

## CURRICULUM VITAE (April 2019)



Dr. Ricardo Rodríguez Jorge

Ricardo Rodriguez Jorge received his Ph.D. from the Department of Instrumentation and Control Engineering from the Czech Technical University in Prague, Faculty of Mechanical Engineering in 2012. He is a Researcher in the Department of Industrial and Manufacturing Engineering, Autonomous University of Ciudad Juarez, Mexico. His research interests mainly focus on time series prediction, signal processing, artificial neural networks, adaptive control systems, pattern recognition, mechatronics, and artificial intelligence. He serves as Associate Editor of Intelligent Automation and Soft Computing published by Taylor & Francis (Master Journal List) and also on several peer-reviewed international journal Editorial Boards like International Journal DYNA published by DYNA Engineering & Industry (Master Journal List), Journal of Advanced Computer Science and Information Technology published by Elvedit.Com, International Journal of Humanitarian Technology published by Interscience Publishers. He has participated in nearly 40 international conferences/workshops as technical program committee, and he has also participated as a reviewer in about 52 conferences. He has (co-) authored more than 36 book chapters, journal and international conference papers. Dr. Rodriguez has been keynote speaker in national and international conferences, as well as he gave many invited talks. Currently, his research papers are referenced by other research works all over the world. In 2012 one of his papers earned the 2nd place in a conference in Czech Technical University in Prague, Czech Republic. Furthermore, he earned the 1st place in a conference in Krakow University of Technology, Poland. In 2013, one of his coauthored papers earned the best paper award presented in the 6th International Conference on Research, in the Computer Science field. In 2017 Dr. Rodriguez has been incorporated as a member of the research group: Mechatronics that is awarded by PRODEP as (Consolidated research group). Currently, He serves as General Chair of the Eighth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2017) to be held in Autonomous University of Ciudad Juarez in Mexico.

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## 1. GENERAL INFORMATION

- **Personal information**

- Nationality: Mexican
- E-mail: ricardo.jorge@uacj.mx, [ricardo.rodriquezjorge.mx@ieee.org](mailto:ricardo.rodriquezjorge.mx@ieee.org)
- Personal web site: <http://www.rodriquezricardo.net/>

- **Languages**

- English
- Spanish
- Czech (basics)

## 2. AREAS OF INTERESTS

- Control Systems
- Adaptive Control Systems
- Artificial neural networks
- Time series prediction
- Higher Order Neural Units
- Mechatronics
- Pattern recognition
- Artificial Intelligence
- Signal Processing
- Fuzzy-logic
- Genetic algorithms
- Natural Language Processing

## 3. ACADEMIC TRAINING

- **PhD Degree**

PHD. IN MECHANICAL ENGINEERING (2009-2012)  
“CZECH TECHNICAL UNIVERSITY IN PRAGUE (CTU)”  
Department of Instrumentation and Control Engineering  
Czech Republic  
Field of study: Control and Systems Engineering  
Thesis entitled: “Lung tumor motion prediction by neural networks”

- **Master’s Degree**

MASTER OF SCIENCE IN COMPUTER SCIENCE, (2005-2007)  
“THE NATIONAL CENTRE OF RESEARCH AND TECHNOLOGICAL DEVELOPMENT  
(CENIDET)”  
Mexico  
Specialty: Artificial Intelligence, AVERAGE: 96.33

- **Bachelor's Degree**

Computational Systems Engineering (2000-2004)  
"TECHNOLOGICAL INSTITUTE OF LAZARO CARDENAS"  
México  
Specialty: Distributed systems and networks, AVERAGE: 94.28

#### 4. AWARDS AND DISTINCTIONS

- **Desirable profile recognition: awarded as a desirable profile**

Appointment as a desirable profile by PRODEP from SEP (Ministry of Public Education)

- **Academic research group: UACJ-CA-75 Mechatronics**

Appointment as in consolidation research group (CAEC) by PRODEP-DSA 2016.

- **Best paper award**

Best paper award in the field of Computer Sciences, with the paper: "Preparation and integration of population data in the data mining process: a case of study", in the 6th International Conference on Research, CIPITECH 2013, October 9, 10 y 11, 2013, Chihuahua, Mexico.

- **Second best paper award**

Second place in the competition for postgraduate students, STC 2012, with the paper: Ricardo Rodriguez, Jiri Bila, Ivo Bukovsky, "Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction" STC 2012, March 28, 2012, Czech Republic.

- **Best paper award**

First place in the competition of postgraduate students- Faculty of Mechanical Engineering, 2012, in Krakow, Poland, with the paper: Ricardo Rodriguez, Jiri Bila, Ivo Bukovsky, "Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction" Sesja studenckich Kół Naukowych - Wydział Mechaniczny PK - 27 IV 2012, Poland, April 27, 2012.

#### 5. PUBLICATIONS

- **Co-edited book**

- Jolanta Mizera-Pietraszko, **Ricardo Rodriguez-Jorge**, Diego Moises Almazo-Perez, Pit Pichappan, ADVANCES IN DIGITAL TECHNOLOGY - PROCEEDINGS OF THE 8TH INTERNATIONAL CONFERENCE ON APPLICATIONS OF DIGITAL INFORMATION AND WEB TECHNOLOGIES ICADIWT 2017, SERIES FRONTIERS IN ARTIFICIAL INTELLIGENCE AND APPLICATIONS, IOS Press, 978-1-61499-772-6 (print) | 978-1-61499-773-3 (online), Amsterdam, the Netherlands (2017), 284 pages, 978-1-614.

- **Preface**

- Jolanta Mizera-Pietraszko, **Ricardo Rodriguez-Jorge**, Diego Moises Almazo-Perez, Pit Pichappan, PREFACE TO ADVANCES IN DIGITAL TECHNOLOGIES PROCEEDINGS OF THE 8TH INTERNATIONAL CONFERENCE ON APPLICATIONS OF DIGITAL INFORMATION AND WEB TECHNOLOGIES ICADIWT 2017, w: Frontiers in Artificial Intelligence and Applications (red. Jolanta Mizera-Pietraszko, Ricardo Rodriguez Jorge, Diego Moisés Almaz), IOS Press, ISBN 978-1-61499-773-3 (online), Amsterdam, the Netherlands (2017), V.

- **Journal Publication**

- S. Cervantes, A. Mexicano, José-Antonio Cervantes, **Ricardo Rodríguez**, and Jorge Fuentes-Pacheco, Binary Pattern Descriptors for Scene Classification (submitted).
- Mexicano, Adriana; **Rodríguez Jorge, Ricardo**, et al. "Acceleration of the K-Means algorithm by removing stable items", Int. J. of Space-Based and Situated Computing (IJSSC), Vol. 7, No. 2, 2017.
- Vergara Villegas, Osslan Osiris; Cruz Sánchez, Vianey Guadalupe; **Rodríguez Jorge, Ricardo**; Nandayapa, Alfaro, M. de J. (2016). Editorial for Volume 7 Number 3 Recent ADvances in Augmented Reality (RADAR). International Journal of Combinatorial Optimization Problems and Informatics, 7(3), 1–6.
- CCarrasco, José Eduardo Carballo, Manuel Nandayapa, Ángel Flores Abad, Ángel Israel Soto Marrufo, and **Ricardo Rodríguez Jorge**. "Sistema Virtual para control de movimiento basado en LabVIEW-Solidworks." (In Spanish). CULCyT 58 (2016).
- Medrano, Gerardo Durán, Manuel Nandayapa, Luis Raúl Robles Ramos, Ulises I. Ponce, **Ricardo Rodríguez Jorge**, and Luis Ricardo Vidal Portilla. "Diseño de un PLC Basado en Microcontrolador para Secuencias Programables Bajo Lenguaje Basic." (In Spanish). CULCyT 58 (2016).
- Jiri Bila, Martina Mironovova, **Ricardo Rodríguez**, Jakub Jura, "Detection of Emergent Situations in Complex Systems by violations of structural invariants on Algebras of Transformations", International Journal of Enhanced Research in Science, Technology & Engineering.
- **Ricardo Rodríguez**, Adriana Mexicano, Jiri Bila, S. Cervantes, and Rafael Ponce, "Feature Extraction of Electrocardiogram Signals by Applying Adaptive Threshold and Principal Component Analysis," Journal of Applied Research and Technology, Vol. 13, Issue 4, April 2015, ISSN: 1665-6423. Accepted. (*Indexed in JCR, impact factor: 0.447*).
- **Ricardo Rodríguez**, Adriana Mexicano, Jiri Bila, Rafael Ponce, Salvador Cervantes, "Electrocardiogram Complexity Recognition and Modeling by Multilayer Perceptron," Progress in Signals and Telecommunication Engineering, Volume 2, Issue 2, September, 2013, pp. 61-72, ISSN: 2319-4588.
- Ing. Ivo Bukovský, Ph.D., **Rodríguez Ricardo**, M.Sc., prof. Ing. Jiří Bila, Dr.Sc., "PROSPECTS OF GRADIENT METHODS FOR NONLINEAR CONTROL", Strojárstvo Extra, MEDIA/ST, s.r.o publishing house, 2012, ISSN 1335-2938.
- **Ricardo Rodríguez**, Ivo Bukovsky, Noriasu Homma. "*Potentials of Quadratic Neural Unit for Applications*". International Journal of Software Science and Computational Intelligence, (IJSSCI), Volume 3, Issue 3, pp. 1-12, July- September 2011. DOI: 10.4018/IJSSCI.2011070101, ISSN: 1942-9045, EISSN: 1942-9037.
- **Ricardo Rodríguez Jorge**, Gerardo Reyes Salgado, Vianey Gpe. Cruz Sanchez. "*An Enhanced Petri Net Model to Verify and Validate a Neural Symbolic Hybrid System*". International Journal of Software Science and Computational Intelligence, (IJSSCI), vol. 1, issue 3, July - September 2009. ISSN: 1942-9045, EISSN: 1942-9037, DOI: 10.4018/jssci.2009070103.
- **Ricardo Rodríguez**, Ivo Bukovsky, Jiri Bila, Kei Ichiji, Noriasu Homma. "*Prediction of Lung Tumor Motion during Respiration for Radiation therapy Applications*". 2012. (To be published).

- **Book chapter**

- J.U. Reyes Munoz, E.A. Martínez-García, **R. Rodríguez Jorge**, R. Torres-Cordoba, Chapter: WMR Kinematic Control Using Underactuated Mechanisms for Goal Direction and Evasion, Book: Kinematics, IntechOpen, Croacia, ISBN: 978-953-51-3687-3. (Web of Science, Book Citation Index).
- Osslan Osiris Viergara Villegas, Vianey Guadalupe Cruz Sánchez, Humberto de Jesús Ochoa Domínguez, Jorge Luis García-Alcaraz, **Ricardo Rodríguez Jorge** (2016), "Automatic Defect Detection and Classification of Terminals in a Bussed Electrical Center Using Computer Vision", Handbook of Research on Managerial Strategies for Achieving Optimal Performance in Industrial Processes, IGI Publishing Hershey, PA, USA ©2016, May 2016, pp. 241-266, DOI: 10.4018/978-1-5225-0130-5, ISBN13: 9781522501305.
- **Ricardo Rodríguez**, Adriana Mexicano, Salvador Cervantes, Jiri Bila, Rafael Ponce, "Extracting the QRS complexity and R beats in electrocardiogram signals using the Hilbert transform," Emergence, Complexity, Computation, Vol. 8, Ali Sanayei et. al: ISCS 2013: INTERDISCIPLINARY SYMPOSIUM ON COMPLEX SYSTEMS, 978-3-642-45437-0.
- **Ricardo Rodríguez**, Ivo Bukovsky, Noriasu Homma. "Potentials of Quadratic Neural Unit for Applications", Advances in Abstract Intelligence and Soft Computing, Yingxu Wang ed. (2012), IGI Publishing Hershey, PA, USA ©2012, December, 2012, pp. 343-354, DOI: 10.4018/978-1-4666-2651-5, ISBN13: 9781466626515, ISBN10: 1466626518, EISBN13: 9781466626829. (Web of Science, Book Citation Index).
- **Ricardo Rodríguez Jorge**, Gerardo R. Salgado, Vianey G. C. Sanchez (2012), "An Enhance Petri Net Model to Verify and Validate a Neural-Symbolic Hybrid System", Software and Intelligent Sciences: New Transdisciplinary Findings, Wang, Y. ed. (2012), IGI Publishing Hershey, PA, USA ©2012, March, 2012, pp. 434-450, DOI: 10.4018/978-1-4666-0261-8, ISBN13: 9781466602618, ISBN10: 1466602619, EISBN13: 9781466602625.
- **Ricardo Rodríguez Jorge**, Otoniel Rodríguez, Gerardo Reyes, Vianey Cruz (2010). "Using Petri nets for modeling and verification of Hybrid Systems", Petri Nets Applications, Pawel Pawlewski (Ed.), ISBN: 978-953-307-047-6, INTECH, Available from: <http://sciyo.com/articles/show/title/using-petri-nets-for-modeling-and-verification-of-hybrid-systems> (Web of Science, Book Citation Index).

- **Refereed papers**

- Mexicano-Santoyo, A.; **Rodríguez-Jorge, Ricardo**; Abrego, A., Jiménez; Zúñiga-Treviño; Martínez-García, Edgar. A., Visual Analysis of Differential Evolution Algorithms, Proceedings of the 11th International Conference MISSI 2018. (Web of Science, Proceedings Citation Index).
- **Rodríguez Jorge, Ricardo**; Bila, Jiri; Mizera-Pietraszko, Jolanta; Martinez-Garcia, Edgar A., Weight Adaptation Stability of Linear and Higher-Order Neural Units for Prediction Applications, Proceedings of the 11th International Conference MISSI 2018.(Web of Science, Proceedings Citation Index).
- Mizera-Pietraszko, Jolanta; Kolaczek, Grzegorz; **Rodríguez Jorge, Ricardo**; Martínez García, Edgar Alonso, Information Streaming Systems: A Review, The 2018 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2018), July 3-5, 2018, Thessaloniki, Greece.(Web of Science, Proceedings Citation Index).
- Ibarra Fierro, Gabriela I.; **Rodríguez-Jorge, Ricardo**; Mizera-Pietraszko, Jolanta; Martínez García, Edgar Alonso, Design and implementation of a data acquisition system for R peak detection in electrocardiogram, Artificial Intelligence for Health 2018 (AI4Health 2018), January 19-21, 2018, Funchal, Madeira, Portugal.
- Montes, Angel; Mizera-Pietraszko, Jolanta; **Rodríguez Jorge, Ricardo**; Martínez García, Edgar Alonso, Particle swarm optimization as a new measure of machine translation efficiency, 9th International Conference on Soft Computing and Pattern Recognition (SoCPaR 2017), December 11-13, 2017, Marrakech, Morocco.
- E.A. Martinez-Garcia, N. Avila, **R. Rodríguez-Jorge**, J.K. Sheba, R.E.Mohan, E. Magid, Non Linear Fitting Methods for Machine Learning, 3rd Intl. Workshop on Signal Processing and Machine Learning Nov. 8-10, 2017, Barcelona, Spain. Lecture Notes on Data Engineering and Communications Technologies Series, Volume 13. (Web of Science, Proceedings Citation Index).
- **R. Rodríguez-Jorge**, E.A. Martinez-Garcia, J. Mizera-Pietraszko, J.Bila, R.Torres-Cordoba, Prediction of highly non-stationary time series using neural networks, 3rd Intl. Workshop on Signal Processing and Machine Learning Nov. 8-10, 2017, Barcelona, Spain. Lecture Notes on Data Engineering and Communications Technologies Series, Volume 13. (Web of Science, Proceedings Citation Index).
- **R. Rodríguez-Jorge**, E.A. Martinez-Garcia, R. Torres-Cordoba, J. Bila, J. Mizera-Pietraszko, Adaptive Threshold, Wavelet and Hilbert Transform for QRS detection in Electrocardiogram Signals, 3rd Intl. Workshop on Signal Processing and Machine Learning Nov. 8-10, 2017, Barcelona, Spain. Lecture Notes on Data Engineering and Communications Technologies Series, Volume 13. (Web of Science, Proceedings Citation Index).
- N. B. Nghien, **R. Rodríguez-Jorge**, E. A. Martinez-Garcia, R. Torres-Córdoba, J. Mizera-Pietraszko and A. Montes Olguín, Predicting the Short-Term Exchange Rate between United State dollar and Czech Koruna Using Hilbert-Huang Transform and Fuzzy Logic, 3rd Intl. Workshop on Signal Processing and Machine Learning Nov. 8-10, 2017, Barcelona, Spain. Lecture Notes on Data Engineering and Communications Technologies Series, Volume 13. (Web of Science, Proceedings Citation Index).
- Almazo, Diego; **Rodríguez Jorge, Ricardo**; Mizera-Pietraszko, Jolanta, Computational Fluid Dynamics Simulation for Propeller, Proceedings of 8th International Conference on Applications of Digital Information and Web Technologies 2017, Ciudad Juarez, Chihuahua, Mexico. (Web of Science, Proceedings Citation Index).



- Mizera-Pietraszko, Jolanta; Kołaczek, Grzegorz; Rodriguez Jorge, Ricardo, Source-Target Mapping Model of Streaming Data Flow for Machine Translation, INnovations in Intelligent SysTEms and Applications (INISTA), 2017 IEEE International Conference on, 3-5 July 2017, Gdynia, Poland. (IEEE Xplore, Web of Science Core Collection Database).
- **Rodriguez Jorge, Ricardo**, Artificial Neural Networks: Challenges in Science and Engineering Applications, Proceedings of 8th International Conference on Applications of Digital Information and Web Technologies 2017, Ciudad Juarez, Chihuahua, Mexico.
- Montes Olgún, Angel; **Rodriguez Jorge, Ricardo**, Climate fuzzy control proposal for a homemade greenhouse, Proceedings of 8th International Conference on Applications of Digital Information and Web Technologies 2017, Ciudad Juarez, Chihuahua, Mexico.
- Martinez, Ana; **Rodriguez Jorge, Ricardo**; Villa-Angulo, Rafael; Bila, Jiri; Mizera-Pietraszko, Jolanta, Review on higher-order neural units for monitoring cardiac arrhythmia patterns, Proceedings of 8th International Conference on Applications of Digital Information and Web Technologies 2017, Ciudad Juarez, Chihuahua, Mexico.
- **Rodriguez Jorge, Ricardo**; Bila, Jiri; Mizera-Pietraszko, Jolanta; Loya Orduño, Ricardo Ezequiel, "Adaptive Methodology for Designing a Predictive Model of Cardiac Arrhythmia Symptoms based on Cubic Neural Unit," Proceedings of 8th International Conference on Applications of Digital Information and Web Technologies 2017, Ciudad Juarez, Chihuahua, Mexico.
- Ponce, Israel U. ;Nandayapa Alfaro, Manuel de Jesús; Soto Marrufo, Ángel Israel; **Rodriguez Jorge, Ricardo**, "Seguimiento de trayectoria de un helicóptero de 3-GDL con zona muerta y dinámica de primer orden en la entrada (In Spanish)," Congreso Nacional de Control Automático 2016, September 2016, Querétaro, México.
- Cancino Herrera, José Elías; **Rodríguez Jorge, Ricardo**; Vergara Villegas, Osslán Osiris; Cruz Sánchez, Vianey Guadalupe; Bila, Jiri; Nandayapa Alfaro, Manuel de Jesus; Ponce, Israel U.; Soto Marrufo, Ángel Israel; Flores Abad, Ángel, "Monitoring of Cardiac Arrhythmia Patterns by Adaptive Analysis," 2016 11th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC), November 2016, Asan, Korea.
- Mexicano, A; Cervantes, S.; **Rodríguez, R.**; Pérez, J.; Almanza, N., "Identifying stable objects for accelerating the classification phase of k-means," 2016 11th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC), November 2016, Asan, Korea.
- Mexicano A., **Rodríguez R.**, Cervantes S., Montes P., Jimenez M., "The Early Stop Heuristic: A new convergence criterion for k-means," Symposium on Optimization Algorithms for Discrete Problems", ICNAAM 2015, September 2015, Rhodes, Greece (Indexed in ISI web of knowledge, Scopus).
- **Ricardo Rodriguez**, Osslán O. Vergara, Vianey G. Cruz, Adriana Mexicano, "Arrhythmia disease classification using a higher-order neural unit," Fourth International Conference on Future Generation Communication Technologies (FGCT 2015), July 29-31, 2015 (Indexed by IEEE Xplore).
- Adriana Mexicano, **Ricardo Rodriguez**, Salvador Cervantes, Rafael Ponce, Wilebaldo Bernal, Fast Means: enhancing the K-Means algorithm by accelerating its Early Classification version, "Symposium on Optimization Algorithms for Discrete Problems", ICNAAM 2014, September 22-28, 2014, Rhodes, Greece (Indexed in ISI web of knowledge, Scopus).
- Wilebaldo Bernal, Adriana Mexicano, **Ricardo Rodriguez**, Antonio Abrego, "Una versión mejorada del algoritmo K-means," Congreso Universitario 2014, ISBN: 9786078262052.

- Rodrigo Zúñiga, Adriana Mexicano, Salvador Cervantes, **Ricardo Rodriguez**, “Herramienta Visual para el análisis de algoritmos de evolución diferencial,” Congreso Universitario 2014, ISBN: 9786078262052.
- Adriana Mexicano, Perla Marlen Bocanegra, Salvador Cervantes, **Ricardo Rodriguez**, “C-JADE: Una versión paralela del algoritmo Jade,” Congreso Universitario 2014, ISBN: 9786078262052.
- Adriana Mexicano, Joaquin Perez, **Ricardo Rodriguez**, Salvador Cervantes, “Caracterización de instancias difíciles del problema de Binpacking aplicando minería de datos,” 7<sup>mo</sup> Congreso Internacional de Investigacion, CIPITECH 2014. ISBN: 978-607-8262-06-9.
- Adriana Mexicano, Rodrigo Zúñiga, Salvador Cervantes, **Ricardo Rodriguez**, “RAVED: Herramienta para análisis visual de algoritmos de evolución diferencial,” 7<sup>mo</sup> Congreso Internacional de Investigación, CIPITECH 2014. 978-607-8262-06-9.
- **Ricardo Rodriguez**, Adriana Mexicano, Jiri Bila, N. B. Nghien, Rafael Ponce, Salvador Cervantes, “Hilbert- Huang Transform and Neural Networks for Electrocardiogram Modeling and Prediction,” The 2014 10<sup>th</sup> International Conference on Natural Computation (ICNC 2014), August 19-21, 2014, Xiamen, China. (indexed by IEEE Xplore).
- **Ricardo Rodriguez**, Adriana Mexicano, Jiri Bila, Rafael Ponce-Medellin, Salvador Cervantes, “Adaptive Threshold and Principal Component Analysis for Feature Extraction of Electrocardiogram Signals,” International Symposium on Computer, Consumer and Control 2014, IEEE Computer Society Washington, DC, USA 2014, June 10-12, 2014 Taichung, Taiwan (indexado en Scopus).
- Adriana Mexicano, **Ricardo Rodríguez**, Salvador Cervantes, Rafael Ponce, Joaquin Pérez, “Preparación e integración de datos poblacionales en el proceso de minería de datos: un caso de estudio,” 6<sup>to</sup> Congreso Internacional de Investigación, CIPITECH 2013, Octubre 9, 10 y 11, 2013, ISBN: 978-607-8262-02-1, Chihuahua, Mexico.
- **Ricardo Rodriguez**, Adriana Mexicano, Salvador Cervantes, Jiri Bila, Rafael Ponce, “Extracting the QRS complexity and R beats in electrocardiogram signals using the Hilbert transform,” 2013 Interdisciplinary Symposium on Complex Systems, September, 10-13, 2013, Prague, Czech Republic.
- **Ricardo Rodriguez**, Adriana Mexicano, Jiri Bila, Rafael Ponce, Salvador Cervantes, Alicia Martinez, “Hilbert Transform and Neural Networks for Identification and Modeling of the ECG Complex” *Third International Conference on Innovative Computing Communication Technology*, ISBN: 978-1-4799-0048-0, August 29-31, 2013, London, UK, (indexed in Scopus).
- **Ricardo Rodriguez**, Jiri Bila, Ivo Bukovsky, N Homma, “Lung Tumor Motion Prediction by Static Neural Networks”, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics*, ISBN: 978-80-01-05061-3, 28 – 30 May 2012, Roztoky, Czech republic.
- **Ricardo Rodriguez**, Jiri Bila, Ivo Bukovsky, “Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction” *Sesja studenckich Kół Naukowych - Wydział Mechaniczny PK - 27 IV 2012*, Poland, April 27, 2012.
- **Ricardo Rodriguez**, Jiri Bila, Ivo Bukovsky, “Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction” *STC 2012*, March 28, 2012, Czech Republic.
- Ivo Bukovsky, Jiri Bila, Homma Noriyasu, **Ricardo Rodriguez**, “Prospects of gradient methods for nonlinear control” *Automatizácia a riadenie v teórii a praxi*, ARTEP 2012, 22. 2. – 24. 2. 2012, Stará Lesná, SR, Slovak Republic.

- **Ricardo Rodriguez**, Ivo Bukovsky, Jiri Bila, “*Weight Adaptation Stability of Static Quadratic Neural Unit*”, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics 2011*, Herbertov, Czech Republic, may 19-21, 2011, pp. 83-88.
- Ivo Bukovsky, Kei Ichiji, Noriyasu Homma, Makoto Yoshizawa and **Rodriguez Ricardo**. “*Testing Potentials of Dynamic Quadratic Neural Unit for Prediction of Lung Motion during Respiration for Tracking Radiation Therapy*”. 2010 IEEE World Congress on Computational Intelligence/ International Joint Conference on Neural Networks. Centro de Convenciones Internacional de Barcelona, Barcelona, Spain. July 18-23,2010, pp. 3906-3911, ISBN 978-1-4244-6917-8, (indexed in Scopus).
- **Ricardo Rodriguez**, Kei Ichiji, Ivo Bukovsky, Jiri Bila, Noriasu Homma. “*Lung motion Prediction by static neural networks*”. 4<sup>th</sup> International Symposium on Measurement, Analysis and Modelling of Human Functions. Czech Technical University in Prague, Czech Republic. June 14-16, 2010, pp. 40-45, ISBN 978-80-01-04577-0 (indexed in Scopus).
- **Ricardo Rodriguez**, “*Experimental Analysis of MLP in Lung Motion Prediction*”. Seminar Kozojedy, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics 2010*, may 27,2010, pp. 95-100, ISBN 978-80-01-04625-8.
- Ivo Bukovsky, Noriyasu Homma, Ladislav Smetana, **Ricardo Rodriguez**, Martina Mironovova, Stanislav Vrana. “*Quadratic Neural Unit is a Good Compromise between Linear Models and Neural Networks for Industrial Applications*”. The 9th IEEE International Conference on COGNITIVE INFORMATICS, ICCI 2010. Tsinghua University, Beijing, China. July 7-9, 2010, pp. 556 - 560, ISBN: 978-1-4244-8041-8, Los Alamitos: IEEE Computer Society Press, DOI: [10.1109/COGINF.2010.5599677](https://doi.org/10.1109/COGINF.2010.5599677), (indexed in Scopus)
- **Ricardo Rodríguez Jorge**, Gerardo Reyes Salgado, Vianey Gpe. Cruz Sanchez. “*Verification and Validation of a Neural-Symbolic Hybrid System Using an Enhanced Petri Net*”. The 7th IEEE International Conference on COGNITIVE INFORMATICS, ICCI 2008. Stanford University, California, USA. August 14-16, 2008, ISBN: 978-1-4244-2538-9. IEEE CN: CFP08312-PRT, (indexed in Scopus).
- **Ricardo Rodríguez Jorge**, Gerardo Reyes Salgado, Vianey Gpe. Cruz Sanchez. “*Knowledge Verification in Image Segmentation Problems Using an Extended Petri Net*”. First International Conference on Industrial, Mechatronics and Manufacture Engineering (**CIIMM 2007**). Conference Memories, Ciudad Juarez Chihuahua. From 03 to 05 October, 2007, ISBN 978-968-9305-07-1.
- **Ricardo Rodríguez Jorge**, Gerardo Reyes Salgado, Vianey Gpe. Cruz Sánchez. “Una revisión de los métodos de verificación y validación del conocimiento en los sistemas basados en conocimiento,” Decimoséptima Reunión de Otoño de Comunicaciones, Computación, Eléctrica y Exposición Industrial, (**ROC&C 2006**). IEEE sección México. Acapulco, Gro., México, Noviembre 28 - December 03, 2006.

## 6. PRESENTATIONS

### • Scientific Poster

- Wilebaldo Bernal Flores, Adriana Mexicano Santoyo, **Ricardo Rodriguez Jorge**, “An improvement to the classification stage of the k-means algorithm,” 4th University Forum, In 3rd Expo-science edition and Innovation Tamaulipas, Tamaulipas, Mexico.

### • Invited keynote speaker

- *Description of technological processes and mathematical modeling by means of higher-order neural units*, 2nd International Meeting on Postgraduate Progresses in Software Engineering, Guadalajara University, Mexico, Sept. 29, 2017.

- *Challenges in Science and Engineering Applications*, The Eight International Conference on the Applications of Digital Information and Web Technologies, March 31, 2017.
- *The Hilbert-Huang Transform and Neural Networks for Modeling and Prediction of Electrocardiograms*, University Conference 2014, Technological University of Ciudad Juarez, August 13, 2014.
- *Neural Networks and Modern Transforms for Science and Technology Applications*, Tékhné 2013, Instituto Tecnológico de Morelia and CECTI Michoacán, October 16-18, 2013.
- *Sliding Window Technique for Conventional and Nonconventional Neural Networks in Biomedical Applications*, International Congress on Research (CIPITECH), Technological University of Ciudad Juarez, September 28, 2012.
- *Emergent Phenomena in the Evolution of Shapes and in Problem Solving (First author: Prof. Jiri Bila)* in International Congress on Research (CIPITECH), Technological University of Ciudad Juarez, September 27, 2012.
- *Validation and Verification of Neural-Symbolic Hybrid Systems in the 3rd. National Congress of Mechatronics*. Technological University of Torreon. Carried out on July 2008.
- **Invited plenary speaker**
  - *Adaptive Monitoring by means of Dynamic Higher-Order Neural Units*, in Engineering Week, Autonomous University of Ciudad Juarez, Ciudad Juárez, Chih., Mexico, September 18, 2017.
  - *Higher Order Neural Unit for Engineering Applications*, in Engineering Week, Autonomous University of Ciudad Juarez, Ciudad Juárez, Chih., Mexico, September 24, 2015.
  - *Neural Networks for Machine Learning and Applications*, in Jornadas IMT, Tecnológico de Monterrey, Campus Ciudad Juárez, Ciudad Juárez, Chih., Mexico, November 28, 2014.
  - *Neural Networks*, in the International Conference on Robotics and Automation, Morelos, Mexico, November 13, 2014.
  - *Transforms and Neural Networks in Engineering Applications*, in the International Conference Káthedra 2014, Technological Institute of Ciudad Juarez, September 29 – October 03, 2014.
- **Invited Lectures**
  - *Seminar lecture: Adaptive evaluation of technological processes by means of dynamic higher-order neural units presented* at New Mexico State University (NMSU). In the United States of America (USA), October 13, 2017.
  - *Adaptive Evaluation: Challenges in Biomedical Engineering* presented at The University of Texas in El Paso (UTEP) in The United States of America (USA), April 14, 2017.
  - *Artificial Intelligence challenges for Engineering Applications*, presented at Opole University, in Poland. He stayed at Villa Academica for foreign guests (Courtesy of Opole University), December 22, 2016.
  - *Higher-Order Neural Unit (structure, learning, aspects and applications)* in the Technological University of Ciudad Juárez, January 4, 2011.
- **Invited workshop speaker**

- *Signal Processing and Machine Learning*, Guadalajara University, Mexico, September 25 - 29, 2017. During the 2nd International Meeting on Postgraduate Progresses in Software Engineering. (In Spanish).
- *Artificial Intelligence*, Engineering Week 2016, Autonomous University of Ciudad Juarez, September 19-23, 2016 (In Spanish).

- **Conferences**

- *Una versión mejorada del algoritmo K-means,*” Congreso Universitario 2014, Universidad Tecnológica de Ciudad Juárez, Chihuahua, August 2014.
- *Herramienta visual para el análisis de algoritmos de evolución diferencial,*” Congreso Universitario 2014, Universidad Tecnológica de Ciudad Juárez, Chihuahua, August 2014.
- *C-JADE: una versión paralela del algoritmo Jade,*” Congreso Universitario 2014, Universidad Tecnológica de Ciudad Juarez, Chihuahua, August 2014.
- *Preparación e integración de datos poblacionales en el proceso de minería de datos: un caso de estudio,* ” 6to Congreso Internacional de Investigación, CIPITECH 2013, Chihuahua, Octubre 2013.
- *Hilbert Transform and Neural Networks for Identification and Modeling of the ECG Complex,* *Third International Conference on Innovative Computing Communication Technology*, August 29-31, 2013, London, UK.
- *Lung Tumor Motion Prediction by Static Neural Networks*”, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics*, 28 – 30 May 2012, Roztoky, Czech republic.
- *Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction*” Sesja studenckich Kół Naukowych - Wydział Mechaniczny PK - 27 IV 2012, Poland, April 27, 2012.
- *Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction*, STC 2012, March 28, 2012, Czech Republic.
- *Weight Adaptation Stability of Static Quadratic Neural Unit*”, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics* 2011, Herbertov, Czech Republic, may 19-21, 2011.
- *Lung motion Prediction by static neural networks.* 4<sup>th</sup> International Symposium on Measurement, Analysis and Modelling of Human Functions. Czech Technical University in Prague, Czech Republic. June 14-16, 2010, pp. 40-45.
- *Experimental Analysis of MLP in Lung Motion Prediction*”. Seminar Kozojedy, *Proceedings of the annular meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics* 2010, may 27,2010, pp. 95-100.
- *Quadratic Neural Unit is a Good Compromise between Linear Models and Neural Networks for Industrial Applications*”. The 9th IEEE International Conference on COGNITIVE INFORMATICS, ICCI 2010. Tsinghua University, Beijing, China. July 7-9, 2010.
- *“Verification and Validation of a Neural-Symbolic Hybrid System Using an Enhanced Petri Net”*. The 7th IEEE International Conference on COGNITIVE INFORMATICS, ICCI 2008. Stanford University, California, USA. August 14-16, 2008.

- *Knowledge Verification in Image Segmentation Problems Using an Extended Petri Net*". First International Conference on Industrial, Mechatronics and Manufacture Engineering (**CIIMM 2007**). Conference Memories, Ciudad Juarez Chihuahua. From 03 to 05 October, 2007.
- *Una revisión de los métodos de verificación y validación del conocimiento en los sistemas basados en conocimiento*. Decimoséptima Reunión de Otoño de Comunicaciones, Computación, Eléctrica y Exposición Industrial, (**ROC&C 2006**). IEEE sección México. Acapulco, Gro., México, Noviembre 28 - Diciembre 03, 2006.

## 7. PARTICIPATION IN RESEARCH PROJECTS

- **POSTGRADO-IIT**

Awarded by: Coordinacion de Investigacion y Postgrado- IIT  
 Project entitle: Sistema de control difuso para regular la temperatura de un invernadero  
 Awarded Institution: Universidad Autonoma de Ciudad Juarez  
 Role: Corresponded researcher  
 Date: April 2019

- **POSTGRADO-IIT**

Awarded by: Coordinacion de Investigacion y Postgrado- IIT  
 Project entitle: Sistema de traducción automática mediante optimización por enjambre de partículas  
 Awarded Institution: Universidad Autonoma de Ciudad Juarez  
 Role: Corresponded researcher  
 Date: April 2019

- **POSTGRADO-IIT**

Awarded by: Coordinacion de Investigacion y Postgrado- IIT  
 Project entitle: Métodos de Lie aplicados a campos vectoriales algebrizables en dimensión tres  
 Awarded Institution: Universidad Autonoma de Ciudad Juarez  
 Role: Corresponded researcher  
 Date: April 2019

- **PROMEPE 2016**

Awarded by: The Professor Improvement Program (PRODEP)  
 Grant number: DSA/103.5/16/10473  
 Project entitle: Detección de Patrones de Arritmias Cardiacas mediante Análisis Adaptativo  
 Date: September 2016

- **POSTGRADO-IIT**

Awarded by: Coordinacion de Investigacion y Postgrado- IIT  
 Project entitle: Redes Neuronales de Orden Superior para la Deteccion de Patrones de Arritmias  
 Awarded Institution: Universidad Autonoma de Ciudad Juarez  
 Role: Corresponded researcher  
 Date: March 2016

- **POSTGRADO-IIT**

Awarded by: Coordinación de Investigación y Postgrado-IIT  
 Project entitle: Realidad Aumentada aplicada al aprendizaje del idioma Mayo  
 Awarded Institution: Universidad Autónoma de Ciudad Juárez

Role: Colaborator researcher

Date: April 2016

- **PROMEP 2013**

Awarded by: Programa de Mejoramiento del Profesorado (PROMEP),  
Grant number: PROMEP/103.5/13/9045,  
Project entitle: Arquitectura de redes neuronales para la detección de Arritmias  
Date: October 2013.

- **SGS10/252/OHK2/3T/12**

Title of the project: The development of methods for cost-effective creation of information and control systems for mechanical and thermal energy equipment (In czech).

Awarded by: SGS grant

Grant number: SGS10/252/OHK2/3T/12

Role: Collaborator

## 8. PARTICIPATION IN ACADEMIC MANAGEMENT

- **Associate Editor**

- Journal of Intelligent Automation and Soft Computing (AutoSoft), <http://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=tasj20#.UuWNxrRIDIU>, ISSN: 1079-8587, indexed by Journal Citation Reports (JCR), Thomson-Reuters, impact factor: 0.155.

- **Scientific board**

- Journal DYNA Engineering and Industry, <http://www.revistadyna.com/>, ISSN: 0012-7361, indexed by Journal Citation Reports (JCR), Thomson-Reuters, impact factor: 0.237.

- **Editorial Board**

- International Journal of Computer and Communication Engineering Research, <http://ijccer.org/index.php/ojs/index>,
- International Journal of Innovation and Applied Studies, <http://www.issr-journals.org/ijias/authors.php>, ISSN: 2028-932
- Engineering Research Publication, <http://www.erppublication.org/>, International Journal of Modern Communication Technologies & Research, International Journal of Engineering & Technical Research
- International Journal of Computer Science and Business Informatics, <http://www.ijcsbi.org/>, ISSN: 1694-2108
- Journal of Biomedical Engineering Research, [www.academicpub.org/ber/](http://www.academicpub.org/ber/), ISSN:2306-6008(Print), ISSN:2306-5990(Online).
- Journal of Pattern Recognition and Intelligent Systems, [http:// www.academicpub .org/pris/EditorialBoard.aspx](http://www.academicpub.org/pris/EditorialBoard.aspx)
- International Journal of Softcomputing and Enginnering, <http://www.ijscce.org/>, ISSN:2231-2307.

- International Journal of Advanced Computer Science and Information Technology, [http://elvedit.com/journals/IJACSIT/?page\\_id=32](http://elvedit.com/journals/IJACSIT/?page_id=32),
- International Journal of Humanitarian Technology, ISSN: 2056-6557, inderscience publishers, <http://www.inderscience.com/jhome.php?jcode=ijht>.
- 1rs International Conference on environment and society, <http://sites.colech.edu.mx/cimas2014/>.
- **General conference chair**
  - Eight International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2017), <http://www.socio.org.uk/icadiwt/>
- **Co-edited Book**
  - Advances in Digital Technologies, Frontiers in Artificial Intelligence and Applications, volume: 295, Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies, Amsterdam, 2017, ISBN: 978-1-61499-772-6.
- **Workshop chair**
  - 2017 Workshop Chair of: 2016 Workshop on Signal Processing and Machine Learning <http://www.sipml.com.mx/>
  - 2016 Workshop Chair of: 2016 Workshop on Signal Processing and Machine Learning <http://www.sipml.com.mx/>
  - 2015 Workshop on Signal Processing and Machine Learning (SiPML 2015), <http://www.sipml.com.mx/default.html>, November 4-6, 2015, Krakow, Poland.
  - 2015 Workshop on Intelligent Computing and Measurements (InCM 2015), [http://www.socio.org.uk/fgct/FGCT\\_workshop\\_flyer.pdf](http://www.socio.org.uk/fgct/FGCT_workshop_flyer.pdf), July 29-31, Luton, UK.
  - Second International Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'14), <http://icacci-conference.org/website/icaais2014>, September, 24 – 27, 2014.
  - First International Conference on the Future Generation Information and Communication Technology (FGICT 2014), <http://www.socio.org.uk/fgict/index.html>, September 08-10, 2014.

## 9. PARTICIPATION IN EVALUATION OF SCIENTIFIC PAPERS

- **Technical Program Committee**
  - The “Congreso Universitario 2014,” August 11-15, 2014, Ciudad Juarez, Chihuahua, Mexico.
  - The 2014 IEEE International Conference on Power and Energy (PECON 2014), <http://2014-ieee-pecon.com/>, December 1-3, 2014, Kuching Sarawak, Malaysia.
  - Fourth International Conference on the Innovative Computing Technology (INTECH 2014), <http://socio.org.uk/intech/>, August 13<sup>th</sup>-15<sup>th</sup>, 2014, University of Bedfordshire, Luton, UK.



- 2014 IEEE Symposium on Industrial Electronics and Applications (ISIEA 2014), <http://isiea2014.isiea.org/>, Sept. 28 th – Oct. 1<sup>st</sup> 2014, Kota Kinabalu, Malaysia.
- 2014 International Conference on Advanced Technology in Materials Science and Engineering (ATMSE 2014), May 17-18, 2014, <http://www.atmse.org/>, Macau, China.
- IEEE International Autumn Meeting on Power, Electronics and Computing, ROPEC 2014, <http://ropec.org/>, November 5-7, 2014, Ixtapa, Mexico.
- International Conference on Cyber-enabled distributed computing and knowledge discovery, <http://www.cyberc.org/index.asp>, October 10-12, 2014, China.
- 2014 International Workshop on Mobile Applications (MobiApps 2014), <http://www.themobiapps.org/>, August 27-29, 2014, Barcelona, Spain.
- 2014 International Workshop on the Design and Performance of Networks on Chip, <http://www.intnoc.org/index.html>, August 17-20, 2014, Ontario, Canada.
- 2014 International Conference on Engineering Management and Industrial Engineering, <http://www.emie2014.org/>, October 16-17, 2014, China.
- 2014 International Conference on Remote Sensing Techniques and Application (RSTA 2014), <http://www.rsta2014.org/>, November 16-17, Shenzhen, China.
- International Conference on Applied Mechanics and Mechanical Automation (AMMA 2014), <http://www.amma2014.org/>, May 20-21, 2014, Macao.
- International Colloquium on Sport Science, Exercise, Engineering and Technology 2014, <http://icosseet2014.uitmrmj.org/>, April, 7-9, 2014, Penang, Malaysia.
- International Conference on Electronic Publishing and Information Technology, <http://icepit.uob.edu.bh/>, April, 22-24, 2014, University of Bahrain, Bahrain.
- The 2014 10th International Conference on Natural Computation (ICNC 2014) and the 2014 11th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD2014), <http://icnc-fskd.xmu.edu.cn/index.html>, August, 19-21, 2014, Xiamen, China.
- 2014 IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE 2014), <http://myies.org/iscaie2014/>, April, 7-8, 2014, Penang, Malaysia.
- International Conference on Industrial Automation, Instrumentation, and Communication Technology 2014 (IAICT 2014), <http://iaict.org/>, August, 28-30, 2014, Bali, Indonesia.
- The Fifth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT Edition V), <http://www.socio.org.uk/icadiwt/index.php>, February 17-19, 2014.
- International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2014), <http://www.iiitm.ac.in/sirs/>, March 13 – 15, 2014, Thiruvananthapuram, India.
- 3<sup>rd</sup> International Conference on Advances in Computing, Communications & Informatics, <http://icacci-conference.org/website/>, 24-27 September 2014, Delhi, India.
- International Colloquium of Art and Design Education Research (i-cader 2014), <http://i-cader2014.myies.org/>, 7 to 9 April 2014, Penang Malaysia.

- IEEE Innovative Smart Grid Technologies Conference – Asia (ISGT ASIA), <http://iee-isgt-asia-2014.com/>, <http://iee-isgt-asia-2014.com/>, May 20 – 23, 2014 in Kuala Lumpur, Malaysia.
- Second International Conference on Future Generation Communication Technologies (FGCT 2013), <http://www.socio.org.uk/fgct/index.php>, December 12-14, 2013, London, UK.
- International Conference on Mechatronics, Electronics and Automotive Engineering (ICMEAE 2013), <http://www.icmeae.org.mx/>, November 19-22, 2013, Cuernavaca, Morelos, Mexico.
- 2013 International Conference on Control System, Computing and Engineering (ICCSCE 2013), <http://acsrg.com/iccsce/2013/>, Nov. 29- Dec. 1, 2013, Penang, Malaysia.
- The First International Conference on Advanced Data Engineering (DaEng-2013), <http://amcs.co/daeng2013/page/commitee.php>, December 16-18, 2013, Kuala Lumpur, Malaysia.
- 2013 IEEE International Autumn Meeting on Power, Electronics and Computing (ROPEC 2013), <http://ropec.org/>, November 13-15, 2013, Morelia, Mich. México.
- 2013 International Conference on Biological, Medical and Chemical Engineering (BMCE 2013), <http://www.bmce2013.org/>, December 1-2, 2013, Hong Kong, China.
- 2013 International Conference on Advanced Education Technology and Management Science, December 1-2, 2013, <http://www.aetms.org/>, Hong Kong, China.
- 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013), November 18-20, 2013, <http://myias.org/ceat2013/>, Langkawi, Indonesia.
- 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013), November 18-20, 2013, <http://myias.org/ceat2013/>, Langkawi, Indonesia.
- 2013 International Conference on Robotics, Biomimetics, & Intelligent Computational Systems (ROBIONETICS), November 25-27, 2013, <http://robionetics.org/>, Yogyakarta, Indonesia.
- IEEE Symposium on Humanities, Science and Engineering 2013 (SHUSER 2013), June 23-25, 2013, <http://mypels.org/shuser2013/>, Penang, Malaysia.
- The International Conference on Innovative Computing Technology (INTECH 2013), August 29-31, 2013, <http://www.dirf.org/intech/>, London UK.
- IEEE Business Engineering and Industrial Applications Colloquium 2013 (IEEE BEIAC 2013), <http://www.mypels.org/beiac2013/>, Langkawi, Malaysia on 8 – 9 April 2013.
- CHUSER 2012, IEEE Colloquium on Humanities, Science and Engineering Research, <http://www.mypels.org/chuser2012/>, Kota Kinabalu, Malaysia, 3 - 4 December 2012.
- ICCSII 2012, 2012 IEEE CONFERENCE ON CONTROL, SYSTEMS & INDUSTRIAL INFORMATICS, <http://iccsii.org/>, September 23-26, 2012, Bandung, Indonesia.
- Pecon, 2012, IEEE International Conference on Power and Energy, <http://www.ieeepecon.org/2012/>, December 2 – 5, 2012, Malaysia.
- ISBEIA 2012, 2012 IEEE Symposium on Business, Engineering and Industrial Applications, <http://www.uitmrm.com/isbeia2012/>, Bandung, Indonesia, 23 -26 September 2012.
- [ISIEA 2012](http://www.isiea.org/2012/), 2012 IEEE Symposium on Industrial Electronics & Applications, <http://www.isiea.org/2012/>, Bandung, Indonesia on 23 – 26 September 2012.

- Program Committee of [\*CompSens 2011, IEEE Workshop on Merging Fields of Computational Intelligence and Sensor Technology, within the IEEE Symposium Series on Computational Intelligence 2011, Paris, 2011.\*](#)

- **Journal reviewer**

- Transactions of the Institute of Measurement and Control, <http://tim.sagepub.com/>, ISSN: 0142-3312, Editors: Frank L. Lewis, John O'Gray, Steve Thompson, indexed by 2012 Journal Citation Reports ® (Thomson Reuters, 2013), impact factor: 0.656 (1 paper reviewed).
- International Journal of Research in Computer Science, <http://www.oajournals.info/2012/01/17/international-journal-of-research-in-computer-science-ijorcs/>, ISSN: 2249 – 8257 (1 paper reviewed).
- Computers in Biology and Medicine, <http://www.journals.elsevier.com/computers-in-biology-and-medicine>, indexed by Journal Citation Reports (Thomson Reuters), impact factor: 1.162.
- Webology, <http://www.webology.org/index.html>, ISSN 1735-188X, Editor in Chief: Dr. Alireza Noruzi
- World Review of science, technology and sustainable development (WRSTSD Journal), <http://www.inderscience.com/jhome.php?jcode=WRSTSD>, ISSN: 1741-2242, Editor in Chief: Dr. Farhad Memarzadeh.
- Revista Ingenieria, investigacion y Tecnologia, <http://www.ingenieria.unam.mx/~revistafi/index.php>, Editor in Chief: Mphil. Marcia Aida Gonzalez Osuna, ISSN: 1405-7743 (Indexed by Conacyt) (1 paper reviewed).
- International Journal of Software Science and Computational Intelligence (IJSSCI, <http://www.idea-global.com/IJSSCI>). ISSN: 1557-3958 E-ISSN: 1557-3966, 2009.
- Journal of Robotics. <http://www.hindawi.com/journals/jr/contents.html>. 2010. Guest Editors: Madan M. Gupta, Noriyasu Homma, Zeng-Guang Hou, Ivo Bukovsky.(3 papers reviewed).
- Journal of Ingenieria Mecanica, Tecnologia y Desarrollo, <http://revistasomim.net/consejoeditor.html>, Editor: Dr. Francisco J. Solorio Ordaz, ISSN: 1665-7381, (Indexed by Conacyt) (1 paper reviewed).
- Journal of Robotics. <http://www.hindawi.com/journals/jr/contents.html>. 2011. Special issue: Cognitive and Neural Aspects in Robotics with Applications 2011 (CNAR11). Guest Editors: Madan M. Gupta, Noriyasu Homma, Zeng-Guang Hou, Ivo Bukovsky.(4 papers reviewed).
- Journal of Progresses in Nanotechnology and Nanomaterials (PNN), <http://www.academicpub.org/pnn/SubmissionGuidelines.aspx>, ISSN: 2306-0034 (1 paper reviewed).
- International Journal of Computer and Information Technology (IJCIT), [www.ijcit.com](http://www.ijcit.com), ISSN: 2279-0764
- The journal of applied research and technology, <http://www.revistas.unam.mx/index.php/jart>, ISSN: 1665-6423, Responsible: Felipe Lara Lozano. (Indexed by Conacyt).
- Computacion y Sistemas, <http://cys.cic.ipn.mx/ojs/index.php/CyS>, ISSN: 1405-5546, Editors in Chief: Grigori Sidorov and Ulises Cortés (Indexed by Conacyt) (1 paper reviewed).

- International Journal of Artificial Intelligence and Soft Computing, <http://www.inderscience.com/jhome.php?jcode=ijaisc>, Editor in Chief: Prof. Atulya K. Nagar, ISSN print: 1755-4950.

- **Book chapter reviewer**

- Book: Privacy in a Digital, Networked World – Technologies, Implications and Solutions, PrivacyBook 2014. Co-editor: Mohamad Badra.

- **Conference reviewer**

- 19th International Conference on Artificial Neural Networks (ICANN), <http://www.kios.org.cy/ICANN09/>. 14-17 September, Limassol, Cyprus, 2009.
- 2010 IEEE World Congress on Computational Intelligence (WCCI 2010, <http://wcci2010.org/>) July 19, 2010, Barcelona, Spain.(4 papers reviewed).
- The 11th IEEE International Conference on COGNITIVE INFORMATICS (ICCI 2010, <http://www.icci2010.edu.cn/>) July 7-9, 2010, Tsinghua University, Beijing, China. (3 papers reviewed).
- International Congress on Neural Computation (ICNC 2010), <http://www.icnc.ijcci.org/home.asp> , october 24-26, 2010, Valencia, Spain. (4 papers reviewed).
- 2011 IEEE Workshop on Merging Fields of Computational Intelligence and Sensor Technology,(COMPSENS 2011) <http://ieeessci.org/2011/compsens-2011>, *within of the IEEE Symposium Series on Computational Intelligence 2011* April 11-15, 2011, Paris, France (5 papers reviewed).
- The 10th IEEE International Conference on COGNITIVE INFORMATICS and COGNITIVE COMPUTING (ICCI\*CC2011), August 18-20, 2011, [http://www.ucalgary.ca/icci\\_cc2011/ICCI2011](http://www.ucalgary.ca/icci_cc2011/ICCI2011), Banff, Alberta, Canada (1 paper reviewed).
- 2011 International Joint Conference on Neural Networks (IJCNN 2011), <http://ieeescis.org/conferences/ijcnn2011/index.php>, July 31-August 5, 2011, San Jose, California, USA (1 paper reviewed).
- 2012 International Joint Conference on Neural Networks (IJCNN 2012), <http://ieeewcci2012.org/>, June 10-15, 2012, Brisbane, Australia (3 paper reviewed).
- 2012 Ninth International Symposium on Neural Networks (ISNN 2012), <http://isnn.mae.cuhk.edu.hk/>, July 11-14, 2012, Shenyang, China (4 paper reviewed).
- The 11th IEEE International Conference on COGNITIVE INFORMATICS (ICCI\*CC 2012, [http://www.ucalgary.ca/icci\\_cc/ICCICC2012](http://www.ucalgary.ca/icci_cc/ICCICC2012)) August 22-24, 2012, Kyoto, Japan. (1 paper reviewed).
- CHUSER 2012, IEEE Colloquium on Humanities, Science and Engineering Research, <http://www.mypels.org/chuser2012/>, Kota Kinabalu, Malaysia, 3 - 4 December 2012 (11 papers reviewed).
- ICCSII 2012, 2012 IEEE CONFERENCE ON CONTROL, SYSTEMS & INDUSTRIAL INFORMATICS, <http://iccsii.org/>, September 23-26, 2012, Bandung, Indonesia (3 papers reviewed).

- Pecon, 2012, IEEE International Conference on Power and Energy, <http://www.ieeepecon.org/2012/>, December 2 – 5, 2012, Malaysia (6 papers reviewed).
- ISBEIA 2012, 2012 IEEE Symposium on Business, Engineering and Industrial Applications, <http://www.uitmrmj.org/isbeia2012/>, Bandung, Indonesia, 23 -26 September 2012 (6 papers reviewed).
- [ISIEA 2012](http://www.isiea.org/2012/), 2012 IEEE Symposium on Industrial Electronics & Applications, <http://www.isiea.org/2012/>, Bandung, Indonesia, 23 – 26 September 2012 (1 paper reviewed).
- CIPITECH 2012, Fifth International Congress of Research CIPITECH 2012, <http://201.174.39.75:8002/>, Technological University of Ciudad Juarez, Ciudad Juarez, Chihuahua, Mexico, 26-28 September 2012, (7 papers reviewed).
- IEEE SCORED 2012. 2012 IEEE Student Conference on Research and Development, <http://www.mypels.org/scored2012/>. Penang, Malaysia on 5 – 6 December 2012 (1 paper reviewed).
- IEEE ICCSCE 2012, IEEE International Conference on Control System, Computing and Engineering, <http://acscrg.com/iccsce/2012/call-for-papers/>, 23 - 25 November 2012, Malaysia (2 paper review).
- IEEE Business Engineering and Industrial Applications Colloquium 2013 (IEEE BEIAC 2013), <http://www.mypels.org/beiac2013/>, Langkawi, Malaysia on 8 – 9 April 2013 (15 paper review).
- IEEE SSCI 2013, 2013 IEEE Symposium Series on Computational Intelligence. [http://www.ntu.edu.sg/home/epnsugan/index\\_files/SSCI2013/index.html](http://www.ntu.edu.sg/home/epnsugan/index_files/SSCI2013/index.html), 15 Mon - 19 Fri April 2013, Singapore (1 paper reviewed)
- 2013 - International Symposium on Control, Automation, Industrial Informatics and Smart Grid, <http://icacci-conference.org/site/icais2013>, August 24-25, 2013 in Mysore, India (7 papers reviewed).
- 2013 International Conference on Technology, Informatics, Management, Engineering & Environment, <http://time-e.org/time-e-2013/>, June 23-26, Bandung, Indonesia, (5 paper reviewed).
- 2013 2<sup>nd</sup> International Conference on Control Systems & Industrial Informatics, Bandung, Indonesia, <http://iccsii.org/>, Bandung, Indonesia, June 23-26, 2013 (5 papers reviewed).
- CHUSER 2013 IEEE Colloquium on Humanities, Science and Engineering Research, <http://www.mypels.org/chuser2013/>, Bali, Indonesia, 24 to 25 November 2013 (6 papers reviewed).
- CIPITECH 2013 Sixth International Congress of Research CIPITECH 2013, <http://www.cipitech.mx/>, Technological University of Chihuahua, Chihuahua, Mexico, 9-11 October 2013 (6 papers reviewed),
- International Joint Conference on Neural Networks, IJCNN 2013, August 4-9, 2013, [www.ijcnn2013.org](http://www.ijcnn2013.org), Dallas, Texas, USA (1 paper reviewed).
- The 2013 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA 2013), <http://www.uitmrmj.org/isbeia2013/>, Kuching, Malaysia, 22 - 25 September 2013 (1 paper reviewed).
- The International Conference on Innovative Computing Technology (INTECH 2013), August 29-31, 2013, <http://www.dirf.org/intech/>, London UK (2 papers reviewed).
- The 2013 3<sup>rd</sup> International Conference on Instrumentation Control and Automation, Agust 28-30, 2013, Bali, Indonesia, <http://ica-itb.org/>, 5 papers reviewed)
- IEEE Symposium on Humanities, Science and Engineering 2013 (SHUSER 2013), June 23-25, 2013, <http://mypels.org/shuser2013/>, Penang, Malaysia (6 papers reviewed).

- 2013 IEEE Symposium on Industrial Electronics & Applications (ISIEA), <http://isiea2013.myies.org/>, Kuching, Malaysia, September 22-25, 2013 (1 paper reviewed).
- Colloquium on Administrative Science & Technology 2013 (CoAST 2013), <http://coast2013.myies.org/>, Kuching, Sarawak, Malaysia, September 22-25, 2013 (5 papers reviewed).
- 2014 AAGBS International Conference on Business Management (AiCoBM 2014), <http://www.myias.org/aiconf2014/>, Penang, Malaysia, 6-8 April 2014 (1 paper reviewed).
- 2014 Conference on Systems Engineering Research (CSER 2014), <http://www.incose-la.org/events/conferences/cser-2014-welcome.html>, Redondo Beach, California, United States, March 21-22, 2014.
- International Postgraduate Colloquium on Science and Technology 2014 (IPCOST 2014), <http://ipsis.uitm.edu.my/v1/ipcost2014>, Penang, Malaysia, April 7-8, 2014.
- The International Symposium on Cognition/ Knowledge Science and Engineering: CKSE 2013, Orlando Florida, USA, July 9-12, 2013
- International Colloquium of Art and Design Education Research (i-CADER 2014), Penang, Malaysia, 7<sup>th</sup>-9<sup>th</sup> April, 2014, <http://i-cader2014.myies.org/>, (1 paper reviewed).
- The Annual International Joint Conference on Neural Networks (IJCNN), <http://www.ieee-wcci2014.org/index.htm>, Beijing, China, July 6-11, 2014 (2 papers reviewed).
- The 2014 10<sup>th</sup> International Conference on Neural Computation (ICNC 2014) and the 2014 11<sup>th</sup> International Conference on Fuzzy Systems and knowledge Discovery (FSKD 2014), <http://icnc-fskd.xmu.edu.cn/index.html>, Xiamen, China, August 19-21, 2014 (4 papers reviewed (first round), 4 papers reviewed (second round) ).
- 2014 International Conference on Industrial Automation, Information and Communications Technology (IAICT 2014), <http://iaict.org/>, Bali, Indonesia, August 28-30, 2014.(3 papers reviewed).
- International Conference on Cyber-enabled distributed computing and knowledge discovery (cyberC 2014), <http://www.cyberc.org/>, Shanghai, China, October 10-12, 2014. (2 papers reviewed).
- CIPITECH 2014 Seventh International Conference on Research CIPITECH 2014, <http://www.cipitech.mx/>, Technological Institute of Chihuahua I and Technological Institute of Chihuahua II, Chihuahua, Mexico, 29-31 October 2014 (3 papers reviewed).
- International Conference on Mechatronics, Electronics and Automotive Engineering (ICMEAE 2014), <http://www.icmeae.org.mx/>, November, 2014, Cuernavaca, Morelos, Mexico (4 paper reviewed).
- 2014 International Conference on Industrial Electronics, Manufacturing, Control, Systems, and Informatics (IMACSI 2014), <http://imacsi.org/>, November 11-13 2014.
- 2014 2<sup>nd</sup> International Conference on Robotics, Biomimetics, Intelligent Computational Systems (ROBIONETICS 2014), <http://robionetics.org/>, November 11-13, 2014, Yogyakarta, Indonesia.
- 2014 2<sup>nd</sup> International Conference on Technology, Informatics, Management, Engineering & Environment (TIME-E 2014), <http://time-e.org/>, August 19-21, 2014, Bandung, Indonesia.
- 2014 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA 2014), <http://www.uitmrmj.org/isbeia2014/>, September 28- October 1, 2014, Kota Kinabalu, Malaysia.

- 2014 International Conference on Computer, Communication, and Control Technology (I4CT 2014), <http://i4ct.org/>, September 2-4, 2014, Langkawi Island, Kedah, Malaysia.
- 2014 International Conference on Intelligent Autonomous Agents, Networks and Systems (INAGENTSYS 2014), <http://inagentsys.org/>, Bandung, Indonesia, August 19-21, 2014.
- International Symposium on Research of Arts, Design and Humanities (ISRADH 2014), <http://isradh2014.wordpress.com/>, September 28- October 1, 2014, Kota Kinabalu, Malaysia.
- 1<sup>st</sup> International Conference on environment and society, (CIMAS 2014), <http://itcj.edu.mx/docs/Convocatoria%20CIMAS.pdf>, (3 abstracts reviewed).
- Advancement in Information Technology International Conference (2014 ADVKIT), <http://advkit.com/>, Dec. 16-18, 2014, Bandung, Indonesia.
- IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems 2015 (IEEE SPICES 2015), <http://www.ieeespices.org/>, Feb. 19-21, 2015, Kozhikode, India.

## 10. HUMAN RESOURCE TRAINING

### • PhD Student

- Supervisor of PhD Thesis: “Monitoreo de patrones de arritmias cardíacas mediante análisis adaptativo,” by the student: Ana Dolores Martínez Molina, PhD in Technology, from the Autonomous University of Ciudad Juárez. Dic 2019.

### • Co-supervisor of Master Thesis

- Co-Advisor of the Master Thesis: “Diseño de Arquitectura Robótica Biológicamente Inspirada (Co-Advisor),” by the student: Ibarra Fierro Gabriela Idali, Master in Applied Computing, from the Autonomous University of Ciudad Juárez. Dec. 2020. (In progress).
- Co-Advisor of Master Thesis: “Procesamiento de señales mioeléctricas para la detección e interpretación de los movimientos de la pierna,” by the student: Edgar Bernardo Ríos Ortega, Master in Computer Science, from the Technological Institute of Ciudad Victoria. Dec. 2019.
- Co-Supervisor of Master Thesis: “Una mejora a la fase de clasificación del algoritmo K-means,” by the student: Wilebaldo Bernal Flores, Master in Computer Science, from the Technological Institute of Ciudad Victoria. June 2016.
- Co-Advisor of the Master Thesis: “Planificador de Transición de Eventos para Vehículo Autónomo con Redes Neuronales Artificiales Profundas,” by the student: David Salas Velázquez, Master in Applied Computing, from the Autonomous University of Ciudad Juárez. Dec. 2018.

### • Supervisor of Bachelor thesis

- Supervisor of the thesis: “Implementación de un clasificador de imágenes usando una red multicapa con alimentación hacia adelante,” by the student Juan Manuel Ramos Gaspar, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec. 2018.
- Supervisor of the thesis: “Mantenimiento predictivo de una máquina industrial mediante redes neuronales,” by the student Laura Rubí Sánchez Pérez, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec. 2018.

- Supervisor of the thesis: “Detección de la complejidad QRS en tiempo real mediante comunicación Bluetooth,” by the student Isaac De Leon Damas, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec. 2018.
- Supervisor of the thesis: “Implementación de una Unidad Neuronal Cúbica para la detección de Patrones y Predicción de Arritmias Cardíacas vía inalámbrica,” by the student Paola Alejandra Huerta Solis, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec. 2018.
- Supervisor of the thesis: “Sistema de control difuso para regular la temperatura de un invernadero,” by the student Luis Carlos Hernández Meléndez, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. May 2018.
- Supervisor of the thesis: “Software para transcripción de formatos específicos orientado en el orden jurídico,” by the students Oscar Manuel Robledo Holguín, and Carlos Humberto Pérez Mata in order to get the title of Engineer in Computer Systems. Computer Systems Program. Autonomous University of Ciudad Juárez. May 2018.
- Supervisor of the thesis: “Implementación de un sistema de visión artificial para validación de piezas en la industria,” by the student Erick Antonio Ramos Vargas, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec 2017.
- Supervisor of the thesis: “Control de una mano robótica integrada mediante señales mioeléctricas,” by the student Laura Ivonne Figueroa Puebla, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec 2017.
- Supervisor of the thesis: “Diseño y construcción de un sistema de adquisición de datos básico para la detección de la onda representativa R en un electrocardiograma,” by the student Gabriela Ibarra Fierro, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec 2017.
- Supervisor of the thesis: “Detección del pico R en señales ECG obtenidas en tiempo real por medio del sensor single lead,” by the student Valeria Vargas Morales, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dec 2017.
- Supervisor of the thesis: “Controlador PID en un regulador neumático automático,” by the student Francisco Javier Esquivel Ceballos, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. May 2017.
- Supervisor of the thesis: “Desarrollo de un sistema de control para una prótesis robótica de mano mediante el procesamiento de señales mioeléctricas,” by the student Mauricio Pérez Lozano, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. May 2017.
- Supervisor of the thesis: “Diseño e implementación de medidor de distancia láser con una cámara web para detectar obstáculos,” by the student Nelson Mier Rutiaga, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Dic. 2016.
- Supervisor of the thesis: “Regulador de presión semiautomático,” by the student Eleazar Pulido Sariñana, in order to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. May 2016.



- Co- Supervisor of the thesis: “Software educativo como herramienta de apoyo para la enseñanza de la independencia de México basado en Realidad Aumentada,” by the students Jesús Reyes Almanza and Alejandra Margarita Rivas Simental, in order to get the title of Engineer in Software. Software Engineering Program. Autonomous University of Ciudad Juárez. May 2016.
  - Supervisor of the thesis: “Estación impresora de anillos,” by the student Joel Efrén Uribe Garcia, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University in Ciudad Juarez. May 2014.
  - Supervisor of the thesis: “Minimización de tiempo muerto en la búsqueda de fixturas en cambios de modelo,” by the student Francisco Javier Cruz Prestegui, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. May 2014.
  - Supervisor of the thesis: “Incremento de la producción en zonas 6 y 14,” by the student Christian Daniel Bautista Ramírez, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. May 2014.
  - Supervisor of the thesis: “Reducción de tiempo en cambio de rodillo,” by the student Julio Miguel Gonzalez Rodriguez, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. September 2014.
  - Supervisor of the thesis: “Firma de procesos de verificación”, by the student Luis Alberto Ramos de los Santos, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. September 2013.
  - Supervisor of the thesis: “Diseño de recipientes a presión”, by the student Asiel Alejandro Méndez Soto, in order to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. September 2013.
- **Thesis supervisor of University Technician**
    - Supervisor of the thesis: “Máquina automática de ensamble y crimpado de conector”, by the student Javier Hernández Martínez, in order to get the title of University Technician in Mechatronics. Department of Mechatronics, Technological University of Ciudad Juarez. September 2013.
    - Supervisor of the thesis: ”Instalación de equipo Matrix”, by the student: Mauricio Eduardo Brisen Valencia, in order to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Ciudad Juarez. September 2013.
    - Supervisor of the thesis: “Fabricación de máquinas para líneas de producción” by the student Jose Antonio Ruiz Romero, in order to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Juarez City. February 2009.
    - Supervisor of the thesis: “PNEUMATIC FESTO”, by the student Andres Isaac Matus Lecourtois, in order to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Juarez City. February 2009.
    - Supervisor of the thesis: “Plato giratorio automatizado” by the student Isidro Puentes Gaytan in order to obtain the title of University Superior Technician in the Technological University of Juarez City. February 2009.
- **Reviewer of Bachelor thesis**
    - Reviewer of the bachelor thesis: “Foundations of an expert system for inspection of industrial cranes”, defended by the student: Peter Mark Beneš. Faculty of Mechanical Engineering. Czech Technical University in Prague. Prague, August 28, 2012.

- Reviewer of the bachelor thesis: “Artificial Neural Networks in Python”, defended by the student: Koo Kim. Faculty of Mechanical Engineering. Czech Technical University in Prague. Prague, 23 August 2011.
- **Reviewer of the Professional Residence Memory**
  - Reviewer of the Professional Residence Memory: “System to the Stocktaking and Farming Control”, by the student: Sofia Betzabe Sanchez Gonzalez in order to obtain the title of Engineer in Computational Systems in the Technological Institute of Juarez City. November 2008.
- **Teaching experience**
  - [2015 - CURRENT]
 

Full Time Professor, Full Time Researcher, Department of Industrial and Manufacturing Engineering, Autonomous University of Ciudad Juárez.

Subjects taught:

    - Maintenance of Mechatronics Systems
    - Project of Mechatronics Diploma Thesis
    - Advanced Programming (Master course)
    - Programming Fundamentals (In the Department of Electrical and Computer Engineering)
    - Interface Design I
    - Research seminar III (PhD. course)
    - Project of Diploma Thesis I (PhD. course)
    - Machine Learning (Master course)
    - Scientific Computing (Master course)
    - Fuzzy Control Systems (Master course)
    - Project of Diploma Thesis II (PhD. course)
  - [Enero 2013- 2015]
 

Associate Professor, Full Time Researcher, Department of Mechatronics, Technological University of Ciudad Juarez.

Subjects taught:

    - Analog Electronics
    - Automatic Control
    - Applied Calculus,
    - Integrative
    - Applied Differential Equations
    - Linear Systems for Automation
    - Digital Systems
    - Sensors.
  - [SEP 2009 - NOV 2012]
 

Postgraduate researcher, Full time Ph.D. student, Faculty: Mechanical Engineering, Department: Instrumentation and Control Engineering, Czech Technical University in Prague

Subjects taught:

    - Measurement in Engineering (teaching assistant),
    - Computer Support for Study (teaching assistant).

- [JAN 2008-OCT 2009]  
Subject Lecturer, Part Time Lecturer, Department of Computation and Informatics, Technological Institute of Ciudad Juarez  
Subjects taught:
  - Artificial Intelligence
  - Data Structures I
  - Theory of Computation
  - Software of Systems
  - Data Structures
  - Sustainable Development
  
- [OCTOBER 2007-OCTOBER 2009]  
Associate Professor, Full Time Researcher, Department of Mechatronics Technological University of Ciudad Juarez  
Subjects taught:
  - Informatics III
  - Robotics
  - Analog Electronics
  - Informatics II
  - Mathematics I
  - Mathematics III
  - Applied calculus
  - Integrative
  - Analog Electronics
  - Automatic Control

## 11. RESEARCH VISITS

- [Dec. 2016-Jan 2017]. Research visit  
Institution: Czech Technical University in Prague, CTU  
Faculty: Mechanical Engineering  
Department: Instrumentation and Control Engineering  
Field: Control and Systems Engineering  
Address of the Faculty: Technická 4, 166 07 Prague 6 – Dejvice, Czech Republic.
  
- [May 28th -Jul 28th 2011]. Visiting student for a research project (scientific research)  
Research centre: Research Division on Advanced Information Technology. Cyberscience center. (Graduate School of Eng. &Graduate School of Biomedical Eng.)  
University: TOHOKU UNIVERSITY  
Project: Intelligent Prediction Method of Lung Tumor Motion for Highly Accurate Radiation Therapy.  
Host: Dr. Noriyasu Homma-Associate Professor. Yoshizawa-Homma laboratory  
Address: (Ao-A15), 6-3, Aoba, Aramaki, Aoba-ku, SENDAI,980-8578, JAPAN.
  
- [28 JUN – 31 AG '04]. Summer of the scientific research  
Institution: Centro Nacional de Investigaciones Nucleares (ININ)  
Department: Ciencias Aplicadas

Project: “Explotación de los recursos de una cámara CMU para su puesta en marcha en un robot”.  
Address: km. 36.5 carr. México-Toluca, Mpio. Ocoyoacac, Mex.

## 12. REFEREES

- Prof. Jiří BÍLA, Czech Technical University in Prague, Czech Republic, <http://www1.fs.cvut.cz/cz/u12110/bila/>
- Dr. Jolanta MIZERA-PIETRASZKO, Opole University, Poland, <http://www.math.uni.opole.pl/~jmizera/index.php>
- Dr. Edgar A. Martínez, Autonomous University of Ciudad Juarez, Mexico, <http://roboticslabuacj.wixsite.com/roboticslab-uacj/academic-body-of-mechatronics>