

Ricardo Rodríguez Jorge, Ph.D.

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Ricardo Rodríguez 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 Faculty of Science, Department of Informatics, Jan Evangelista Purkyně University, Czech Republic. 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 on several peer-reviewed international journal Editorial Boards like International Journal DYNA published by DYNA Engineering Industry (Master Journal List). 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 50 book chapters, journal and international conference papers. Dr. Rodríguez 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. Rodríguez has served as General Chair of the Eight International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2017) that was held at the Autonomous University of Ciudad Juarez in Mexico.

General Information

Personal information 📌 **E-mail:** Ricardo.Rodriguez-Jorge@ujep.cz, **Personal web site:** <http://www.rodriguezricardo.net/>, **Office phone:** +420 475 286 724, **Skype:** rodriguezri
Languages 📌 **English, Spanish, Czech (basics).**

Areas of Interest

Research areas 📌 Artificial neural networks
📌 Mechatronics
📌 Pattern recognition
📌 Artificial Intelligence
📌 Signal Processing
📌 Fuzzy-logic
📌 Genetic algorithms
📌 Natural Language Processing
📌 Medical Informatics
📌 Control Systems
📌 Adaptive Control Systems
📌 Data science
📌 Big data

Employment History

- 2021 – to present **Assistant Professor.** Faculty of Science, Department of Informatics Jan Evangelista Purkyně University in Ústí nad Labem (UJEP): Ústí nad Labem, CZ.
- 2015 – 2019 **Titular Professor - Researcher.** Institute of Engineering and Technology, Autonomous University of Ciudad Juarez (UACJ), Mexico.
- 2013 – 2015 **Associate Professor.** Department of Mechatronics, Technological University of Ciudad Juarez (UTCJ), Mexico.
- 2009 – 2012 **Postgraduate researcher/PhD student.** Department of Instrumentation and Control Engineering U12110, Faculty of Mechanical Engineering, CZ.
- 2007 – 2009 **Assistant Professor.** Department of Mechatronics, Technological University of Ciudad Juarez (UTCJ), Mexico.
- 2008 – 2009 **Subject Lecturer, Part Time Lecturer.** Department of Systems and Computing, Technological Institute of Ciudad Juarez (ITCJ), Mexico.

Education

- 2009 – 2012 **Ph.D. Mechanical Engineering, Czech Technical University in Prague (CTU).** Department of Instrumentation and Control Engineering, Field of study: Control and Systems Engineering, Czech Republic.
Thesis title: *Lung tumor motion prediction by neural networks.*
- 2005 – 2007 **M.Sc. Computer Science, The National Centre of Research and Technological Development (Cenidet).** Department of Computer Sciences, Field of study: Artificial Intelligence, Mexico, AVERAGE: 96.33.
Thesis title: *Validation and Verification Automatic Module of Extracted Rules of a Neural-Symbolic Hybrid System.*
- 2000 – 2004 **B.Sc. Computational Systems Engineering, Technological Institute of Lázaro Cárdenas (ITLAC).** Department of Systems and Computing, Field of study: Distributed systems and networks, Mexico, AVERAGE: 94.28.
Internship project: *Exploitation of Resources of a CMU Camera for its Started up on a ROMIC Robot.*

Research Publications

Journal Articles

- Rodríguez Jorge, R.,** De León-Damas, I., Bila, J., & Škvor, J. (2021). Internet of things-assisted architecture for qrs complex detection in real time. *Internet of Things*, 14(2021), 100395. [doi:https://doi.org/10.1016/j.iot.2021.100395](https://doi.org/10.1016/j.iot.2021.100395)
- Rodríguez Jorge, R.,** Sánchez-Pérez, L., Bila, J., & Škvor, J. (2021). Rotating machinery fault diagnosis using a quadratic neural unit. *International Journal of Grid and Utility Computing*. Retrieved from <https://www.inderscience.com/jhome.php?jcode=ijguc>
- Cervantes, S., Mexicano, A., Cervantes, J.-A., **Rodríguez Jorge, R.,** & Fuentes-Pacheco, J. (2020). Binary pattern descriptors for scene classification. *IEEE Latin America Transactions*, 18(01), 83–91. [doi:10.1109/TLA.2020.9049465](https://doi.org/10.1109/TLA.2020.9049465)
- Rodríguez Jorge, R.,** & Bila, J. (2020). Cardiac arrhythmia prediction by adaptive analysis via bluetooth. *MENDEL*, 26(2), 29–38. [doi:10.13164/mendel.2020.2.029](https://doi.org/10.13164/mendel.2020.2.029)
- Bila, J., **Rodríguez Jorge, R.,** & Novak, M. (2019). Modeling of Complex Systems by Means of Partial Algebras. *MENDEL*, 25(01), 103–110. Retrieved from <https://doi.org/10.13164/mendel.2019.1.103>

- 6 Mexicano, A., **Rodríguez Jorge, R.**, Montes, P., & Pérez, J. (2017). Acceleration of the K-means algorithm by removing stable items. *International Journal of Space-Based and Situated Computing*, 7(2), 72–81. [doi:10.1504/IJSSC.2017.086819](https://doi.org/10.1504/IJSSC.2017.086819)
- 7 Carballo Carrasco, J., Nandayapa, M., Flores Abad, Á., Soto Marrufo, Á., & **Rodríguez Jorge, R.** (2016). Sistema virtual para control de movimiento basado en labview-solidworks. *Cultura Científica y Tecnológica*, 58(13), 260–270. Retrieved from <http://erevistas.uacj.mx/ojs/index.php/culcyt/article/view/1435>
- 8 Durán Medran, G., Nandayapa, M., Robles Ramos, L., Ponce, U., **Rodríguez Jorge, R.**, & Vidal Portilla, L. (2016). Diseño de un plc basado en microcontrolador para secuencias programables bajo lenguaje basic. *Cultura Científica y Tecnológica*, 13(58), 231–238. Retrieved from <http://erevistas.uacj.mx/ojs/index.php/culcyt/article/view/1431>
- 9 Vergara Villegas, O. O., Cruz Sánchez, V. G., **Rodríguez Jorge, R.**, & Nandayapa Alfaro, M. (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. Retrieved from <https://ijcopi.org/ojs/article/view/22>
- 10 Bila, J., Mironovova, M., **Rodríguez Jorge, R.**, & Jura, J. (2015). 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*, 4(9), 38–46. Retrieved from http://www.erpublications.com/uploaded_files/download/download_20_09_2015_16_39_47.pdf
- 11 **Rodríguez Jorge, R.**, Mexicano, A., Bila, J., Cervantes, S., & Ponce, R. (2015). Feature extraction of electrocardiogram signals by applying adaptive threshold and principal component analysis. *Journal of Applied Research and Technology*, 13(2), 261–269. Retrieved from <https://doi.org/10.1016/j.jart.2015.06.008>
- 12 **Rodríguez Jorge, R.**, Mexicano, A., Bila, J., Ponce, R., & Cervantes, S. (2013). Electrocardiogram complexity recognition and modeling by multilayer perceptron. *Progress in Signals and Telecommunication Engineering*, 2(2), 61–72. Retrieved from <https://www.dline.info/pste/fulltext/v2n2/2.pdf>
- 13 Bukovský, I., **Rodríguez Jorge, R.**, Bila, J., & Homma, N. (2012). Prospects of gradient methods for non-linear control. *Strojárstvo Extra*, 5(5), 1–5. Retrieved from <https://www.engineering.sk/archiv/985-52012>
- 14 **Rodríguez Jorge, R.**, Bukovsky, I., & Homma, N. (2011). Potentials of quadratic neural unit for applications. *International Journal of Software Science and Computational Intelligence (IJSSCI)*, 3(3), 1–12. [doi:10.4018/IJSSCI.2011070101](https://doi.org/10.4018/IJSSCI.2011070101)
- 15 **Rodríguez Jorge, R.**, Reyes Salgado, G., & Cruz Sanchez, V. G. (2009). An enhanced petri net model to verify and validate a neural symbolic hybrid system. *International Journal of Software Science and Computational Intelligence (IJSSCI)*, 1(3), 36–52. [doi:10.4018/jssci.2009070103](https://doi.org/10.4018/jssci.2009070103)

Conference Proceedings

- 1 Mexicano, A., Carmona, J., Cervantes, S., Cervantes, J., Lopez, S., & **Rodríguez Jorge, R.** (2021). A Modified Version of K-Means Algorithm. In *Proceedings of the 16th international conference on p2p, parallel, grid, cloud and internet computing, lecture notes in networks and systems, 2021 (3PGCIC 2021)*, Fukuoka, Japan. Retrieved from <http://voyager.ce.fit.ac.jp/conf/3pgcic/2021/index.php>
- 2 **Rodríguez Jorge, R.**, Bila, J., & Skvor, J. (2021). Neural Network with L-M Algorithm for Arrhythmia Disease Classification. In *Proceedings of the 16th international conference on p2p, parallel, grid, cloud and internet computing, lecture notes in networks and systems, 2021 (3PGCIC 2021)*, Fukuoka, Japan. Retrieved from <http://voyager.ce.fit.ac.jp/conf/3pgcic/2021/index.php>
- 3 **Rodríguez Jorge, R.**, De León-Damas, I., & Bila, J. (2021). Detection of the QRS complexity in real time with bluetooth communication. In *Proceedings of the Advances on P2P, Parallel, Grid, Cloud and Internet*

Computing. *Lecture Notes in Networks and Systems (3PGCIC 2020)* (pp. 429–439). Yonago, Japan. Retrieved from https://doi.org/10.1007/978-3-030-61105-7_43

- 4 **Rodríguez Jorge, R.**, Sánchez-Pérez, L., Bila, J., & Škvor, J. (2021). Adaptive architecture for fault diagnosis of rotating machinery. In *Proceedings of the advanced informaton networking and applicatons - lecture notes in networks and systems series (AINA 2021)* (pp. 1–11). Toronto, Canada. Retrieved from https://doi.org/10.1007/978-3-030-75078-7_5
- 5 Cong, C. N., **Rodríguez Jorge, R.**, Nguyen Ba, N., Trinh Trong, C., & Nguyen An, N. (2020). Design of optimal pi controllers using the chemical reaction optimization algorithm for indirect power control of a dfig model with mppt. In *Proceedings of the Web, Artificial Intelligence and Network Applications. Advances in Intelligent Systems and Computing (WAINA 2020)* (pp. 1250–1260). Caserta, Italy. Retrieved from https://doi.org/10.1007/978-3-030-44038-1_114
- 6 Nghien, N. B., & **Rodríguez Jorge, R.** (2020). Building an early warning model for detecting environmental pollution of wastewater in industrial zones. In *Proceedings of the Advances on P2P, Parallel, Grid, Cloud and Internet Computing. Lecture Notes in Networks and Systems (3PGCIC 2019)* (pp. 828–837). Antwerp, Belgium. Retrieved from https://doi.org/10.1007/978-3-030-33509-0_78
- 7 Mexicano-Santoyo, A., **Rodríguez Jorge, R.**, Abrego, A., Jiménez, M. A., Zúñiga-Treviño, R., & Martínez-García, E. A. (2019). Visual analysis of differential evolution algorithms. In *Proceedings of the Multimedia and Network Information Systems. Advances in Intelligent Systems and Computing (MISSI 2018)* (pp. 512–521). Wroclaw, Poland. Retrieved from https://doi.org/10.1007/978-3-319-98678-4_51
- 8 **Rodríguez Jorge, R.**, Bila, J., Mizera-Pietraszko, J., & Martínez-García, E. A. (2019). Weight adaptation stability of linear and higher-order neural units for prediction applications. In *Proceedings of the Multimedia and Network Information Systems. Advances in Intelligent Systems and Computing (MISSI 2018)* (pp. 503–511). Wroclaw, Poland. Retrieved from https://doi.org/10.1007/978-3-319-98678-4_50
- 9 Ibarra Fierro, G. I., **Rodríguez Jorge, R.**, Mizera-Pietraszko, J., & Martínez García, E. A. (2018). Design and implementation of a data acquisition system for r peak detection in electrocardiograms. In *Proceedings of the 11th International Joint Conference on Biomedical Engineering Systems and Technologies - volume 5: AI4Health* (pp. 715–721). [doi:10.5220/0006752807150721](https://doi.org/10.5220/0006752807150721)
- 10 Martínez-García, E. A., Ávila Rodríguez, N., **Rodríguez Jorge, R.**, Mizera-Pietraszko, J., Sheba, J. K., Mohan, R. E., & Magid, E. (2018). Non Linear Fitting Methods for Machine Learning. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing* (pp. 807–818). [doi:10.1007/978-3-319-69835-9_76](https://doi.org/10.1007/978-3-319-69835-9_76)
- 11 Mizera-Pietraszko, J., Kolaczek, G., **Rodríguez Jorge, R.**, & Martínez García, E. A. (2018). Information streaming systems: A review. In *2018 Innovations in Intelligent Systems and Applications (INISTA)* (pp. 1–9). [doi:10.1109/INISTA.2018.8466323](https://doi.org/10.1109/INISTA.2018.8466323)
- 12 Montes Olguín, J., Mizera-Pietraszko, J., **Rodríguez Jorge, R.**, & Martínez García, E. A. (2018). Particle swarm optimization as a new measure of machine translation efficiency. In *Proceedings of the Ninth International Conference on Soft Computing and Pattern Recognition (SoCPaR 2017)* (pp. 161–170). [doi:10.1007/978-3-319-76357-6_16](https://doi.org/10.1007/978-3-319-76357-6_16)
- 13 Nghien, N. B., **Rodríguez Jorge, R.**, Martínez-García, E., Torres-Cordoba, R., Mizera-Pietraszko, J., & Montes Olguín, A. (2018). Predicting the short-term exchange rate between united state dollar and czech koruna using hilbert-huang transform and fuzzy logic. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing* (pp. 796–806). [doi:10.1007/978-3-319-69835-9_75](https://doi.org/10.1007/978-3-319-69835-9_75)
- 14 **Rodríguez Jorge, R.**, Martínez-García, E., Mizera-Pietraszko, J., Bila, J., & Torres-Cordoba, R. (2018). Prediction of highly non-stationary time series using neural networks. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing* (pp. 787–795). [doi:10.1007/978-3-319-69835-9_74](https://doi.org/10.1007/978-3-319-69835-9_74)
- 15 **Rodríguez Jorge, R.**, Martínez-García, E., Torres-Cordoba, R., Bila, J., & Mizera-Pietraszko, J. (2018). Adaptive threshold, wavelet and hilbert transform for qrs detection in electrocardiogram signals. In *Ad-*

vances on P2P, Parallel, Grid, Cloud and Internet Computing (pp. 777–786). [doi:10.1007/978-3-319-69835-9_73](https://doi.org/10.1007/978-3-319-69835-9_73)

- 16 Almazo, D., **Rodríguez Jorge, R.**, & Mizera-Pietraszko, J. (2017). Computational fluid dynamics simulation for propeller. In *Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies 2017* (pp. 162–168). [doi:10.3233/978-1-61499-773-3-162](https://doi.org/10.3233/978-1-61499-773-3-162)
- 17 Herrera, J. E. C., **Rodríguez Jorge, R.**, Villegas, O. O. V., Sánchez, V. G. C., Bila, J., de Jesús Nandayapa Alfaro, M., ... Abad, Á. F. (2017). Monitoring of cardiac arrhythmia patterns by adaptive analysis. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing* (pp. 885–894). [doi:10.1007/978-3-319-49109-7_86](https://doi.org/10.1007/978-3-319-49109-7_86)
- 18 Martínez Molina, A., **Rodríguez Jorge, R.**, Villa-Angulo, R., Bila, J., Mizera-Pietraszko, J., & Torres Arguelles, S. (2017). Review on higher-order neural units to monitor cardiac arrhythmia patterns. In *Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies 2017* (pp. 219–231). [doi:10.3233/978-1-61499-773-3-219](https://doi.org/10.3233/978-1-61499-773-3-219)
- 19 Mexicano, A., Cervantes, S., **Rodríguez Jorge, R.**, Pérez, J., Almanza, N., Jiménez, M. A., & Azuara, A. (2017). Identifying stable objects for accelerating the classification phase of k-means. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing* (pp. 903–912). [doi:10.1007/978-3-319-49109-7_88](https://doi.org/10.1007/978-3-319-49109-7_88)
- 20 Mizera-Pietraszko, J., Kołaczek, G., & **Rodríguez Jorge, R.** (2017). Source-target mapping model of streaming data flow for machine translation. In *2017 IEEE International Conference on Innovations in Intelligent Systems and Applications (INISTA)* (pp. 490–494). [doi:10.1109/INISTA.2017.8001209](https://doi.org/10.1109/INISTA.2017.8001209)
- 21 Montes Olgún, A., & **Rodríguez Jorge, R.** (2017). Fuzzy control proposal for the climate of a homemade greenhouse. In *Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies 2017* (pp. 257–266). [doi:10.3233/978-1-61499-773-3-257](https://doi.org/10.3233/978-1-61499-773-3-257)
- 22 **Rodríguez Jorge, R.** (2017). Artificial neural networks: Challenges in science and engineering applications. In *Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies 2017* (pp. 25–35). [doi:10.3233/978-1-61499-773-3-25](https://doi.org/10.3233/978-1-61499-773-3-25)
- 23 **Rodríguez Jorge, R.**, Bila, J., Mizera-Pietraszko, J., Loya Orduño, R. E., Martínez García, E., & Torres Córdoba, R. (2017). Adaptive methodology for designing a predictive model of cardiac arrhythmia symptoms based on cubic neural unit. In *Proceedings of the 8th International Conference on Applications of Digital Information and Web Technologies 2017* (pp. 232–239). [doi:10.3233/978-1-61499-773-3-232](https://doi.org/10.3233/978-1-61499-773-3-232)
- 24 Mexicano, A., **Rodríguez Jorge, R.**, Cervantes, S., Montes, P., & Jiménez, M. A. (2016). The early stop heuristic: A new convergence criterion for k-means. In *Symposium on Optimization Algorithms for Discrete Problems* (pp. 903–912). [doi:10.1063/1.4952103](https://doi.org/10.1063/1.4952103)
- 25 Ponce, I. U., Nandayapa Alfaro, M. d. J., Soto Marrufo, Á. I., & **Rodríguez Jorge, R.** (2016). Seguimiento de trayectoria de un helicóptero de 3-gdl con zona muerta y dinámica de primer orden en la entrada. In *Congreso Nacional de Control Automático 2016* (pp. 408–413). Querétaro, México. Retrieved from <http://amca.mx/memorias/amca2016/Articulos/0040.pdf>
- 26 Mexicano, A., **Rodríguez Jorge, R.**, Cervantes, S., Ponce, R., & W., B. (2015). Fast means: Enhancing the k-means algorithm by accelerating its early classification version. In *AIP Conference Proceedings* (p. 820004). [doi:10.1063/1.4913023](https://doi.org/10.1063/1.4913023)
- 27 **Rodríguez Jorge, R.**, Vergara Villegas, O. O., Cruz Sanchez, V. G., Bila, J., & Mexicano, A. (2015). Arrhythmia disease classification using a higher-order neural unit. In *2015 Fourth International Conference on Future Generation Communication Technology (FGCT)* (pp. 1–6). [doi:10.1109/FGCT.2015.7300253](https://doi.org/10.1109/FGCT.2015.7300253)
- 28 Bernal, W., Mexicano, A., **Rodríguez Jorge, R.**, & Abrego, A. (2014). Una versión mejorada del algoritmo k-means. In *Congreso Universitario 2014* (pp. 218–223). Ciudad Juárez, Mexico. Retrieved from <https://www.scribd.com/document/264171921/Congreso-Universitario-UTCJ-2014-Publicaciones-en-Extenso>

- 29 Mexicano, A., Bocanegra, P. M., Cervantes, S., & **Rodríguez Jorge, R.** (2014). C-jade: Una versión paralela del algoritmo jade. In *Congreso Universitario 2014* (pp. 212–217). Ciudad Juarez, Mexico. Retrieved from <https://www.scribd.com/document/264171921/Congreso-Universitario-UTCJ-2014-Publicaciones-en-Extenso>
- 30 Mexicano, A., Perez, J., **Rodríguez Jorge, R.**, & Cervantes, S. (2014). Caracterización de instancias difíciles del problema de binpacking aplicando minería de datos. In *7mo Congreso Internacional de Investigación, cipitech 2014* (pp. 311–319). Ciudad Juarez, Mexico. Retrieved from <https://isbn.cloud/9786078262069/septimo-congreso-internacional-de-investigacion-cipitech-2014/>
- 31 Mexicano, A., Zúñiga, R., Cervantes, S., & **Rodríguez Jorge, R.** (2014). Raved: Herramienta para análisis visual de algoritmos de evolución diferencial. In *7mo Congreso Internacional de Investigación, cipitech 2014* (pp. 260–267). Ciudad Juarez, Mexico. Retrieved from <https://isbn.cloud/9786078262069/septimo-congreso-internacional-de-investigacion-cipitech-2014/>
- 32 **Rodríguez Jorge, R.**, Bila, J., Mexicano, A., Cervantes, S., Ponce, R., & Nghien, N. B. (2014). Hilbert-huang transform and neural networks for electrocardiogram modeling and prediction. In *The 2014 10th International Conference on Natural Computation (ICNC 2014)* (pp. 561–567). doi:10.1109/ICNC.2014.6975896
- 33 **Rodríguez Jorge, R.**, Mexicano, A., Bila, J., Nghien, N. B., Ponce, R., & Cervantes, S. (2014). Adaptive threshold and principal component analysis for features extraction of electrocardiogram signals. In *2014 International Symposium on Computer, Consumer and Control* (pp. 1253–1258). doi:10.1109/IS3C.2014.324
- 34 **Rodríguez Jorge, R.**, Mexicano, A., Cervantes, S., Bila, J., & Ponce, R. (2014). Extracting the QRS complexity and r beats in electrocardiogram signals using the hilbert transform. In *ISCS 2013: Interdisciplinary Symposium on Complex Systems* (pp. 203–213). doi:10.1007/978-3-642-45438-7_20
- 35 Zúñiga, R., Mexicano, A., Cervantes, S., & **Rodríguez Jorge, R.** (2014). Herramienta visual para el análisis de algoritmos de evolución diferencial. In *Congreso Universitario 2014* (pp. 293–301). Ciudad Juarez, Mexico. Retrieved from <https://www.scribd.com/document/264171921/Congreso-Universitario-UTCJ-2014-Publicaciones-en-Extenso>
- 36 Mexicano, A., **Rodríguez Jorge, R.**, Cervantes, S., Ponce, R., & Pérez, J. (2013). Preparación e integración de datos poblacionales en el proceso de minería de datos: Un caso de estudio. In *6to Congreso Internacional de Investigación, CIPITECH 2013* (pp. 311–319). Chihuahua, Mexico. Retrieved from <https://www.scribd.com/document/318593402/MEMORIA-SEXTO-CONGRESO-INTERNACIONAL-DE-INVESTIGACION-CIPITECH-2013-UTCH-1>
- 37 **Rodríguez Jorge, R.**, Mexicano, A., Bila, J., Ponce, R., Cervantes, S., & Martínez, A. (2013). Hilbert transform and neural networks for identification and modeling of ecg complex. In *Third International Conference on Innovative Computing Technology (INTECH 2013)* (pp. 327–332). doi:10.1109/INTECH.2013.6653663
- 38 Bukovsky, I., Bila, J., Noriyasu, H., & **Rodríguez Jorge, R.** (2012). Prospects of gradient methods for nonlinear control. In *Automatizácia a riadenie v teórii a praxi* (pp. 1–9). Stará Lesná, Slovak Republic. Retrieved from https://www.researchgate.net/publication/341411869_Prospects_of_gradient_methods_for_nonlinear_control
- 39 **Rodríguez Jorge, R.**, Bila, J., & Bukovsky, I. (2012). Comparison of mlp and quadratic neural unit for lung tumor motion prediction. In *STC 2012* (pp. 1–8). Praha, Czech Republic. Retrieved from https://stc.fs.cvut.cz/history/2012/sbornik/papers/pdf/2544.pdf?_=1332175976
- 40 **Rodríguez Jorge, R.**, Bila, J., Bukovsky, I., & Homma, N. (2012). Lung tumor motion prediction by static neural networks. In *Proceedings of the Annular Meeting New Methods and Procedures in Automatic Control, Instrumentation and Informatics* (pp. 11–15). Roztoky, Czech Republic. Retrieved from <http://elektro.fs.cvut.cz/konference/index.php/trendy/TRENDY12/paper/download/20/3>

- 41 **Rodríguez Jorge, R.**, Bukovsky, I., & Bila, J. (2011). Weight adaptation stability of static quadratic neural unit. In *Proceedings of the annular meeting new methods and procedures in automatic control, instrumentation and informatics 2011* (pp. 83–88). Herbertov, Czech Republic. Retrieved from <http://www1.fs.cvut.cz/cz/U12110/vyzkum/Herbertov11.pdf#page=85>
- 42 Bukovsky, I., Homma, N., Smetana, L., **Rodríguez Jorge, R.**, Mironovova, M., & Vrana, S. (2010). Quadratic neural unit is a good compromise between linear models and neural networks for industrial applications. In *The 9th ieee international conference on cognitive informatics, icci 2010*. (pp. 556–560). doi:10.1109/COGINF.2010.5599677
- 43 Bukovsky, I., Ichiji, K., Homma, N., Yoshizawa, M., & **Rodríguez Jorge, R.** (2010). Testing potentials of dynamic quadratic neural unit for prediction of lung motion during respiration for tracking radiation therapy. In *International joint conference on neural networks, IJCNN 2010* (pp. 1–6). doi:10.1109/IJCNN.2010.5596748
- 44 **Rodríguez Jorge, R.** (2010). Experimental analysis of mlp in lung motion prediction. In *Seminar kozojedy, proceedings of the annular meeting new methods and procedures in automatic control, instrumentation and informatics 2010* (pp. 95–100). Kozojedy, Czech Republic. Retrieved from http://www1.fs.cvut.cz/cz/U12110/vyzkum/Kostelec10/prispevek_ricardo.pdf
- 45 **Rodríguez Jorge, R.**, Ichiji, K., Bukovsky, I., Bila, J., & Homma, N. (2010). Lung motion prediction by static neural networks. In *4th international symposium on measurement, analysis and modelling of human functions* (pp. 1–6). Prague, Czech Republic. Retrieved from <https://everbis.cz/records/ac1edb81-29af-41f1-99ba-baa74f9c683e?locale=en>
- 46 **Rodríguez Jorge, R.**, Gerardo Reyes, S., & Vianey Guadalupe Cruz, S. (2008). Verification and validation of a neural-symbolic hybrid system using an enhanced petri net. In *2008 7th ieee international conference on cognitive informatics* (pp. 160–167). doi:10.1109/COGINF.2008.4639164
- 47 **Rodríguez Jorge, R.**, Gerardo Reyes, S., Vianey Guadalupe Cruz, S., & Andrea, M. (2007). Knowledge verification in image segmentation problems using an extended petri net. In *First international conference on industrial, mechatronics and manufacture engineering (ciimm 2007)*. isbn 978-968-9305-07-1 (pp. 151–157). Ciudad Juarez, Mexico. Retrieved from <https://maestriaindustrial.files.wordpress.com/2007/09/ciimm-program.pdf>
- 48 **Rodríguez Jorge, R.**, Gerardo Reyes, S., & Vianey Guadalupe Cruz, S. (2006). Una revisión de los métodos de verificación y validación del conocimiento en los sistemas basados en conocimiento. In *Decimoseptima reunión de otoño de comunicaciones, computación, eléctrica y exposición industrial, (ROC&C 2006)*. (pp. 1–6). Acapulco, Mexico.

Books and Chapters

- 1 Mizera-Pietraszko, J., **Rodríguez Jorge, R.**, Almazo-Perez, D. M., & Pichappan, P. (Eds.). (2017a). *Preface to advances in digital technologies proceedings of the 8th international conference on applications of digital information and web technologies icadiwt 2017, frontiers in artificial intelligence and applications*. Amsterdam, The Netherlands: IOS Press.
- 2 Mizera-Pietraszko, J., **Rodríguez Jorge, R.**, Almazo-Perez, D. M., & Pichappan, P. (Eds.). (2017b). *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*. Amsterdam, the Netherlands: IOS Press.
- 3 Reyes-Muñoz, J. U., Martínez-García, E. A., **Rodríguez Jorge, R.**, & Torres-Córdoba, R. (2017). WMR Kinematic Control Using Underactuated Mechanisms for Goal Direction and Evasion. In E. Gorrostieta Hurtado (Ed.), *Kinematics* (pp. 23–26). doi:10.5772/intechopen.70811
- 4 Vergara-Villegas, O. O., Sánchez, V. G., Domínguez, H. D., García-Alcaraz, J. L., & **Rodríguez Jorge, R.** (2016). Automatic Defect Detection and Classification of Terminals in a Bussed Electrical Center Using Computer Vision. In G. Alor-Hernández, C. Sánchez-Ramírez, & J. L. García-Alcaraz (Eds.), *Handbook of*

Research on Managerial Strategies for Achieving Optimal Performance in Industrial Processes (pp. 241–266).

doi:10.4018/978-1-5225-0130-5.ch012

- 5 **Rodriguez Jorge, R.**, Bukovsky, I., & Homma, N. (2013). Potentials of Quadratic Neural Unit for Applications. In Y. Wang (Ed.), *Advances in Abstract Intelligence and Soft computing* (pp. 343–354). doi:10.4018/978-1-4666-2651-5.ch023
- 6 **Rodriguez Jorge, R.**, R. Salgado, G., & C. Sánchez, V. G. (2012). An Enhanced Petri Net Model to Verify and Validate a Neural-Symbolic Hybrid System. In Y. Wang (Ed.), *Software and Intelligent Sciences: New Transdisciplinary Findings* (pp. 434–450). doi:10.4018/978-1-4666-0261-8.ch025
- 7 **Rodriguez Jorge, R.**, Rodriguez, O., Reyes, G., & Cruz, V. (2010). Using Petri nets for modeling and verification of Hybrid Systems. In P. Pawlewski (Ed.), *Petri Nets Applications* (pp. 139–162). Rijeka: IntechOpen. Retrieved from <https://doi.org/10.5772/7518>

Skills

Programming languages	■ C/C++, Python, Látex, Matlab, R-programming, Java, SQL, HTML/CSS, Prolog (Logic Programming).
Statistical software	■ SPSS.
Math software	■ Maple.
Operating systems	■ GNU/Linux.

Awards and Achievements

- 2017 ■ **Desirable profile recognition(2017-2020): awarded as a desirable profile**, Appointment as a desirable profile by PRODEP from SEP (Ministry of Public Education).
- 2017 ■ **Academic research group: UACJ-CA-75 Mechatronics**, Appointment as in consolidation research group (CAC) by PRODEP-DSA 2017.
- 2014 ■ **Desirable profile recognition (2014-2017):awarded as a desirable profile**, Appointment as a desirable profile by PRODEP from SEP (Ministry of Public Education).
- 2013 ■ **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.
- 2012 ■ **Extraordinary prize**, Awarded with an extraordinary scholarship by the Dean of the Faculty of Mechanical Engineering, Czech Technical University in Prague, for submitting the PhD dissertation before the time limit and for the quality of the dissertation, 2012, Czech Republic.
- 2012 ■ **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.
- 2012 ■ **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 Kól Naukowych -Wydział Mechaniczny PK -27 IV 2012, Poland, April 27, 2012.
- 2011 ■ **Extraordinary prize**, Awarded with an extraordinary scholarship for being one Ph.Dstudent who passed the national exam with a high score at the first attempt and finished his PhD courses on time, awarded by the Dean of the Faculty of Mechanical Engineering, Czech Technical University in Prague, Czech Republic.

Awards and Achievements (continued)

- 2008 **Advisor of creative project which earned the 1st place**, Awarded with a recognition for being the advisor of the creativity project: “Robotic Arm Controlled through Software for the Classification of Industrial Parts”, obtaining the first place in the internal creativity competition from Technological Institute of Ciudad Juárez, 2008, Mexico.
- Advisor of creative project which earned the 3rd place in the XXIII National Creativity Event**, Awarded with a recognition for being the advisor of the creativity project: “Robotic Arm Controlled through Software for the Classification of Industrial Parts”, obtaining the third place in the XXIII National Creativity Event, 2008, Parral, Chihuahua, Mexico.

Presentations

Scientific Poster

- 2017 **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.
- 2014 **The Hilbert-Huang Transform and Neural Networks for Modeling and Prediction of Electrocardiograms**. University Conference 2014, Technological University of Ciudad Juarez, August 13, 2014.
- 2013 **Neural Networks and Modern Transforms for Science and Technology Applications**, Tékhné 2013, Instituto Tecnológico de Morelia and CECTI Michoacán, October 16-18, 2013.
- 2012 **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.
- 2008 **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

- 2017 **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.
- 2015 **Higher Order Neural Unit for Engineering Applications**, in Engineering Week, Autonomous University of Ciudad Juarez, Ciudad Juárez, Chih., Mexico, September 24, 2015.
- 2014 **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.

Presentations (continued)

Invited Lectures

- 2017 **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.
- 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.
- 2016 **Artificial Intelligence challenges for Engineering Applications**, presented at Opole University, in Poland. December 22, 2016.
- 2011 **Higher-Order Neural Unit (structure, learning, aspects and applications)**, in the Technological University of Ciudad Juárez, January 4, 2011.

Invited workshop speaker

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

Conferences

- 2014 **Una versión mejorada del algoritmo K-means**, Congreso Universitario 2014, Ciudad Juárez, Chihuahua, August 2014.
- 2014 **Herramienta visual para el análisis de algoritmos de evolución diferencial**, Congreso Universitario 2014, Ciudad Juárez, Chihuahua, August 2014.
- 2014 **C-JADE: una versión paralela del algoritmo Jade**, Congreso Universitario 2014, Ciudad Juarez, Chihuahua, August 2014.
- 2013 **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.
- 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.
- 2012 **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.
- 2012 **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.
- 2012 **Comparison of MLP and Quadratic Neural Unit for Lung Tumor Motion Prediction**, STC 2012, March 28, 2012, Czech Republic.
- 2011 **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.
- 2010 **Lung motion Prediction by static neural networks**. 4th International Symposium on Measurement, Analysis and Modelling of Human Functions. Czech Technical University in Prague, Czech Republic. June 14-16, 2010, pp. 40-45.
- 2010 **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.

Presentations (continued)

- 2008 **■ 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.
- 2008 **■ 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.
- 2007 **■ Knowledge Verification in Image Segmentation Problems Using an Extended Petri Net.** First International Conference on Industrial, Mechatronics and Manufacture Engineering (CI-IMM 2007). Conference Memories, Ciudad Juarez Chihuahua. From 03 to 05 October 2007.
- 2006 **■ Una revisión de los métodos de verificación y validación del conocimiento en los sistemas basados en conocimiento.** ROC&C 2006. IEEE sección México. Acapulco, Gro., México, Noviembre 28 - Diciembre 03, 2006.

Participation in Research Projects

- POSTGRADO-IIT **■** Awarded by: Coordinacion de Investigacion y Postgrado-IIT, Project entitle: **Fuzzy control system to regulate the temperature of a greenhouse**, 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: **Automatic translation system by particle swarm optimization**, 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: **Lie methods applied to algebrizable vector fields in dimension three**, Awarded Institution: Universidad Autonoma de Ciudad Juarez, Role: Research collaborator, Date: April 2019
- PROMEPE 2016 **■** Awarded by: The Professor Improvement Program (PRODEP), Grant number: DSA/103,5/16/10473, Project entitle: **Detection of Cardiac Arrhythmia Patterns by Adaptive Analysis**, Role: Corresponded researcher, Date: September 2016
- POSTGRADO-IIT **■** Awarded by: Coordinacion de Investigacion y Postgrado-IIT, Project entitle: **Higher-Order Neural Networks for the Detection of Arrhythmia Patterns**, 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: **Augmented Reality applied to the learning of May language**, Awarded Institution: Universidad Autónoma de Ciudad Juárez, Role: Research collaborator, Date: April 2016
- PROMEPE 2013 **■** Awarded by: Programa de Mejoramiento del Profesorado(PROMEPE), Grant number: PROMEP/103,5/13/9045, Project entitle: **Architecture of Neural networks for arrhythmia detection**, Role: Corresponded researcher, Date: October 2013
- SGS10/252/OHK2/3T/12 **■** Awarded by: SGS grant, Grant number: 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)**, Role: PhD student / Collaborator

Participation in Academic Management

- Associate Editor  **Journal of Intelligent Automation and Soft Computing (AutoSoft)**, 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>.
-  1rs International Conference on environment and society, <http://sites.colech.edu.mx/cimas2014/>.
- General 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  2020 Workshop chair of: The 2nd International Workshop on Intelligent Computing and Measurements (InCM 2020). <http://sipml.com.mx/InCM/default.html>, Caserta, Italy, April 15 – 17, 2020.
-  2019 Workshop chair of: The 5th International Workshop on Signal Processing and Machine Learning (SiPML2019). <http://sipml.com.mx/default.html>, University of Antwerp, Antwerp, Belgium, November 07–09, 2019.
-  2018 Workshop chair of: The 4th International Workshop on Signal Processing and Machine Learning (SiPML 2018). <http://sipml.com.mx/default.html>, Tunghai University, Taichung, Taiwan, October 27–29, 2018.
-  2017 Workshop Chair of: 2017 Workshop on Deep Learning Applications, <http://www.dirf.org/intech/deep-learning-applications/> Luton, UK, August 16-18, 2017.
-  2017 Workshop Chair of: First International Workshop on "IoT and Antenna Design" <http://www.socio.org.uk/fgct/iot/>, Ireland, August 21-23, 2017.
-  2017 Workshop Chair of: Third Workshop on 'Internet of Everything (IoE)' <http://icdim.org/internet.html>, Kyushu University, Fukuoka, Japan, September 12-14, 2017.
-  2017 Workshop Chair of: 2017 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, 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.

Participation in Evaluation of Scientific Papers

- Technical 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 13th-15th, 2014, University of Bedfordshire, Luton, UK.
 - 2014 IEEE Symposium on Industrial Electronics and Applications (ISIEA 2014), <http://isiea2014.isiea.org/>, Sept. 28 th –Oct. 1st2014, 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 Technology2014, <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.















Participation in Evaluation of Scientific Papers (continued)

- International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2014), <http://www.iiitm.ac.in/sirs/>, March 13 –15, 2014, Thiruvananthapuram, India.
- 3rd 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://ieee-isgt-asia-2014.com/>, <http://ieee-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://acscrg.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/committee.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://mypeels.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.mypeels.org/beiac2013/>, Langkawi, Malaysia on 8 –9 April 2013.

Participation in Evaluation of Scientific Papers (continued)

- 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.iecepecon.org/2012/>, December 2-5, 2012, Malaysia.
- ISBEIA 2012, 2012 IEEE Symposium on Business, Engineering and Industrial Applications, <http://www.uitmrmi.org/isbeia2012/>, Bandung, Indonesia, 23-26 September 2012.
- ISIEA 2012, 2012 IEEE Symposium on Industrial Electronics & Applications, <http://www.isiea.org/2012/>, Bandung, Indonesia on 23-26 September 2012.
- Program Committee of CompSens2011, 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
- 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).
- 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).
- 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.

Participation in Evaluation of Scientific Papers (continued)

- Chapter reviewer  Book: Privacy in a Digital, Networked World –Technologies, Implications and Solutions, PrivacyBook 2014. Co-editor: Mohamad Badra.
- Conf. 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 WCCI2010, <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://iee-ssci.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.ualgary.ca/icci_cc2011/ICCI2011, Banff, Alberta, Canada (1 paper reviewed).
-  2011 International Joint Conference on Neural Networks (IJCNN 2011), <http://iee-cis.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://iee-wcci2012.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*CC2012, http://www.ualgary.ca/icci_cc/ICCI2012) 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.ieceecon.org/2012/>, December 2 -5, 2012, Malaysia (6 papers reviewed).
-  ISBEIA 2012, 2012 IEEE Symposium on Business, Engineering and Industrial Applications, <http://www.uitrmi.org/isbeia2012/>, Bandung, Indonesia, 23 -26 September 2012 (6 papers reviewed).
-  ISIEA 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).

Participation in Evaluation of Scientific Papers (continued)

- 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, 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 2nd 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, Dallas, Texas, USA (1 paper reviewed).
- The 2013 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA 2013), <http://www.uitrmi.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 3rd 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).

Participation in Evaluation of Scientific Papers (continued)

- 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 Posgraduate Colloquium on Science and Technology 2014 (IP-COST 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, 7th-9th 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 10th International Conference on Neural Computation (ICNC 2014) and the 2014 11th 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 2nd International Conference on Robotics, Biomimetics, Intelligent Computational Systems (ROBIONETICS 2014), <http://robionetics.org/>, November 11-13, 2014, Yogyakarta, Indonesia.
- 2014 2nd 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.uitmrmi.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.

Participation in Evaluation of Scientific Papers (continued)

- 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.
- 1st 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 ADV-CIT), <http://advcit.com/>, Dec. 16-18, 2014, Bandung, Indonesia.
- IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems 2015 (IEEE SPICES 2015), <http://www.ieceespices.org/>, Feb. 19-21, 2015, Kozhikode, India.

Human Resource Training

Co-advisor of Master Thesis

- 2016 Co-Advisor of Master Thesis: "An improvement to the classification phase of the K-means algorithm," by the student: Wilebaldo Bernal Flores, Master in Computer Science, from the Technological Institute of Ciudad Victoria. Mexico. June 2016.

Advisor of Bachelor Thesis

- 2018 Advisor of the thesis: "Implementation of an image classifier using a multilayer network with feed forward," by the student Juan Manuel Ramos Gaspar, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec. 2018.
- Advisor of the thesis: "Predictive maintenance of an industrial machine using neural networks," by the student Laura Rubí Sánchez Pérez, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec. 2018.
- Advisor of the thesis: "Detection of QRS complexity in real time through Bluetooth communication," by the student Isaac De Leon Damas, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec. 2018.
- Advisor of the thesis: "Implementation of a cubic neuronal unit for the detection of patterns and prediction of cardiac arrhythmias via wireless," by the student Paola Alejandra Huerta Solis, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec. 2018.
- Advisor of the thesis: "Fuzzy control system to regulate the temperature of a greenhouse," by the student Luis Carlos Hernández Meléndez, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. May 2018.
- Supervisor of the thesis: "Software for transcription of specific formats oriented in the legal order," by the students Oscar Manuel Robledo Holguín, and Carlos Humberto Pérez Mata to get the title of Engineer in Computer Systems. Computer Systems Program. Autonomous University of Ciudad Juárez. Mexico. May 2018.
- 2017 Advisor of the thesis: "Implementation of an artificial vision system for validation of parts in the industry," by the student Erick Antonio Ramos Vargas, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec 2017.
- Advisor of the thesis: "Control of a robotic hand integrated by means of myoelectric signals," by the student Laura Ivonne Figueroa Puebla, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec 2017.

Human Resource Training (continued)

- Advisor of the thesis: “Design and construction of a basic data acquisition system for the detection of the representative wave R in an electrocardiogram,” by the student Gabriela Ibarra Fierro, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec 2017.
- Advisor of the thesis: “Detection of the R peak in ECG signals obtained in real time by means of the single lead sensor,” by the student Valeria Vargas Morales, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec 2017.
- Advisor of the thesis: “PID controller in an automatic pneumatic regulator,” by the student Francisco Javier Esquivel Ceballos, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. May 2017.
- Advisor of the thesis: “Development of a control system for a hand-held robotic prosthesis through the processing of myoelectric signals,” by the student Mauricio Pérez Lozano, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. May 2017.
- 2016 ■ Advisor of the thesis: “Design and implementation of laser distance meter with a webcam to detect obstacles,” by the student Nelson Mier Rutiaga, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. Dec. 2016.
- Advisor of the thesis: “Semiautomatic pressure regulator,” by the student Eleazar Pulido Sariñana, to get the title of Engineer in Mechatronics. Mechatronics Program. Autonomous University of Ciudad Juárez. Mexico. May 2016.
- Co-Advisor of the thesis: “Educational software as a support tool for the teaching of the independence of Mexico based on Augmented Reality,” by the students Jesus Reyes Almanza and Alejandra Margarita Rivas Simental, to get the title of Engineer in Software. Software Engineering Program. Autonomous University of Ciudad Juarez. Mexico. May 2016.
- 2014 ■ Advisor of the thesis: “Ring printer station,” by the student Joel Efren Uribe Garcia, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University in Ciudad Juarez. Mexico. May 2014.
- Advisor of the thesis: “Minimization of downtime in the search for fixtures in model changes,” by the student Francisco Javier Cruz Prestegui, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. Mexico. May 2014.
- Advisor of the thesis: “Increase in production in zones 6 and 14,” by the student Christian Daniel Bautista Ramirez, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. Mexico. May 2014.
- Advisor of the thesis: “Reduction of time in change of roller,” by the student Julio Miguel Gonzalez Rodriguez, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. Mexico. September 2014.
- 2013 ■ Advisor of the thesis: “Verification process signature,” by the student Luis Alberto Ramos de los Santos, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. Mexico. September 2013.
- Advisor of the thesis: “Design of pressure vessels,” by the student Asiel Alejandro Méndez Soto, to get the title of Engineer in Mechatronics. Department of Mechatronics. Technological University of Ciudad Juarez. Mexico. September 2013.

Thesis supervisor of University Technician

- Advisor of the thesis: “Automatic connector crimping and crimping machine,” by the student Javier Hernández Martínez, to get the title of University Technician in Mechatronics. Department of Mechatronics, Technological University of Ciudad Juarez. Mexico. September 2013.

Human Resource Training (continued)

- 2009
- Advisor of the thesis: "Installation of Matrix equipment", by the student: Mauricio Eduardo Briseno Valencia, to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Ciudad Juarez. Mexico. September 2013.
 - Advisor of the thesis: "Manufacture of machines for production lines" by the student Jose Antonio Ruiz Romero, to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Juarez City. Mexico. February 2009.
 - Advisor of the thesis: "PNEUMATIC FESTO", by the student Andres Isaac Matus Lecourtois, to get the title of University Superior Technician in Mechatronics. Department of Mechatronics, Technological University of Juarez City. Mexico. February 2009.
 - Advisor of the thesis: "Automated rotating plate" by the student Isidro Puentes Gaytan to obtain the title of University Superior Technician in the Technological University of Juarez City. Mexico. February 2009.

Reviewer of Bachelor thesis

- 2012
- Reviewer of the bachelor thesis: "Foundations of an expert system for inspection of industrial cranes", defended by the student: Peter Mark Benes. Faculty of Mechanical Engineering. Czech Technical University in Prague. Prague, Czech Republic. August 28, 2012.
- 2011
- 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, Czech Republic. 23 August 2011.

Reviewer of the Professional Residence Memory

- 2008
- Reviewer of the Professional Residence Memory: "System to the Stocktaking and Farming Control", by the student: Sofia Betzabe Sanchez Gonzalez to obtain the title of Engineer in Computational Systems in the Technological Institute of Juarez City. Mexico. November 2008.

Teaching experience

- SEP 2021 – NOW
- **Assistant Professor, Researcher.** Faculty of Science, Jan Evangelista Purkyně University (UJEP), Czech Republic. Subjects taught:
 - Algorithms and Programming I
 - Professional English
 - Python and R for Data Science

Teaching experience (continued)

- AUG 2015 –JUL 2019 **Titular Professor, Researcher.** Institute of Engineering and Technology, Autonomous University of Ciudad Juárez (UACJ), Mexico. 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)
- JAN 2013 –JUL 2015 **Associate Professor.** Full Time Researcher, Department of Mechatronics, Technological University of Ciudad Juarez (UTCJ), Mexico. 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)

Teaching experience (continued)

- JAN 2008 -OCT 2009 **Subject Lecturer, Part Time Lecturer.** Department of Computation and Informatics, Technological Institute of Ciudad Juarez (ITCJ). Subjects taught:
- Artificial Intelligence
 - Data Structures I
 - Theory of Computation
- OCT 2007-SEP 2009 **Assistant Professor.** Full Time Researcher, Department of Mechatronics Technological University of Ciudad Juarez (UTCJ). Subjects taught:
- Informatics III
 - Robotics
 - Analog Electronics
 - Informatics II
 - Mathematics I
 - Mathematics III

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. Cyber-science 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: (A0-A15), 6-3, Aoba, Aramaki, Aoba-ku, SENDAI,980-8578, JAPAN.
- 28 JUN — 31 AG 2004 **Summer of the scientific research.** Institution: National Institute of Nuclear Investigations (ININ).
Department: Applied sciences.
Project: “Exploitation of Resources of a CMU Camera for its Started up on a ROMIC Robot”.
Address:km. 36,5 carr. México-Toluca, Mpio. Ocoyoacac, Mex.

References

Available on Request