Francisco Javier López Tiro
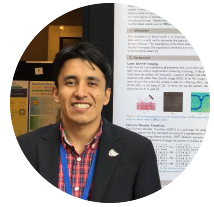
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🈯 Spanish (mother tongue), English (conversational level)

Education

Aug 2017 – Nov 2019   🔖 **MSc in Biomedical Sciences and Technologies**,
Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE),
Biosignals and Medical Computing Laboratory
Thesis: *"Visualización de vasos sanguíneos en imágenes de contraste basado en la descomposición de la transformada wavelet discreta"*.
Supervisors: Hayde Peregrina-Barreto, and José de Jesús Rangel-Magdaleno

Aug 2011 – May 2015   🔖 **BE in Mechatronics Engineering**,
Universidad Politécnica de Puebla,
Thesis: *"Modernización del control de propulsión y monitoreo de buques de la Armada de México"*.
Supervisor: Salvador Antonio Arroyo-Díaz

Service

Jun 19, 2021   🔖 **Volunter,**
LatinX in CV (LXCV) Research at CVPR 2021, Virtual.

May 10-11, 2018   🔖 **Volunter,**
Seminario Nacional de Ciencias y Tecnologías Biomédicas. Instituto Nacional de Astrofísica, Óptica y Electrónica. Puebla, Mexico.

Jan 2015 – Apr 2015   🔖 **Resident,** Instituto de Investigación y Desarrollo Tecnológico de la Armada de México.

Employment

Aug 2020 – Now   🔖 **Assistant professor** at Universidad Tecmilenio. Assistant professor of robotics, and head coach of EARTH 4723 robotics team.

🔖 **Associate professor** at Universidad de los Ángeles. Associate professor of instrumentation and control, mechatronic design, electricity and magnetism, and numerical programming.

Employment (continued)

Nov 2019 – Now   🔖 **Research assistant** at Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE). Department of Biomedical Sciences and Tecnologies.

Aug 2015 – May 2017   🔖 **Associate professor** at Universidad de los Ángeles. Associate professor of signal processing, instrumentation and control, digital electronics, mechatronic design, circuit analysis and robotics.

   🔖 **Assistant professor** at Colegio de Educación Profesional Técnica del Estado de Puebla. Assistant professor of physics, mathematics, electronics and metrology. Head coach of F1 in Schools team.

Publications

Journal

Aug 2021   🔖 "Visualization of blood vessels in in-vitro raw speckle images using an energy-based decomposition criteria on DWT coefficients". *Biomedical Signal Processing and Control*, 2021.

Jul 2021   🔖 "On the in vivo recognition of kidney stones using machine learning". *Artificial Intelligence In Medicine*. (Submitted July, 2021).

Conference

Oct 31 – Nov 04, 2021   🔖 "Assessing deep learning methods for the identification of kidney stones in endoscopic images". *43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, 2021. (Accepted July, 2021)

May 17–20, 2021   🔖 "Localization of Blood Vessels in in-vitro LSCI Images with K-Means". *IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, 2021.

May 25–28, 2020   🔖 "Effect of the Exposure Time in Laser Speckle Imaging for Improving Blood Vessels Localization: a Wavelet Approach". *IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, 2020.

May 20–23, 2019   🔖 "Visualization of in-vitro Blood Vessels in Contrast Images Based on Discrete Wavelet Transform Decomposition". *IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, 2019.

Skills

Languages   🔖 English, TOELF score 500.