 2006

B. S. in Computer Science

**Universidad Autónoma de Puebla
Facultad de Ciencias de la Computación**
Puebla, Mexico

1999 - 2003

Premios y reconocimientos

Best student paper award of the 23th International Joint Conference on Neural Networks. Granted by the IEEE for the paper entitled: "*Ensemble Particle Swarm Model Selection*".

Best 2010 PhD thesis on Artificial Intelligence award, granted by the Mexican Society for Artificial Intelligence at MICA2010, for the thesis: "Cohesion Semantica para la Anotacion y Recuperacion de Imagenes".

SNI Fellow candidate level (2011-2013), granted by the National Council for Science and Technology.

Publicaciones Selectas

Revistas indizadas

Hugo Jair Escalante, Enrique Sucar, Manuel Montes. **Particle Swarm Model Selection.** *Journal of Machine Learning Research*, 10(Feb):405--440, 2009

Hugo Jair Escalante, Michael Grubinger, Carlos Hernandez, Jesus A. Gonzalez, Aurelio Lopez, Manuel Montes, Eduardo Morales, Enrique Sucar, and Luis Villaseñor. **The Segmented and Annotated IAPR-TC12 Benchmark.** *Computer Vision and Image Understanding Journal*, 114(4):419—428, 2010.

Capítulos en libros

Hugo Jair Escalante, Enrique Sucar, Manuel Montes. **Multi-class Particle Swarm Model Selection for Automatic Image Annotation.** *Book Chapter in A. Engelbrecht et al. editors, Applied Swarm Intelligence, Springer Series in Studies in Computational Intelligence, accepted, 2010.*

Hugo Jair Escalante, Enrique Sucar, Manuel Montes. **Particle Swarm Model Selection.** *Book Chapter in Isabelle Guyon, Gavin Cawley, Gideon Dror, and Amir Saffari Editors. Hands on Pattern Recognition: Challenges in Data Representation, Model Selection, and Performance Prediction. Microtome, In press, 2011.*

Conferencias con arbitraje internacional

Hugo Jair Escalante, M. Montes and E. Sucar. **Ensemble Particle Swarm Model Selection.** *Proceedings of the International Joint Conference on Neural Networks 2010*, pp. 1814--1821, July, IEEE, Barcelona, Spain, 2010 [**received the best student paper award**].

Hugo Jair Escalante, Manuel Montes, and Luis Villaseñor. **Particle Swarm Model Selection for Authorship Verification.** *In CIARP'09: Proceedings of the 14th Iberoamerican Congress on Pattern Recognition, LNCS 5856, pp. 563—570, Springer, November 15-18, Guadalajara, Mexico, 2009.*

Hugo Jair Escalante, Jesus A. Gonzalez, Carlos Hernandez, Aurelio Lopez, Manuel Montes, Eduardo Morales, Enrique Sucar, and Luis Villaseñor. **Annotation-Based Expansion and**

Late Fusion of Mixed Methods for Multimedia Image Retrieval. In C. Peters et al. editors, *Proc. 9th Workshop of the CLEF, LNCS 5706*, pp. 669--676, Springer, 2009.

Hugo Jair Escalante, Carlos Hernandez, Enrique Sucar, Manuel Montes. **Late Fusion of Heterogeneous Methods for Multimedia Image Retrieval.** In *MIR'08: Proceedings of the 2008 ACM Multimedia Information Retrieval Conference*, pp. 172--179, October 30--31, 2008, Vancouver, British Columbia, Canada.

Hugo Jair Escalante, Carlos Hernandez, Aurelio Lopez, Heidy Marin, Manuel Montes, Eduardo Morales, Enrique Sucar, and Luis Villaseñor. **Towards Annotation-Based Query and Document Expansion for Image Retrieval.** In C. Peters et al. (Eds.): *CLEF 2007, LNCS 5152*, pp. 546--553, 2008. Springer-Verlag Berlin Heidelberg 2008.

Hugo Jair Escalante, Manuel Montes and Enrique Sucar. **An Energy-based Model for Feature Selection.** *Presented at the Workshop on Causality Challenge in WCCI08, Hong-Kong, China, June 3-4, 2008.*

Hugo Jair Escalante, Manuel Montes, L. Enrique Sucar. **Improving Automatic Image Annotation Based on Word Co-occurrence.** In N. Boujemaa, M. Detyniecki, and A. Nurnberger (Eds.): *AMR 2007, LNCS 4918*, pp. 57--70, 2008. Springer-Verlag Berlin Heidelberg 2008.

Thomas Deselaers, Allan Hanbury, Ville Viitaniemi, J.D R. Farquhar, Mátyás Brendel, Bálint Daróczy, Hugo Jair Escalante Balderas, Theo Gevers, Carlos Arturo Hernández Gracidas, Steven C. H. Hoi, Jorma Laaksonen, Mingjing Li, Heidy Marisol Marin Castro, Hermann Ney, Xiaoguang Rui, Nicu Sebe, Julian Stöttinger, Lei Wu. **Overview of the ImageCLEF 2007 Object Retrieval Task.** In C. Peters et al. (Eds.): *CLEF 2007, LNCS 5152*, Springer-Verlag Berlin Heidelberg, 2008.

Hugo Jair Escalante, and Manuel Montes and L. Enrique Sucar. **Word Co-occurrence and Markov Random Fields for Improving Automatic Image Annotation.** *Proceedings of the 18th British Machine Vision Conference. Vol. 2*, pp. 600-609, Warwick, UK, 2007.

Hugo Jair Escalante, Manuel Montes y Gomez, and Luis Enrique Sucar. **PSMS for Neural Networks on the IJCNN 2007 Agnostic vs Prior Knowledge Challenge.** In *IJCNN'07: IEEE-INNS Proceedings of 20th International Joint Conference on Neural Networks*, pp. 1191--1197. ISBN: 1-4244-1380-X. ISSN: 1098-7576. Orlando, Florida, USA, August 12-17, 2007.

Hugo Jair Escalante. **Cleaning Training Datasets with Noise-Aware Algorithms.** In Sergio Rajsbaum, editor, *Proceedings of the Seventh Mexican International Conference on Computer Science (ENC 2006)*, pp. 151--158, San Luis Potosi, Mexico, September 2006, IEEE Computer Society.

Hugo Jair Escalante and Olac Fuentes, **Analysis of Galactic Spectra using Noise-Aware Learning Algorithms.** G. Sutcliffe and R. Goebel Editors. *Proceedings of the 19th International FLAIRS Conference (FLAIRS-19)*, pp. 550-555. Melbourne Beach, Florida, USA, May 2006,

Platicas invitadas

Particle Swarm Model Selection and Multimodal Image Retrieval, Research Seminar, Computer Science Department, CICESE, Ensenada, BC, Mexico, May 17, 2010.

Particle Swarm Optimization for Model Selection and Feature Selection, Research Seminar PISIS research group, Universidad Autonoma de Nuevo Leon, San Nicolas de los Garza, NL, Mexico, November 26, 2009.

Introduction to Machine Learning and Pattern Recognition. Research Seminar PISIS research group, Universidad Autonoma de Nuevo León, San Nicolás de los Garza, NL, Mexico, November 27, 2009.

Particle Swarm Model Selection, 10th Machine Learning Summer School, Ile de Re, France, September 12, 2008.

Servicio Profesional

Co-chair of the 1st Automatic Image Annotation and Retrieval Workshop, AIAR2010, Puebla, Mexico, October 6-8, 2010.

Member of the organizing committee of the IEEE Special Session on Autonomous and Incremental Learning (AIL). In conjunction with International Joint Conference on Artificial Neural Networks (IJCNN 2011)

Cursos relevantes

10th Machine Learning Summer School. *Ile de Re, France, September, 2008.* (Teaching assistant for Isabelle Guyon in [Feature and Model Selection Course](#)).

Business Foundations for Scientists and Engineers, *Given by Eller College of management, University of Arizona, INAOE, May, 2008.*

28th International School for Young Astronomers, *Organized by the International Astronomical Union, INAOE, July-August 2005.*

Docencia

Applied Probabilistic Models, graduate course, UANL, 2011.

Inferential statistics, undergraduate course UANL, 2010, 2011

Feature and model selection course at MLSS08, graduate course (assistant)

Discrete mathematics, 2007, graduate course (assistant)

Discrete mathematics, 2009, graduate course (assistant)