DR. FELIPE ORDUÑA BUSTAMENTE

Investigacor en acústica y vibraciones

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ÁREAS DE CONOCIMIENTO

- Tecnología musical

LÍNEAS DE INVESTIGACIÓN

- Instrumentación y mediciones acústicas
- Procesamiento de señales acústicas
- Acústica musical
- Tecnología musical

SEMINARIOS IMPARTIDOS

- Fundamentos de acústica de la música,
- Acústica de los instrumentos musicales
- Psicoacústica general y aplicada

RESEÑA CURRICULAR

Investigador Titular B del Grupo de Acústica y Vibraciones del Instituto de Ciencias Aplicadas y Tecnología de la Universidad Nacional Autónoma de México (ICAT-UNAM). Tiene Licenciatura en Física (UNAM, 1987), Maestría y Doctorado en Sonido y Vibraciones (Universidad de Southampton, Inglaterra, 1990, 1995). Trabaja en temas de instrumentación y mediciones acústicas, procesamiento de señales, acústica musical y tecnología musical. Autor de artículos, memorias y patentes incluidos en índices académicos internacionales. Tutor y profesor de los posgrados en Ingeniería y Música de la UNAM, iniciador de las áreas de Instrumentación y de Tecnología Musical. Ha sido miembro de la Acoustical Society of America, Audio Engineering Society y otras asociaciones académicas. Es músico aficionado, intérprete de la guitarra clásica, la flauta transversa barroca, la flauta de pico, instrumentos de teclado, instrumentos electrónicos y canto coral

PUBLICACIONES RECIENTES

- Felipe Orduña-Bustamante, A.L. Padilla-Ortiz, Carlos Mena, **"Assessing the benefits of virtual speaker lateralization for binaural speech intelligibility over the Internet"**, *Applied Acoustics*, **202**, 108966, (2023). ISSN: 0003-682X. (AIPT: Speech). https://doi.org/10.1016/j.apacoust.2022.109146
- José María Gómez-Pérez, Felipe Orduña-Bustamante, **"Acoustic travelling wave separation in the time domain using electronic time delay circuits and leaky recursion"**, *Applied Acoustics*, **198**, 108966, (2022). ISSN: 0003-682X. (AIPT: Acoustic instrumentation). https://doi.org/10.1016/j.apacoust.2022.108966
- A.L. Padilla-Ortiz, Felipe Orduña-Bustamante, **"Binaural speech intelligibility tests conducted remotely over the Internet compared with tests under controlled laboratory conditions"**, *Applied Acoustics*, **172**, 107574, (2021). ISSN: 0003-682X. (AIPT: Speech). https://doi.org/10.1016/j.apacoust.2020.1075740
- Orduña-Bustamante, F. **"Auralization in space and in rooms of arbitrary D dimensions"**, *Proceedings of the 14th Sound and Music Computing Conference 2017*, SMC 2017, 2019, pp. 250–253. (AIPT: Architectural Acoustics). http://smc2017.aalto.fi/media/materials/proceedings/SMC17_p250.pdf
- Herrera-Castro, M., Quintanar-Isaías, A., Orduña-Bustamante, F., Olmedo-Vera, B., Jaramillo-Pérez, A. T., **"Wood identification and acoustic analysis of three original Aztec teponaztli musical instruments"**, *Madera y Bosques*, **25(1)**, e2511690, (2019). ISSN: 1405-0471. (AIPT: Musical Acoustics). https://doi.org/10.21829/myb.2019.2511690
- Felipe Orduña-Bustamante, A. L. Padilla-Ortiz, Edgar A. Torres-Gallegos, **"Binaural speech intelligibility through personal and non-personal HRTF via headphones, with added artificial noise and reverberation"**, *Speech Communication,* **105**, pp. 53-61, December (2018). ISSN: 0167-6393. (AIPT: Speech). https://doi.org/10.1016/j.specom.2018.10.009
- Felipe Orduña Bustamante, F. Arturo Machuca Tzili, Roberto Velasco Segura, "**Evaluation of the bias error of transmission tube measurements of normal-incidence sound transmission loss using narrow tube reference elements"**, *Journal of the Acoustical Society of America*, **144**(2), pp. 1040-1048, August (2018). ISSN: 0001-4966. (AIPT: Acoustic measurements). https://doi.org/10.1121/1.5051649

- Felipe Orduña-Bustamante, Pablo Luis Rendón, Erika Martínez-Montejo, **"Comparison between acoustic measurements of brass instruments and one-dimensional models with curved wavefronts and transformed axial coordinates"**, *Journal of the Acoustical Society of America*, **142**(4), pp. 1717–1725, October (2017). ISSN: 0001-4966. (AIPT: Musical acoustics). https://doi.org/10.1121/1.5004533
- Cristian Bañuelos, Felipe Orduña, **"Dynamic Time Warping for Automatic Musical Form Identification in Symbolic Music Files"**, in Octavio A. Agustín-Aquino, Emilio Lluis-Puebla, Mariana Montiel (eds.), *Mathematics and Computation in Music*, 6th International Conference, MCM 2017, Mexico City, Mexico, June 26–29, 2017, Proceedings, LNAI 10527, Springer International Publishing AG 2017, pp. 253–258. ISBN 978-3-319-71826-2. https://doi.org/10.1007/978-3-319-71827-9 19
- Pablo L. Rendón, Carlos G. Malanche, Felipe Orduña-Bustamante, Antonio Pérez-López, **"Spectral enrichment of transient acoustic waves as a function of input signal shape"**, *Acta Acustica united with Acustica*, **103**(3), pp. 379–384, May/June (2017). ISSN: 1610-1928. (AIPT: Nonlinear acoustics). http://dx.doi.org/10.3813/AAA.919067
- F. Arturo Machuca-Tzili, Felipe Orduña-Bustamante, Antonio Pérez-López, Santiago J. PérezRuiz, Andrés E. Pérez-Matzumoto, **"Modified acoustic transmission tube apparatus incorporating an active downstream termination"**, *Journal of the Acoustical Society of America*, **141**(2), February (2017), pp. 1093-1098, ISSN: 0001-4966. (AIPT: Acoustic measurements). http://dx.doi.org/10.1121/1.4976094
- Edgar A. Torres-Gallegos, Felipe Orduña-Bustamante, Fernando Arámbula-Cosıó , **"Personalization of head-related transfer functions (HRTF) based on automatic photoanthropometry and inference from a database"**, *Applied Acoustics*, **97**, October (2015), pp. 84–95, ISSN: 0003-682X. (AIPT: Acoustic measurements). http://dx.doi.org/10.1016/j.apacoust.2015.04.009
- Laura Padilla, Felipe Orduña, **"Improving speech intelligibility for binaural voice transmission under disturbing noise and reverberation using virtual speaker lateralization"**, *Journal of Applied Research and Technology*, **13**(3), June (2015), pp. 351–358, ISSN: 1665-6423. (AIPT: Speech). http://dx.doi.org/10.1016/j.jart.2015.07.001

- Ana Laura Padilla Ortíz, Felipe Orduña Bustamante, **“Binaural speech intelligibility and interaural cross-correlation under disturbing noise and reverberation”**, *Journal of Applied Research and Technology*, **10**(3), pp. 347–360, June (2012). ISSN: 1665-6423. (AIPT: Speech). http://www.jart.ccadet.unam.mx/jart/vol10 3/binaural 5.pdf
- Alfonso Meave Ávila, Felipe Orduña Bustamante, **“ModusXXI: An atonal melody generator for ear-training, based on Lars Edlund’s Modus Novus methodology”**, *Journal of Applied Research and Technology*, **10**(1), pp. 5–13, February (2012). ISSN: 1665-6423. (AIPT: Musical acoustics). http://www.jart.ccadet.unam.mx/jart/vol10 1/modusxxi 1 icias.pdf