

Xiaoou Li

Professor/Researcher, PhD

Computer Science Department

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Google Scholar

https://scholar.google.com/citations?hl=es&user=R9Td938AAAAJ&view_op=list_works

Scopus <https://www.scopus.com/authid/detail.uri?authorId=55993756400>

Recognition

- Level 3 of Mexico **National System of Researchers (SNII)** (2000-)
- Regular member of **Mexican Academy of Sciences**¹ (2008-)
- Senior member of **IEEE** (2007-)
- Board member of **Mexican Artificial Intelligence Society** (2023-)

EDUCATION

- B.Sc. in Applied Mathematics, **Northeastern University**, P. R. China, 1991
- Ph.D. in Automatic Control, **Northeastern University**, P. R. China, 1995
Thesis: *Object oriented colored Petri nets model and its application in flexible manufacturing systems*

PROFESSIONAL EXPERIENCE

- 2000-Present, professor/researcher (2005-), Dept. of Computer Science, **Cinvestav**, Mexico
- 2006-Present, Director of Data Science Laboratory, Dept. of Computer Science, **Cinvestav**, Mexico
- 1998-2000, Postdoc, Instituto de Ciencias Aplicadas y Tecnología (ICAT), **Universidad Nacional Autónoma de México (UNAM)**, Mexico City, Mexico
- 1995-1997, Assistant Professor and Coordinator, Center of Robotics and Artificial Intelligence, **Northeastern University**, Shenyang, P. R. China
- 2006-2007, Senior Visiting Professor, School of Electronics, Electrical Engineering & Computer Science, **Queen's University Belfast**, Belfast, UK (Sabbatical leave)
- May - Oct./2010, Visiting Professor, Information Retrieval and Knowledge Management Lab, School of Engineering, **University of California**, Santa Cruz, CA, USA (Sabbatical leave)
- Sept. 2018 – Mar. 2019, Big Data Institute, **Shenzhen University**, Shenzhen, China (Sabbatical leave)
- Jun.-Nov. 2023, State Key Laboratory of Synthetical Automation for Process Industries, **Northeastern University**, Shenyang, China (Sabbatical leave)

¹ **Mexican Academy of Sciences** (*Academia Mexicana de Ciencias*) is a non-profit organization comprising over 2800 distinguished Mexican scientists, attached to various institutions in the country, as well as a number of eminent foreign colleagues, including 12 Nobel Prize winners.

RESEARCH INTERESTS

- Data mining applications
- Machine learning and Big Data
- Data-driven sustainable and ecological automation
- Time series analysis
- Social network analysis
- Human machine interface (HMI)
- Robot-assisted rehabilitation system
- Petri Nets applications
- Educational Robotics

FUNDING

She has been PI/Co-PI of 11 research projects and academic activities of national science foundation of Mexico and China and has participated in 4 basic theoretical research and industrial projects.

PI & Co-PI

- 1) 2023-2026, **CONACYT² Frontier Science Funding** project # CF-2023-I-2614, “[Machine Learning and Big Data Analytics for Sustainable Food-Energy-Water Systems](#)”, MX\$800,000 (PI)
- 2) April 2016, **CONACYT Scientific, Technology and innovation activity Support** project # 269631 “[13th IEEE International Conference on Networking, Sensing, and Control](#)”, MX\$570,000 (PI)
- 3) Aug. 2015-Jul. 2016, **CONACYT program for foreigner distinguished scholar's sabbatical stay in Mexico**, project # 261288, “[Petri nets, Learning, and Big Data](#)”, US\$24,000 (PI)
- 4) Oct. 2012 – Dic. 2016, **CONACYT* Basic Science Funding** project #167259, México, [Dynamic Vertical Fragmentation in Databases Using Online Data Mining Techniques and Active Rules](#), MX\$ 841,950 (PI)
- 5) [Aug. 2009 – Jan. 2011](#), **UCMEXUS-CONACYT 2009 Collaborative project** #CN-09-325, [Verification of Active Rule Bases using Timed Petri Nets](#), , US\$25,000.00 (PI of Mexico side)
- 6) [Jul. 2005 – Jun. 2010](#), **CONACYT Basic Science Funding** project #46729-Y, Mexico, [Petri nets based active database systems](#), MX\$663,400 (PI)
- 7) [Jan. 2002 – Dec 2004](#), **CONACYT Basic Science Funding** project #39151-A, Mexico, [Combining neural networks and Petri nets in artificial intelligence](#), MX\$236,653.00 (PI)
- 8) [Jan 1997- Dec 1997](#), **Science and Technology Fund for young researchers of Liaoning Province** project #970521, China, [Distributed Cooperative Control of Multi-robotic Flexible Assembly Cell](#) (PI)
- 9) [Oct 1995- May 1997](#), **Open Laboratory of Robotics of Chinese Academy of Sciences** project #960902, China, [Optimal Scheduling Strategy Generation of Flexible Robot Cells](#) (PI)
- 10) [Jul 1995- Jun 1997](#), **Chinese 863 High-Tech** project # 863-511-9508-004, China, [Object Oriented Colored Petri nets and its application on Flexible manufacturing systems](#) (Co-PI)

² **CONACYT** (Consejo Nacional de Ciencia y Tecnología, in English: **National Council of Science and Technology**) is Mexican entity in charge of the promotion of scientific and technological activities, setting government policies for these

- 11) Sep 1995- Ago 1996, **Chinese National Key Laboratory of System Engineering** project #95014, [Intelligent Scheduling and Planning of FMS \(PI\)](#)

Participated

- 1) 2019-2023 [Modeling and Control for Human-Robot Interaction with Deep Reinforcement Learning](#), **CONACYT³ Basic Science Funding** project # A1-S-8216
- 2) 2019-2021 [Development of machine learning-based innovative methods of seismic forecasting in Italy and Mexico](#), **CNR-CINVESTAV**
- 3) 2019-2021 [Semi-Active Control of Building Structures Based on Structure Health Monitoring and Deep Learning Techniques](#), **SEP-CINVESTAV**
- 4) 2007-2010, **CONACyT-Chinese National Science Foundation collaborative project** #J110.284/2007 and #J110.507/2006, [Hierarchical fuzzy neural networks for nonlinear system identification](#)
- 5) Sep 1993- Sep 1995, **Chinese 863 High-tech** Project #863-511-9308-002, [Theory and applications on Discrete Event dynamic systems](#)
- 6) Mar 1992- Jan 1993, **Chinese 863 High-tech** project #863-511-9501-001, [CIMS of Shenyang Blowing Works](#)
- 7) Jul 1998- Dec. 1999 **UNAM funding of the university** #CIB9901, [Modelado de Sistemas Dinámicos Difusos mediante Redes de Petri Difusas](#)

PROFESSIONAL ACTIVITIES

Editorial Activities

- 1) *IEEE Press* Editorial Board, 2016-2019, 2019-2022
- 2) Associate Editor of *Knowledge-Based Systems*, 2025-2028 (Q1)
- 3) Editor of *Engineering Applications of Artificial Intelligence*, 2022-2025 (Q1)
- 4) Associate Editor of *IEEE Transaction on Automation Science and Engineering*, 2017- 2024 (Q1)
- 5) Associate Editor of *IEEE/CAA Journal of Automatica Sinica*, 2017-2020 (Q1)
- 6) Associate Editor of *IEEE SMC Magazine*, 2016-2018
- 7) Associate Editor of *IEEE Access*, 2018-2021
- 8) Guest Editor of *IEEE/CAA Journal of Automatica Sinica* Special Issue on *IoT-based Smart and Complex Systems*, 2017

International Organizing/Steering Committee

- Steering committee member of the International Conference on Automation Science and Engineering (2022- 2026)
- General Chair, the IEEE 18th International Conference on Automation Science and Engineering (CASE2022)

matters, and granting scholarships for postgraduate studies. It is the equivalent of National Science Foundation in US.

³ **CONACYT** (Consejo Nacional de Ciencia y Tecnología, in English: **National Council of Science and Technology**) is Mexican entity in charge of the promotion of scientific and technological activities, setting government policies for these matters, and granting scholarships for postgraduate studies. It is the equivalent of National Science Foundation in US.

- General Chair, 13th IEEE International Conference on Networking, Sensing and Control (ICNSC 2016)
- Program Chair, 2023 IEEE Symposium Series on Computational Intelligence, December 5th – 8th 2023, Mexico City, Mexico
- International advisory committee 12th /14th IEEE International Conference on Networking, Sensing and Control (ICNSC 2015/2017)
- General Co-chair 11th IEEE International Conference on Networking, Sensing and Control (ICNSC 2014)
- Publicity Chair, 10th IEEE International Conference on Networking, Sensing and Control (ICNSC 2013)
- Special Session Chair, fifth International Symposium on Neural Networks (ISNN2008)
- Publication Chair, Second International Workshop on Advanced Computational Intelligence (IWACI2009)
- Publicity Chair, 2006 International Conference on Intelligent Computing (ICIC'06)
- Organization Committee and Computer Science Topic Chair, 2nd International Conference on Electrical and Electronics Engineering (ICEEE) and XI Conference on Electrical Engineering (CIE 2005)
- Logistic Chair VIII Conferencia de Ingeniería Eléctrica (CIE'02)

International Program Committee

- International Conference on Intelligent Computing (ICIC 2009-2017)
- IEEE International Conference on Networking, Sensing and Control(ICNSC 2010- 2017)
- International Symposium on Neural Networks (ISNN 2008, 2009, 2010, 2011)
- International Workshop on Advanced Computational Intelligence (IWACI2010,2011)
- IEEE Workshop on Health Care Management(WHCM 2010)
- IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2009- 2012)
- International Workshop on Petri Nets and Software Engineering (PNSE2009)
- International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE 2005- 2010)
- International Conference on Machine Learning and Cybernetics (ICMLC 2008-2012)
- 6th International Workshop on Modeling, Simulation, Verification and Validation of Enterprise Information Systems (MSVVEIS 2008)
- International Workshop on Petri Nets and Distributed Systems (PNDS 2008)
- IEEE International Conference on Systems, Man, and Cybernetics (SMC 2005- 2012)
- International Conference on Information Technology: Research and Education (ITRE 2003- 2005)
- IASTED International Conference on Artificial and Computational Intelligence (ACI'02)

International Journal Reviewer

- IEEE Transactions on Fuzzy Systems
- Computación y Sistemas (in Spanish)
- Computerized Medical Imaging and Graphics
- Future Generation Computer Systems

- Fuzzy Sets and Systems
- IEEE Access
- IEEE Transactions on Automation Science and Engineering
- IEEE Transactions on Biomedical Circuits and Systems
- IEEE Transactions on Circuits and Systems I
- IEEE Transactions on Computational Social Systems
- IEEE Transactions on System, man, and Cybernetics, Part A, B, C
- IEEE/CAA Journal of Automatica Sinica
- Journal of Applied Research and Technology
- Journal of Medical systems
- Journal of Signal Processing Systems
- Knowledge and Information Systems
- Neurocomputing
- International Journal of Machine Learning and Cybernetics
- International Journal of Pattern Recognition and Artificial Intelligence
- Transactions on Signal Processing

Evaluation Committee

- 1) *The 2021-2023 IEEE James H. Mulligan, Jr. Education Medal Committee*,
<https://www.ieee.org/about/awards/medals/education.html>.
- 2) *National Scholarship for Study Abroad*, 2010, 2015, 2018
- 3) *Ruling committee of SNI (Sistema Nacional de Investigadores, area 7: Engineering and area 1: Mathematics)*,
Jun- oct. de 2020 and August 2024
- 4) *Mexican National Science Funding (CONACYT-SEP Ciencia Básica)*, 2010, 2015
- 5) *National Sectorial Funding*, 2017, 2018
- 6) *National Postgraduate education program*, 2018
- 7) *Programa de Apoyos para Actividades Científicas, Tecnológicas y de Innovación*, 2020

AWARDS AND DISTINCTIONS

International

- **Best paper award**, Felipe Lara-Rosano and Xiaou Li, “Petri nets model for dynamic fuzzy caused and anticipatory systems”, *the 3rd International Conference on Computing Anticipatory Systems (CASYS'99)*, Liège, Belgium, 1999
- **Distinguished young researcher**, Programa “*Estancias de Verano en Estados Unidos para Investigadores Jóvenes 2005*” de la Academia Mexicana de Ciencias (AMC) y la Fundación México-Estados Unidos para la Ciencia (FUMEC), 2005, 2008
- **Senior Researcher Fellowship**, *International Exchange Scheme* of Queen’s University Belfast, £10,000 funding, 2006-2007 (one year)
- **Distinguished Professor**, Program of International Collaboration on Scientific Research and High-level University Construction, Computer and Software Faculty, Shenzhen University, 2018-2019.

- **Three Remarkable Women with Top-Flight Track Records 2018**, by IEEE Systems, Man, and Cybernetics Society, <https://ieeexplore.ieee.org/document/8525487>
- **50 Women in Robotics You Need to Know About 2022**, <https://www.womeninrobotics.org/wir-list/2022>

National

- Member of **National Researcher System** (SNII: Sistema Nacional de Investigadores) Level 3 (2001-)
- Regular member of **Mexican Academy of Sciences** (AMC: Academia Mexicana de Ciencias) (2008-)
- **Best thesis award (under her direction)**, the thesis "*Data Reduction methods for large data classification using SVM*" by Asdrúbal López Chau won the First place of the 37th National Thesis Competition (doctoral level), la Asociación de Instituciones de Educación en Tecnologías de la Información (ANIEI), 2014
- **Winner of Summer Stays in the United States for Young Researchers Program** of (*Estancias de Verano en Estados Unidos para Investigadores Jóvenes*), funding by Mexican Academy of Sciences (AMC) and Mexico-USA Foundation for Science (FUMEC), 2005.
- **Winner of Summer Stays in the United States for Young Researchers Program** of (*Estancias de Verano en Estados Unidos para Investigadores Jóvenes*), funding by Mexican Academy of Sciences (AMC) and Mexico-USA Foundation for Science (FUMEC), 2008.

* Many awards during her university and postgraduate studies are omitted.

INVITED TALKS

- 1) "Big data analytics for sustainable food-energy-water (FEW) systems" *IEEE SMC 2017 Women In Engineering (WIE) Workshop* "Innovative Women and Millennials: Beyond Breaking Barriers" Banff, CA, Oct. 6th, 2017
- 2) "Active Rule Base Verification and Analysis: a Petri Nets Approach" *The International Conference on Modeling, Simulation and Control of Discrete Event Systems* Yilan, Taiwan, March 13th, 2017
- 3) "Adaptive Fuzzy Petri Nets Framework for Dynamic Knowledge Inference and Learning" *IEEE SMC Taipei Chapter*, National Taipei University of Technology, Taipei, March 15th, 2017
- 4) "SVM in Big Data Research and Classification" *Taipei University*, Taipei, March 16th, 2017
- 5) "SVM in Big Data Research and Classification" *South China University*, Guangzhou, May 11, 2017
- 6) "Big Data, Big Analytics" *Northeastern University*, Shenyang, China, May 17-20, 2017
- 7) "Big Data Analytics for Sustainable Food-Energy-Water Systems", ponencia del evento "*Un acercamiento a la Inteligencia Artificial*" organizado por **La Comisión de Ciencia y Tecnología del Senado de la República Mexicana**, Feb. 17, 2020.
- 8) "Big Data Analytics for Sustainable Food-Energy-Water Systems", plática invitada de la *Reunión Internacional de Inteligencia Artificial y sus Aplicaciones (RIIAA'2020)*, Session "Imitation & Reinforcement Learning", Aug. 27, 2020 <https://hopin.to/events/riiaa-2020>
- 9) "Big data analítica para los sistemas sustentables de FEW (Alimento-energía-agua)", ponencia del *XX Seminario de la Investigación del Área Académica de Ingeniería y Arquitectura, Universidad Autónoma del Estado de Hidalgo*, 11-12 de Nov. 2020
- 10) "Machine Learning and Big Data Analytics for Sustainable Food-Energy-Water Nexus", *the 21st Mexican International Conference on Artificial Intelligence, MICA I 2022* Monterrey, Nuevo León, México, October 24 -29, 2022.
- 11) "Machine Learning and Big Data Analytics for Sustainable Food-Energy-Water Nexus", *The 2023 IEEE International Conference on Automation in Manufacturing, Transportation and Logistics (iCaMal 2023)*, Wuhan, China, Nov. 3-5, 2023.

- 12) “Machine Learning and Big Data Analytics for Sustainable Food-Energy-Water Nexus”, *the 3rd Int. Con. Industrial Artificial Intelligence (IAI2023)*, Shenyang, 21-24 de Agosto de 2023
- 13) “Desafíos y oportunidades de la inteligencia artificial en la educación”, *Conferencias Secretaría de Investigación y Posgrado (SIP) del Instituto Politécnico Nacional: Los retos y problemáticas de la inteligencia artificial en la educación y sus riesgos y oportunidades hacia el futuro*. 2 de Mayo de 2024.
- 14) “Enhancing Time Series Forecasting Accuracy with Innovative Solutions for Handling Missing Data”, *6th International Conference on Industrial Artificial Intelligence (IAI 2024)*, Shenyang, China, Aug. 21-24, 2024
- 15) “机器学习与人类学习：人工智能赋能教育的挑战与机遇”，首届青云菁英创新发展论坛，Nanjing, China, June 23, 2024
- 16)

THESIS DIRECCION

She has supervised 6 PhD theses and 27 master theses, all in CINVESTAV-IPN, Mexico.

Ph. D.

- 1) “Desarrollo de reglas ECA en bases de datos activas: un enfoque de red de Petri”, In English: “[Development of ECA rules in active data base systems: a Petri nets approach](#)”_by Medina Marín Joselito, 2005
- 2) “Verificación y Análisis de Bases de Reglas Activas”, In English: “[Verification and analysis of active rule-based system](#)” by Chavaría Báez Lorena, 2008
- 3) “Clasificación de grandes conjuntos de datos vía Máquinas de Vectores Soporte y aplicaciones en sistemas biológicos” In English: “[Classification of large data sets using support vector machines and applications on biological systems](#)”, by Cervantes Canales Jair, 2009
- 4) “Fragmentación vertical dinámica de bases de datos multimedia utilizando reglas activas” In English: “[Dynamic vertical Partitioning of multimedia database using active rules](#)”, by Rodríguez Mazahua Lisbeth, 2012
- 5) “Métodos de reducción de datos para clasificación con máquinas de soporte vectorial” In English: “[Data Reduction methods for large data classification using SVM](#)”, by López Chau Asdrúbal, 2013
- 6) "Uso de atributos para detectar comunidades de calidad en redes sociales” In English “[Use of attributes to detect quality communities in social networks](#)”, by Bella Citlali Martínez Seis, March 23, 2018
- 7) Desarrollo de un sistema de rehabilitación bilateral asistido por robots para miembro superior de pacientes de enfermedad vascular cerebral (EVC)” In English “[Development of a bilateral rehabilitation system assisted by upper limb robots for patients with cerebrovascular disease](#)” by Erick García López, 2023?

Master

- 1) “Modelado y control de sistemas híbridos con redes de Petri difusas y redes neuronales”, In English: “[Hybrid system modeling and control using fuzzy Petri nets and neural networks](#)”, by Perez Moo Sergio Antonio, 2002
- 2) “Redes de Petri coloreadas condicionales y sus aplicaciones en base de datos activas”, In English: “[Conditional colored Petri nets and their applications en active data base systems](#)”, by Medina Marín Joselito, 2002
- 3) “Modelado difuso neuronal con algoritmo de aprendizaje estable”, In English: “[Fuzzy neural modeling with stable learning algorithm](#)”, by Villaseñor Lozano Carlos Alejandro, 2003
- 4) “Detección de Candados Mortales en Base de Datos utilizando Redes de Petri”, In English: “[Deadlock Detection and Analysis of Distributed Database Systems](#)”, by Trujillo Ferrara José de Jesús, 2003
- 5) “Medición de la Complejidad de la Interacción de las reglas ECA en BDA vía CCPN”, In English: “[ECA rule interaction complexity measurement](#)”, by Chavaría Báez Lorena, 2004
- 6) “Modelado de workflow con redes de Petri coloreadas condicionales” In English: “[Modeling workflow management system using Conditional Coloring Petri nets](#)”, by Garrido Daniel Samuel, 2005
- 7) “Algoritmo de Clustering basado en Entropía para Descubrir Grupos en Atributos de Tipo Mixto”, In English: “[An entropy based clustering algorithm for discovering groups with mixed type attributes](#)”, by Hernández Valadez Edna, 2006
- 8) “Redes Neuronales CMAC como Modelo de Clasificación en Minería de Datos” In English: “[CMAC neural nets as a classification model in data mining](#)” by Palacios Hernández Francisco, 2006

- 9) "Predicción de Tráfico en Redes de Telecomunicaciones basado en Técnicas de Inteligencia Analítica" In English: "[Telecommunication networks traffic prediction using analysis intelligence techniques](#)" by Millan Alonso Gildardo, 2006
- 10) "Toma de Decisiones automatizada mediante reglas ECA Fuzzy sobre un DWH activo" In English " [Automated decision making by ECA Fuzzy rules on an active DWH](#) " by Vázquez Tzompantzi Marisol, 2007
- 11) "Sistema de Control de Acceso con RFID" In English: "[Access control system with Radio Frequency Identification \(RFID\)](#)" by Alvarado Sánchez Jorge Alberto, 2008
- 12) "Diseño de un modelo para la predicción de vínculos en redes sociales", In English: "[A new model for predicting linkage of social networks](#)" by Limeta Cabañas Alberto, 2010
- 13) "Análisis de Redes Sociales a Gran Escala", In English: "[Large social network analysis](#)" by Mejía Olivares Cristian Paolo, 2010
- 14) "Marco de trabajo basado en ontologías para la adecuada gestión del conocimiento en el proceso de Inteligencia de Negocios." In English: "[Ontology based framework for knowledge management en ETL process](#)" by Villanueva Chávez Joel, 2011
- 15) "OPCOLAPH: Optimizador de Consultas OLAP para Cluster de Bases de Datos basado en Histogramas" In English: "[OPCOLAPH: OLAP Query Optimization of distributed database in cluster based on histogram](#)" by Pérez Rivas Eduardo, 2012
- 16) "Diseño e implementación de un sistema de control para un cuadricóptero" In English: "[Design and implementation of quadcopter control system](#) " by Pico Villalpando Antonio, 2012
- 17) "Un enfoque evolutivo para el aprendizaje de conocimiento con redes de Petri difusas" In English: "[An evolutionary approach for knowledge learning using Petri nets](#)" by Sánchez Barreto Christian Onassis, 2013
- 18) "Desarrollo de una interfaz hombre-máquina usando smartphone con aplicación a brazo manipulador" In English: "[Human machine interface development using Smartphone with application on robot control](#)" by Parga Villalpando Carlos, 2013
- 19) "Detección de daños en edificios provocados por vibraciones mediante técnicas de minería de datos" In English: "[Structural Health Monitoring using data mining techniques](#)" by Villegas Solís Salvador Abdelaziz, 2014
- 20) "Análisis de sentimientos de textos en español basado en aproximaciones semánticas " In English "[Sentiment Analysis of Spanish text based on semantics approximation](#)" by Hernández Petlachi Roberto Francisco, 2014
- 21) "Generación de caminata robótica bípeda mediante análisis de datos de la marcha humana" In English " [Bipedal robot walking generation through data analysis of human walking](#) " by Pantoja Laces Williams Antonio, 2015
- 22) "Sistema de rehabilitación 3D usando dispositivo háptico" In English " [3D rehabilitation system using haptic device](#)" by Rodríguez Molina Alejandro, 2015
- 23) "Herramienta para el preprocesamiento de tweets con base en búsqueda por tópico" In English " [Preprocessing tool for tweets based on search by topic](#) "by Andrade Jiménez Yareli Licet, 2015
- 24) "Diseño y desarrollo de un sistema de reconocimiento de gestos manuales para el control de un VANT" In English "[Design and Development of a Hand Gesture Recognition System for UAV Control](#)" by Gómez Rosal Dulce Adriana , 2016
- 25) "Desarrollo de un sistema de rehabilitación bilateral asistido por robots" In English "Development of a bilateral rehabilitation system assisted by upper limb robots" by Erick García López, Aug. 25, 2017
- 26) "Implementación de algoritmo de aprendizaje profundo CNN para la identificación de plantas invasivas utilizando conjuntos de datos pequeños" In English "Implementation of CNN deep learning algorithm for the identification of invasive plants using small data sets" by Oscar Ramírez Ayala, Feb. 28, 2019
- 27) "Predicción de energía eólica usando modelos híbridos múltiples de ARIMA", In English "Wind energy prediction using hybrid multiple ARIMA models" By Vicente Adnan Duarte Méndez, Dic. 09, 2022
- 28) *Implementación de máquina de vectores de soporte cuántica con mapeo tipo ZZ*, **Edgar Omar Mendoza López**, Maestría en Ciencias de la Computación, Centro de Investigación en Computación (CIC-IPN), Feb. 6, 2025
- 29) Algoritmo de inteligencia artificial (IA) para generación de trayectorias en exoesqueleto de rehabilitación de marcha, **Saul Jesus Rangel Popoca**, Maestría en Ciencias En Sistemas Autónomos De Navegación Aérea Y Submarina, 18 de agosto de 2025
- 30) Implementación de un sistema de rehabilitación en ambiente virtual usando un dispositivo háptico para miembro superior, **Yahel Jesús Cortés García**, Maestría en Ciencias En Sistemas Autónomos De Navegación Aérea Y Submarina, 18 de agosto de 2025

TEACHING

She has taught the following courses in undergraduate and graduate level.

- IA Generativa
- Data Mining
- Machine Learning
- Neural Networks and Deep Learning
- Theory of Computation
- Social Network Analysis
- System Modeling and Simulation
- Petri Nets and Applications
- Big Data and Big Analysis (short course)
- Seminar of investigation (master and PhD level)

PUBLICATIONS

She has authored and coauthored more than 40 SCI research papers, 24 book chapters and more than 100 international/national conference papers.

International Journals

1999

- [1] Xiaoou Li, Xinhe Xu and Felipe Lara Rosano, Modeling manufacturing systems using object oriented colored Petri nets, *International Journal of Intelligent Control and Systems*, 3: 359-375, 1999.

2000

- [2] Xiaoou Li and Felipe Lara Rosano, Adaptive fuzzy Petri nets for dynamic knowledge representation and inference, *Expert Systems with Applications*, 19(3): 235-241, 2000.
- [3] Xiaoou Li, Wen Yu and Felipe Lara Rosano, Dynamic knowledge inference and learning under adaptive fuzzy Petri net framework, *IEEE Transactions on System, Man, and Cybernetics, Part C: Applications and reviews*, 30(4): 442-450, 2000.
- [4] Wen Yu, Marco A. Moreno and Xiaoou Li, Observer-based neuro identifier, *IEE Proceedings-Control Theory and Application*, 147(2): 145-152, 2000.

2001

- [5] Wen Yu and Xiaoou Li, Some stability properties of dynamic neural networks, *IEEE Transactions on Circuit and System Part I*, 48(2): 256-259, 2001.
- [6] Wen Yu and Xiaoou Li, Some New Results on System Identification with Dynamic Neural Networks, *IEEE Transactions on Neural Networks*, 12(2): 412-417, 2001.
- [7] Wen Yu, Alexander S. Poznyak and Xiaoou Li, Multilayer dynamic neural networks for non-linear system on-line identification, *International Journal of Control*, 74(18): 1858-1864, 2001.

2002

- [8] Xianping Guo, Wen Yu and Xiaoou Li, Minimax control for discrete-time time-varying stochastic systems, *Automatica*, 38(11): 1991-1998, 2002.
- [9] Xiaoou Li and Wen Yu, Dynamic system identification via recurrent multilayer perceptrons, *Information Sciences*, 146(5): 45-63, 2002.

- [10] Wen Yu, Xiaou Li, Chemical process identification with multiple neural networks, *International Journal of Computational Engineering Science*, 3(4): 385-407, 2002.

2003

- [11] Wen Yu, Xiaou Li, Discrete-time neuro identification without robust modification, *IEE Proceedings - Control Theory and Applications*, 150(2): 311-316, 2003.

2004

- [12] Wen Yu, Xiaou Li, Fuzzy identification using fuzzy neural networks with stable learning algorithms, *IEEE Trans. Fuzzy Systems*, 12(3): 411-420, 2004.

2006

- [13] Wen Yu and Xiaou Li, PD control of robot with velocity estimation and uncertainties compensation, *International Journal of Robotics & Automation*, 21(1): 1-9, 2006.

2007

- [14] Wen Yu, Xiaou Li, Passivity analysis of dynamic neural networks with different time-scales, *Neural Processing Letters*, 25(2): 143-155, 2007.
- [15] Xiaou Li, Joselito Medina Marín, and Sergio V. Chapa, Applying Petri Nets in Active Database Systems, *IEEE Transactions on Systems, Man, and Cybernetics -- part C: Applications and Reviews*, 37(4): 482-493, 2007.
- [16] Rigoberto Toxqui Toxqui, Wen Yu, and Xiaou Li, Stable anti-swing PD control for overhead crane systems with velocity estimation and uncertainties compensation, *Int. J. Automation and Control*, 1 (4): 326-340, 2007.

2008

- [17] Wen Yu, Xiaou Li, Optimization of crude oil blending with neural networks and bias update scheme, *Engineering Intelligent Systems*, 16(1): 28-37, 2008.
- [18] Jair Cervantes, Xiaou Li, Wen Yu, Support vector machine classification for large data sets via minimum enclosing ball clustering, *Neurocomputing*, 71(4-6): 611-619, 2008.
- [19] Wen Yu, Xiaou Li, On-line fuzzy modeling via clustering and support vector machines, *Information Sciences*, 178(22): 4264-4279, 2008.

2009

- [20] Wen Yu, Xiaou Li, Online fuzzy modeling with structure and parameter learning, *Expert Systems with Applications*, 36(4): 7484-7492, 2009.

2010

- [21] Wen Yu, Xiaou Li, Automated nonlinear system modeling with multiple fuzzy neural networks and kernel smoothing, *International Journal of Neural Systems*, 20(5): 429-435, 2010.
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