

INMETRO - DIVISION OF ACOUSTICS AND VIBRATION METROLOGY**LIST OF TECHNICAL PUBLICATIONS IN THE PERIOD 2010 – 2025****ELECTROACOUSTICS:**

- SOARES, Z. M. D. **“Sound pressure levels in mineral blasting: Measurement errors and microphone frequency response.”** In Proc. of Inter-Noise 2025 – International Congress & Exposition on Noise Control Engineering, 24–27 August 2025, São Paulo, SP, Brasil.
- MILHOMEM, T. A. B. **“Acoustic emissions of windpower generators: measurement method and case study”** (In Portuguese: Emissões acústicas de aerogeradores: método de medição e estudos de caso), In Proc. of XXX Encontro da Sobra, 19-22 Nov 2023, Natal, RN, Brasil.
- MILHOMEM, T. A. B.; PINTO E. B. **“Calibration of Sound Level Meter: an overview”**, (In Portuguese: Calibração de sonômetros: uma visão geral), In Proc. of 11º Congresso Brasileiro de Metrologia, 28-30 Nov 2023, Itaipava-Petrópolis, RJ, Brasil.
- MILHOMEM, T. A. B. **“Measuring directivity of half-inch measurement microphones”**, In Proc. InterNoise 2023, 20-23 August 2023, Chiba, Tokyo, Japan.
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Phase sensitivity microphone calibration”**, In Proc. of the XII Congresso Iberoamericano de Acústica (FIA 2022) / XXIX Encontro da Sobra, 28- 31 August 2022, Florianópolis, SC, Brasil.
- SOARES, Z. M. D.; MILHOMEM, T. A. B.; SANTO, N. M. E.; PINTO, E. B. **“Personal sound exposure meters: A study of measurements methods of the acoustic performance”**, In Proc. of the XII Congresso Iberoamericano de Acústica (FIA 2022) / XXIX Encontro da Sobra, 28- 31 August 2022, Florianópolis, SC, Brasil.
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Measurement Microphones: Working principle and main characteristics”** (In Portuguese: Microfones de medição: princípio de funcionamento e principais características), In: Proc. of the 11º Congresso Brasileiro de Metrologia, 18-21 October 2021.
- MILHOMEM, T. A. B.; SOARES, Z. M. D.; RIPPER, G. P.; HANES, P.; SOLANO, A.; SERRANO, F. A.; GUEVARA, G. M.; AYALA, J. P. **“Distortion measurements of sound pressure level generated by a pistonphone”**; In: Proc. InterNoise 2021, 1-5 August, Washington DC, USA. <https://doi.org/10.3397/IN-2021-1136>.
- MILHOMEM, T. A. B.; SOARES, Z. M. D.; RIPPER, G. P.; AYALA, J. P.; GUEVARA, G. M.; SERRANO, F. A.; SOLANO, A.; WAGNER, R. P.; HANES, P. **“Final report on supplementary regional comparison SIM.AUV.A-S2: calibration of pistonphone”**, Metrologia, Volume 57, Number 1A, 2020. <https://doi.org/10.1088/0026-1394/57/1A/09002>.
- SOARES, Z. M. D.; SILVA, I. F. C.; ESPIRITO-SANTO, N. M. **“Maximum Measurement Uncertainty: Hearing Aids”**. In: Proc. of the 23rd International Congress on Acoustics (ICA 2019), 09-13 September 2019, Aachen, Germany.
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Experimental determination of the difference between diffuse and pressure field sensitivities of half-inch laboratory standard microphones”**. In: Proc. of 48th International Congress and Exhibition on Noise Control Engineering (Internoise 2019), 16-19 June 2019, Madrid, Spain.
- MILHOMEM, T. A. B.; SOARES, Z. M. D.; MUSAFIR, R. E.; MÜLLER, S. **“Diffuse-field reciprocity calibration of half-inch laboratory standard microphones using simultaneous reverberation time measurement”**. The Journal of the Acoustical Society of America 143, 3658 (2018); doi: 10.1121/1.5043395.

- SOARES, Z. M. D.; MASSON, Z. N.; PAUL, S. **“Quality assurance of hearing aids in Brazil”**, In: Proc. of SOBRAC 2018, paper #83853, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Garantia da Qualidade dos Aparelhos de Amplificação Sonora Individual no Brasil).
- PINTO, E. B.; SOARES, Z. M. D. **“Periodic verification of Sound Level Meters: Acoustic performance of frequency weighting”**, In: Proc. of SOBRAC 2018, paper #84015, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Verificação Periódica de Sonômetros: Desempenho Acústico da Ponderação em Frequência).
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Microphone calibration in infrasonic frequencies”**, In: Proc. of SOBRAC 2018, paper #83320, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Calibração de Microfones em Frequências Infrassônicas).
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Proficiency test on the calibration of sound level meter sets - PEP 001/2014”**, In: Proc. of SOBRAC 2018, paper #83321, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Ensaio de Proficiência na Calibração de Sonômetros e Dispositivos que o Acompanham – PEP 001/2014).
- MILHOMEM, T.; SOARES, Z. M. D.; MUSAFIR, R.; MULLER, S. **“Electrical crosstalk subtraction for free field reciprocity calibration of half inch laboratory standard microphones”**. The Journal of the Acoustical Society of America 141, 3132 (2017); doi: 10.1121/1.4983005.
- MASSON, Z. N.; BRESCIANI, E. C.; PAUL, S.; CORDIOLI, J. A.; SOARES, Z., ESPIRITO SANTO, N. M. **“Bilateral comparison of hearing aids electroacoustics performance results according to ABNT NBR IEC 60118-8:2014”**, In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF (In Portuguese: Comparação bilateral de resultados de performance eletroacústica de um aparelho de amplificação sonora individual segundo a ABNT NBR IEC 60118-8:2014).
- KLING, C.; FEDTKE, T.; SOARES, Z.; MILHOMEM, T. **“Metrology for infrasound measurements”**. In: Proc. of the 24th International Congress on Sound and Vibration - ICSV24, July 2017, London, UK.
- KLING, C.; WIECZOREK, J.; MILHOMEM, T.; SOARES, Z. **“An Investigation on Microphone Calibration at Infrasound Frequencies”**. Internal Report - Bilateral Project for Strengthening the Quality Infrastructure for Renewable Energies and Energy Efficiency in Brazil, Technical cooperation between PTB and Inmetro, 2017.
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Calibration of sound calibrators: An overview”**. Journal of Physics. Conference Series (Print), v.733, p.012055, 2016, doi:10.1088/17426596/733/1/012055
- NEL, R.; FIGUEROA, S. B.; DOBROWOLSKA, D.; SOARES, Z. M. D.; MAINA, A. K.; HOF, C. **“Final Report of Supplementary Comparison AFRIMETS.AUV.A-S1: primary pressure calibration of LS2aP microphones according to IEC610942, over the frequency range 1 Hz to 31.5 kHz”**. Metrologia, Vol. 53, Tech. Suppl., 09001, 2016, <https://doi.org/10.1088/0026-1394/53/1A/09001>.
- MILHOMEM, T. A. B.; SOARES, Z. M. D. **“Primary calibration of measurement microphones in the world: state of art”**. Journal of Physics. Conference Series (Print), v.733, p.012054, 2016, doi:10.1088/17426596/733/1/012054.
- FONTES, V.; ZAJARKIEVAIECH, J. E. B.; SOARES, Z.; SANTO, N. M. E. **“A quality overview of audiometer calibration in Brazil”** In: Proc. of the 15^o Congresso da Fundação Otorrinolaringologia, Campos do Jordão, Brazil, 2016.
- MILHOMEM, T.; SOARES, Z.; MUSAFIR, R.; **“An Investigation about the Effect of Diffusivity of Sound Field for Reciprocity Calibration of Measurement**

- Microphones in Diffuse field**". In: Proc. of Internoise 2016 - 45th International Congress and Exposition on Noise Control Engineering, 2016, Hamburg, Germany.
- MILHOMEM, T.; MUSAFIR, R. E.; SOARES, Z.; **"An investigation on diffuse field calibration of measurement microphones by the reciprocity technique"**. In: Proc. of the 22nd International Congress on Acoustics, Buenos Aires, 2016.
 - SOARES, Z. M. D.; DAVI A. B.; FONTES, V.; **"Audiometer: Correction Factor for Atmospheric Pressure"**. In: Proc. of the 45th International Congress and Exposition on Noise Control Engineering - Internoise 2016, Hamburg, 2016.
 - SERRANO, F.A.; RIGANTI, J.M.; MILHOMEM, T.; SOARES, Z. M. D.; **"Bilateral comparison of LS1P microphone calibration between INTI and INMETRO"**. In: Proc. of the 22nd International Congress on Acoustics (ICA 2016), Buenos Aires, 2016.
 - RIGANTI, J. M.; SERRANO, F. A.; MILHOMEM, T.; SOARES, Z. M. D.; **"Bilateral comparison of pistonphone calibration between INMETRO and INTI"**. In: Proc. of the 22nd International Congress on Acoustics (ICA 2016), Buenos Aires, 2016.
 - MILHOMEM, T.; SOARES, Z.; PINTO, E.B.; MOURA, M.H. **"Ensaio de proficiência na calibração de medidores de nível sonoro e dispositivos que o acompanham"** – Relatório Final PEP 001/2014, Inmetro, Comissão Técnica de Acústica e Vibrações – CT 12 da Coordenação Geral de Acreditação – Cgcre, 17 June 2016.
 - FONTES, V.; SOARES, Z. **"Critical Analysis on Artificial Mastoid Calibration Certificates"**. International Archives of Otorhinolaryngology (Print) v.1, p.573 574, 2015.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D. **"Primary calibration in acoustics metrology"**. Journal of Physics, Conference Series (Online), v.575, p. 012008, 2015, doi:10.1088/17426596/575/1/012008.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D. **"Calibration of sound calibrators: an overview"**. In: Proc. of Metrologia 2015, 8^o Congresso Brasileiro de Metrologia, 2015, Bento Gonçalves, 2015.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D. **"Primary calibration of measurement microphones in the world: state of art"** In: Proc. of Metrologia 2015, 8^o Congresso Brasileiro de Metrologia, Bento Gonçalves, 2015.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D. **"Apresentação da série IEC 61094 que trata de microfones de medição"**. In: Proc. of SOBRAC 2014, Campinas. XXV Encontro SOBRAC, 2014.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D.; SERRANO, F. A.; RIGANTI, J. M. **"Final report on the pistonphone bilateral comparison with Inmetro"**, INTI, 2015.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D.; SERRANO, F. A.; RIGANTI J. M. **"Microphone Bilateral Comparison Final Report"**, INTI, 2015.
 - SOARES, Z.; COUTO, C. M.; CORDIOLI, J. A. **"Metrologia e Padrões de Medição em Audiologia"**. In: Tratado de Audiologia, 2^a edição seção 1, cap. 6, p. 42-49, ISBN 978-85-277-2732-7.
 - MILHOMEM, T. A. B.; SOARES, Z. M. D. **"Presentation of the series IEC 61094 for measurement microphones"**. In: Proc. XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (In Portuguese: Apresentação da série IEC 61094 que trata de microfones de medição).
 - SOARES, Z. M. D.; ZAJARKIEVAIECH J. **"Influence of sound sources in the calibration of sound level meters"**. In: Proc. XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (In Portuguese: Influência das fontes sonoras na calibração de medidores de nível sonoro).

- BUDEL, F.; SOARES, Z. M. D. **“Type approval of sound level meters – Electrical tests”**. In: Proc. XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (In Portuguese: Aprovação de modelo de medidores de nível sonoro - testes elétricos).
- SANTO, N. M. E.; SANTOS, V. F.; SILVA, D. T. C.; LEMOS JUNIOR, R. M. **“Is your audiometer calibrated? The panorama of audiometer calibrations in the southeast region”**. In: Proc. 29º Encontro Internacional de Audiologia – EIA 2014, 13-16 April, Florianópolis, Brazil (In Portuguese: Seu audiômetro está calibrado? Panorama da prestação de serviços de calibração de audiômetros no sudeste).
- MILHOMEM, T. A. B.; SOARES, Z. M. D.; PINTO, C. P. **“Determination of the reciprocity factor for microphones by primary calibration in a diffuse field”**. In: Proc. Internoise 2013, 15– 17 September 2013, Innsbruck, Austria.
- SOARES, Z. M. D.; AJARKIEVAIECH, J. E. B. **“Influence of the sound sources in the calibration of Sound Level Meters”**. In: Proc. Internoise 2013, 15– 17 September 2013, Innsbruck, Austria.
- MÜLLER, S. E.: **“Characterization of measurement microphones”**. In: Proc. 11th Audio Engineering Society-AES Brazil Congress, 7-9 May 2013, São Paulo, Brazil (In Portuguese: Caracterização de Microfones de Medição).
- SANTOS, V. F.; ZAJARKIEVAIECH, J. E. B.; SANTO, N. M. E.; SILVA, D. T. C.; LEMOS JUNIOR, R. M.; **“Demand for the calibration of audiometers through RBC and Inmetro”**. In: Proc. 28º Encontro Internacional de Audiologia, 24-27 April 2013, Salvador, B.A., Brasil (In Portuguese: Demanda pelo serviço de calibração de audiômetros através da RBC e Inmetro).
- SOARES, Z. M. D. MÜLLER; S. E. **“Microphone calibration at infra-sonic frequencies”**. In: Proc. Internoise 2012, 19-22 August 2012, New York, USA.
- SOARES, Z. M. D. MÜLLER; S. E. **“Appropriate parameter choice for calibration of microphones and sound level meters with swept sines”**. In: Proc. Internoise 2012, 19-22 August 2012, New York, USA.
- MÜLLER, S.; **Messmikrofone: Peavey PVR-2**. Production Partner, Ulm, p. 77 - 77, 09 July 2012.
- SOARES, Z. M. D.; MÜLLER, S. W. **“Calibration of microphone in infrasound frequencies”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Calibração de microfones nas frequências infra-sônicas).
- SOARES, Z. M. D. **“Electroacoustic devices traceability of distortion measurements”**. In: Proc. 18th International Congress on Sound & Vibration. July, 2011, Rio de Janeiro, Brazil.
- SOARES, Z. M. D. **“Use of swept sine in calibration services of the acoustical metrology area”**. In: Proc. 39th International Congress and Exposition on Noise Control Engineering, Lisboa, Portugal, June 13 – 16, 2010.
- SOUZA, J. J. L.; PADUIN, F. B. **“Calibration of sound level meters according to the standard IEC 61672-3 using proprietary software”**. In: Proc. XXIII SOBRAC, 2010, Salvador, Brazil (In Portuguese: Calibração de medidores de nível sonoro segundo a Norma IEC 61672-3 utilizando software proprietário).
- SOARES, Z. M. D. **“Calibration Artificial Ear”**, In: Proc. XXIII SOBRAC, 2010, Salvador, Brazil (In Portuguese: Calibração de Ouvido Artificial).
- MÜLLER, S.; **“Novelties of the STI”**, In: Proc. XXIII SOBRAC, 2010, Salvador, Brazil (In Portuguese: Novidades do STI).
- SOARES, Z. M. D.; NABUCO, M. **“Calibration of microphones in diffuse field by the use of diffuse impulse responses”**. In: Proc. XXIII SOBRAC 2010, Salvador,

Brazil (In Portuguese: Calibração de Microfones em Campo Difuso Através do Uso de Respostas Impulsivas).

ACOUSTICAL TESTING:

- MASSARANI, P. M. **“An alternative method for reverberation time measurement using compact wireless loudspeakers and optimized short sine sweep pulses.”** In Proc. of Inter-Noise 2025 – International Congress & Exposition on Noise Control Engineering, 24–27 August 2025, São Paulo, SP, Brasil.
- PAZOS, D. P. **“Pulses correspondence of reflection and incidence over periodic diffuse surfaces: further investigations.”** In Proc. of Inter-Noise 2025 – International Congress & Exposition on Noise Control Engineering, 24–27 August 2025, São Paulo, SP, Brasil.
- AMARAL, M. A. **“An approach to occupational noise assessment using frequency band.”** In Proc. of Inter-Noise 2025 – International Congress & Exposition on Noise Control Engineering, 24–27 August 2025, São Paulo, SP, Brasil.
- AMARAL, M. A.; DAMASCENO, M. N. L. **“Noise dosimetry applied to occupational noise exposure in scientific research laboratories”**, In Proc. of the XII Congresso Iberoamericano de Acústica (FIA 2022) / XXIX Encontro da Sobrac, Florianópolis, SC, 28-31 August 2022, Florianópolis, SC, Brasil. (In Portuguese: Correspondência entre sinais impulsivos de reflexão e incidência sonora sobre superfícies difusoras).
- MASSARANI, P. M.; VILLELA, R.; PAZOS, D. **“Measurement of Diffuse-Field Sound Absorption Coefficient of Materials Using the Two Microphones Method”**. In: Proc. of the 23rd International Congress on Acoustics (ICA 2019), 09-13 September 2019, Aachen, Germany.
- MASSARANI, P. M.; VILLELA, R. L. A.; PAZOS, D. F. P. **“Estimation of sound absorption coefficient by diffuse incidence using the 2 microphone method”**, In: Proc. of XXVIII Encontro Nacional da Sociedade Brasileira de Acústica - SOBRAC 2018, paper #83685, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Estimativa de Absorção Sonora por Incidência Difusa Utilizando o Método dos dois Microfones).
- PAZOS, D. F. P. **“Medição da reflexão sonora de superfícies corrugadas com o método de dois microfones”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
- MASSARANI, P. M. **“Análise de erros no domínio do tempo em medições de absorção pelo método de dois microfones”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
- VILLELA, R. L. A. **“Valoração do Custo Social do Ruído Ambiental de Sistemas de Transporte”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
- VILLELA, R. L. A. **“Redefinition of correlated input quantities: an effective technique for uncertainty evaluation”**. In: Proc. of Metrologia 2015, 8^o Congresso Brasileiro de Metrologia, Bento Gonçalves, 2015 (In Portuguese: Redefinição de grandezas de entrada correlacionadas: uma técnica eficaz para avaliação de incerteza).
- VILLELA, R.; ZINDELUK, M. **“Detection of Holes in Duct Walls by Acoustic Impulse-Response Technique”**. In: Proc. 7th Forum Acusticum 2014, 07-12 September, Krakow, Poland.
- MASSARANI, P. M.; ARAUJO, M. A. N. **“Verification of filters compatibility for measurement of reverberation time by the integrated impulsive response method”**.

- In: Proc. XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (in Portuguese: Verificação da Compatibilidade de Filtros para Medição de Tempo de Reverberação pelo Método da Resposta Impulsiva Integrada).
- NABUCO, M.; VILLELA, R. L. A.; MASSARANI, P. M.; PAZOS, D. F. P. **“Measurement of the sound absorption of theatre seats in a reverberation chamber”**. In: Proc.: XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (in Portuguese: Medição de Absorção Sonora de Poltronas de Teatro em Câmara Reverberante).
 - MASSARANI, P. M. **“Evaluation of the participation in an interlaboratory comparison on measurements of sound absorption in tubes”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Avaliação da participação em uma comparação de laboratórios para ensaios de absorção sonora em tubos).
 - ALVES, L. M.; MASSARANI, P. M.; JESUS, G. F. **“Interlaboratory comparison on measurements of sound absorption in impedance tubes”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Avaliação da participação em uma comparação de laboratórios para ensaios de absorção sonora em tubos).
 - VILLELA, R. L. D’A. **“Recommendations for improvement of measurement procedures of vehicle sound emission by inspection centers”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Dosimetria de ruído aplicada na avaliação de riscos ocupacionais em laboratórios de pesquisa científica).
 - PAZOS, D. F. P.; MUSAFIR, R. E. **“Correspondence between impulsive incident and reflected over difusing surfaces”**, In Proc. of the XII Congresso Iberoamericano de Acústica (FIA 2022) / XXIX Encontro da Sobrac, Florianópolis, SC, 28-31 August 2022, Florianópolis, SC, Brasil.. (In Portuguese: Correspondência entre sinais impulsivos de reflexão e incidência sonora sobre superfícies difusoras).
 - MASSARANI, P. M.; VILLELA, R. L. D’A.; PAZOS, D. F. P. **“Measurement of Diffuse-Field Sound Absorption Coefficient of Materials Using the Two Microphones Method”**. In: Proc. of the 23rd International Congress on Acoustics (ICA 2019), 09-13 September 2019, Aachen, Germany.
 - MASSARANI, P. M.; VILLELA, R. L. D’A.; PAZOS, D. F. P. **“Estimation of sound absorption coefficient by diffuse incidence using the 2 microphone method”**, In: Proc. of XXVIII Encontro Nacional da Sociedade Brasileira de Acústica - SOBRAC 2018, paper #83685, 3-5 October 2018, Porto Alegre, Brazil (In Portuguese: Estimativa de Absorção Sonora por Incidência Difusa Utilizando o Método dos dois Microfones).
 - PAZOS, D. F. P. **“Medição da reflexão sonora de superfícies corrugadas com o método de dois microfones”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
 - MASSARANI, P. M. **“Análise de erros no domínio do tempo em medições de absorção pelo método de dois microfones”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
 - VILLELA, R. L. A. **“Valoração do Custo Social do Ruído Ambiental de Sistemas de Transporte”**. In: Proc. of SOBRAC 2017, XXVII Encontro da Sociedade Brasileira de Acústica, May 2017, Brasília-DF.
 - VILLELA, R. L. A. **“Redefinition of correlated input quantities: an effective technique for uncertainty evaluation”**. In: Proc. of Metrologia 2015, 8^o Congresso Brasileiro de Metrologia, Bento Gonçalves, 2015 (In Portuguese: Redefinição de grandezas de entrada correlacionadas: uma técnica eficaz para avaliação de incerteza).

- VILLELA, R.; ZINDELUK, M. **“Detection of Holes in Duct Walls by Acoustic Impulse-Response Technique”**. In: Proc. 7th Forum Acusticum 2014, 07-12 September, Krakow, Poland.
- MASSARANI, P. M.; ARAUJO, M.A.N. **“Verification of filters compatibility for measurement of reverberation time by the integrated impulsive response method”**. In: Proc. XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (in Portuguese: Verificação da Compatibilidade de Filtros para Medição de Tempo de Reverberação pelo Método da Resposta Impulsiva Integrada).
- NABUCO, M.; VILLELA, R.; MASSARANI, P.; PAZOS, D. **“Measurement of the sound absorption of theatre seats in a reverberation chamber”**. In: Proc.: XXV Encontro da SOBRAC 2014, 20-22 October, Campinas, Brazil (in Portuguese: Medição de Absorção Sonora de Poltronas de Teatro em Câmara Reverberante).
- MASSARANI, P. M. **“Evaluation of the participation in an interlaboratory comparison on measurements of sound absorption in tubes”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Avaliação da participação em uma comparação de laboratórios para ensaios de absorção sonora em tubos).
- ALVES, L. M.; MASSARANI, P. M.; JESUS, G. F. **“Interlaboratory comparison on measurements of sound absorption in impedance tubes”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Avaliação da participação em uma comparação de laboratórios para ensaios de absorção sonora em tubos).
- VILLELA, R. L. D. **“Recommendations for improvement of measurement procedures of vehicle sound emission by inspection centers”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Recomendações para melhoria dos procedimentos de medição de ruído veicular em centros de inspeção).
- OLIVEIRA, C.; FERREIRA, D.; NABUCO, M. **“Estimation of the uncertainty of measurement of noise emitted by washing machines”**. In: Proc. XXIV Encontro da Sociedade Brasileira de Acústica – SOBRAC 2012, May 29 – June 1st, 2012, Belém-PA, Brazil (In Portuguese: Estimativa da incerteza de medição do ruído emitido por máquinas de lavar roupas).
- VILLELA, R. L. A.; NABUCO, M.; MASSARANI, P. M. **“Positioning errors of loudspeakers and their impacts on directivity measurements”**. In: Proc. 18th International Congress on Sound & Vibration, July 2011, Rio de Janeiro, Brazil.
- MASSARANI, P. M.; MÜLLER, S. **“Analysis of different integration limits corrections for the "clarity" calculation in room acoustics measurements”**. In: Proc. 18th International Congress on Sound & Vibration, July 2011, Rio de Janeiro, Brazil.
- MÜLLER, S.; MASSARANI, P. M. **“Distortion immunity in impulse response measurements with sweeps”**. Radiologia Brasileira, vol. 44. September/October 2011, São Paulo, Brazil.
- MASSARANI, P. M. **“The Two-Microphone Method in the Impulse Response Domain”**. In: Proc. 39th International Congress and Exposition on Noise Control Engineering, June 13 – 16, 2010, Lisboa, Portugal.
- MASSARANI, P. M. **“Competence of acoustics laboratories”**. In: Proc. XXIII SOBRAC 2010, Salvador, Brazil (In Portuguese: Competência dos laboratórios de acústica).
- MICHALSKI, R. L. X. N.; NABUCO, M. **“Acoustic performance in buildings up to 5 floors according to the standard ABNT NBR 15575”**. In: XXIII SOBRAC 2010,

Salvador, Brazil (In Portuguese: Desempenho acústico em edifícios habitacionais de até cinco pavimentos conforme a norma ABNT NBR 15575).

- SILVA, J. R. A.; MASSARANI, P. M. **“Variations of parameters acoustic measurements in toys depending on the operator”**. In: Proc. XXIII SOBRAC 2010, Salvador, Brazil (In Portuguese: Variações de parâmetros acústicos medidos em brinquedos em função do operador).

VIBRATION:

- GEIST, J.; METRY, H.; GONZALEZ, A.; ADRIAN G.; RUEDA, A. R.; MICHELI, G. B.; DIAS, R. S.; GAITAN, M. **“Improved Analysis for Intrinsic Properties of Triaxial Accelerometers to Reduce Calibration Uncertainty. Micromachines”**, v. 15, p. 1494, 2024.
- G. P. RIPPER, R. S. DIAS, G. B. MICHELI, C. D. FERREIRA. **“An analysis of the participation of INMETRO in interlaboratory comparisons in vibration measurements”**; In: Proc. of IMEKO 24th TC3, 14th TC5, 6th TC16 and 5th TC22 International Conference, 11 – 13 October 2022, Cavtat-Dubrovnik, Croatia, <https://doi.org/10.21014/tc22-2022.146>.
- RIPPER, G. P.; DIAS, R. S.; MICHELI, G. B.; FERREIRA, C. D. **“Analysis of input impedance influence on calibration of charge conditioning amplifiers”**; In: Proc. of XXIII IMEKO World Congress, August 30 – September 3, 2021, Yokohama, Japan. Measurement: Sensors, Volume 18, December 2021, 100359, <https://doi.org/10.1016/j.measen.2021.100359>.
- BRUNS, T.H.; NORDMANN, D.; RIPPER, G. P.; WINTHER, J. H.; HOF, C.; RUIZ, S.; PINEDA, G. S.; NOZATO, H.; ZUO, A.; DICKINSON, L.; VELDMAN, C. S.; KOZLYAKOVSKIY, A.; SHAN, C.; IVASHCHENKO A.; ALLEN, R. A. **“Final report on the CIPM key comparison CCAUV.V-K5”**, *Metrologia* 58 09001, 2021. <https://doi.org/10.1088/0026-1394/58/1A/09001>.
- RIPPER, G. P.; FERREIRA, C. D.; DIAS, R. S.; MICHELI, G. B. **“Reduction of gravity effect on the results of low-frequency accelerometer calibration”**, ACTA IMEKO, ISSN: 2221-870X, December 2020, Volume 9, Number 5, 365 – 368. http://dx.doi.org/10.21014/acta_imeko.v9i5.1002.
- QIAO, S.; HONGBO, H.; OTA, A.; NOZATO, H.; RIPPER, G. P.; MENDOZA, L. M. M.; KOZLYAKOVSKIY, A.; VELDMAN, I.; BRUNS, T.; DICKINSON L.; LEE, Y. B. **“Key comparison in the field of acceleration on low intensity shock sensitivity”**. *Metrologia* 56 09003, 2019. <https://doi.org/10.1088/0026-1394/56/1A/09003>.
- MICHELI, G. B.; DIAS, R. S.; RIPPER, G. P. **“Primary Shock calibration at INMETRO”**, In: IOP Conf. Series: Journal of Physics: Conf. Series 1065 (2018) 222004, XXII World Congress of the International Measurement Confederation (IMEKO 2018), Belfast, Ireland, doi:10.1088/1742-6596/1065/22/222004.
- FERREIRA, C. D.; RIPPER, G. P.; DIAS, R. S.; MICHELI, G. B.; TEIXEIRA, D. B. **“Primary calibration system of accelerometers at low frequencies by sine approximation method”**, In: Proc. of the Congresso Brasileiro de Metrologia - Metrologia 2017, Fortaleza-CE, 26-29 November 2017 (In Portuguese: Sistema de calibração primária de acelerômetros por aproximação de senos em baixas frequências).
- RIPPER, G. P.; FERREIRA, C. D.; DIAS, R. S.; MICHELI, G. B. **“Improvement of the primary low-frequency accelerometer calibration system at INMETRO”**, In: Proc. of IMEKO 23rd TC3, 13th TC5 and 4th TC22 International Conference, 30 May to 1 June, 2017, Helsinki, Finland.

- QIAO, S.; LIFENG, Y.; BARTOLI, C.; VELDMAN, I.; RIPPER, G. P.; BRUNS, T.; LICHT, T. R.; KOLASA, J.; HOF, C.; PINEDA, G. S.; DICKINSON, L.; OTA, A.; CHEUNG, W. S.; YANKOVSKY A.; SHAN, C. **“Final report of CCAUV.V-K3: key comparison in the field of acceleration on the complex charge sensitivity”**, Metrologia, Vol. 54, Tech. Suppl. 09001, 2017. <https://doi.org/10.1088/0026-1394/54/1A/09001>.
- SANTOS, S. F.; RIPPER, G. P. **“Chapter 8. International metrological structure”**, e-book Metrologia Vol.1: Fundamentos, editora Brasport Livros e Multimídia Ltda, 2017 (In Portuguese: Capítulo 8. Estrutura Metrológica Internacional).
- MICHELI, G. B.; RIPPER, G. P.; DIAS R. S.; FERREIRA, C. D. **“Dispersion analysis of accelerometer shock calibrations by comparison using a new exciter developed at Inmetro”**. In IOP Science - Journal of Physics: Conference Series **648**(2015) 012017, 3rd International Congress on Mechanical Metrology (CIMMEC2014), [doi:10.1088/1742-6596/648/1/012017].
- FERREIRA, C. D.; RIPPER, G. P.; DIAS, R. S.; TEIXEIRA, D. B. **“Primary calibration system for vibration transducers from 0.4 Hz to 160 Hz”**. In IOP Science - Journal of Physics: Conference Series (IOP/JCPS) **575**(2015) 012003, VII Brazilian Congress on Metrology (Metrologia 2013), [doi:10.1088/1742-6596/575/1/012003].
- CASSEMIRO, R. A.; DIAS R. S.; FERREIRA, C. D.; RIPPER, G. P.; TEIXEIRA, D. B.; MICHELI, G. B. **“Improvement and implementation of a gravimetric system for calibration of vibration transducers in low frequencies”**. In: Proc. 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015 (In Portuguese: Aprimoramento e implementação do sistema gravimétrico de calibração de transdutores de vibrações em baixas frequências).
- BRUNS T. H.; RIPPER G. P.; TÄUBNER, A. **“Final report on the key comparison CCAUV.V-K2”**. Metrologia, Vol. 51, Tech. Suppl. 09002, 2014.
- MAINA, A.; VELDMAN, I.; RIPPER, G. P.; KOLASA, J.; PRASIL, M.; HÄMÄLÄINEN, J.; **“Final report on the supplementary comparison AFRIMETS.AUV.V-S3”**. Metrologia, Vol. 51, Tech. Suppl. 09003, 2014.
- RIPPER, G. P.; DIAS, R. S.; MICHELI, G.B.; Ferreira, C. D.; **“Application the new shock exciter developed at Inmetro for comparison calibration of accelerometers”**. In: Proc. 3rd International Congress on Mechanical Metrology - 3rd CIMMEC, 14-16 October 2014, Gramado, Brazil.
- RIPPER, G. P.; DIAS, R. S.; MICHELI, G. B.; Ferreira, C. D. **“Preliminar studies for the implementation of a low-frequency accelerometer calibration system by sine-approximation method”**. In: Proc. 3rd International Congress on Mechanical Metrology - 3rd CIMMEC, 14-16 October 2014, Gramado, Brazil (In Portuguese: Estudos preliminares para implementação do sistema de calibração de acelerômetros por aproximação de senos em baixas frequências).
- RIPPER, G. P.; DIAS, R. S.; MICHELI, G. B.; Ferreira, C. D. **“Calibration of IEPE accelerometers at INMETRO”** In: Proc. Joint IMEKO International TC3, TC5 & TC22 Conference 2014, 3-5 February 2014 Cape Town, South Africa, 2014.
- RIPPER, G.P.; MICHELI, G.B.; DIAS, R.S.; **“A proposal to minimize the dispersion on primary calibration results of single-ended accelerometers at high frequencies”** in Acta-IMEKO, Vol. 2 No. 2, 2013.
- FERREIRA, C. D.; RIPPER, G. P.; TEIXEIRA, D. B.; MÜLLER, S. E.; DIAS, R. S. **“Preliminary studies with a prototype MEMS accelerometer for metrological use at low frequencies”**. In: Proc. 7º Congresso Brasileiro de Metrologia, 2013 (In

Portuguese: Estudos preliminares com protótipo de acelerômetro MEMS para uso metrológico em baixas frequências).

- FERREIRA, C. D.; RIPPER, G. P.; DIAS, R. S.; TEIXEIRA, D. B. **“Primary calibration system for vibration transducers from 0.4 Hz to 160 Hz”**. In: Proc. 7º Congresso Brasileiro de Metrologia, 2013 (In Portuguese: Sistema de calibração primária para transdutores de vibração de 0,4 Hz a 160 Hz).
- MICHELI, G. B.; MÁXIMO, L. A.; RIPPER, G. P. **“A study on the influence of geometry and material of interface elements used for pulse generation in a shock machine for calibration of accelerometers”**. In: Proc. SAE International, 7-9 October 2013, São Paulo-SP, Brazil. (In Portuguese: Um estudo sobre a influência da geometria e do material do elemento de interface usado em uma máquina de choque mecânico para geração de pulsos de aceleração para calibração de acelerômetros).
- RIPPER, G. P.; GIANCARLO B. M.; DIAS, R. S. **“A study of the dispersion on primary calibration results of single-ended accelerometers at high frequencies”**. In: Proc. XX IMEKO World Congress, 10-14 September 2012, Busan, Republic of Korea.
- MACHADO, R. R.; OLIVEIRA, R. S.; FREITAS, L. C. C.; KOCH, C. A.; KNOTT, A.; DIAS, R.S. **“Characterization and qualification of a force dynamic calibration device”**, In: Proc. XX IMEKO WC 2012, Republic of Korea.
- VELDMAN, I.; RIPPER, G. P. **“Final Report on supplementary comparison AFRIMETS.AUV.V-S2”**. Metrologia, Vol. 49, 2012, doi:10.1088/0026-1394/49/1A/09001.
- TEIXEIRA, D. B., FERREIRA C. D., RIPPER, G. P. **“Vibration - A system for comparison calibration of transducers at low frequencies”**. Metrologia e Instrumentação, Dezembro/Janeiro 2012, pp. 78-80 (In Portuguese: Vibração - Sistema para calibração de transdutores em baixa frequência), www.banasmetrologia.com.br.
- GARCIA G. A., MICHELI G. B., RIPPER, G. P. **“Dynamic behavior of porous air bearings under shock excitation”**. In: Proc. II CIMMEC, September 27–30, 2011, Natal, Brazil.
- RIPPER, G. P., FERREIRA C. D., TEIXEIRA, D. B., MICHELI G. B., DIAS, R. S. **“Dynamic calibration of accelerometers in low frequencies at INMETRO”**. In: Proc. VI SBEIN 2010, Rio de Janeiro, Brazil, October 20-22, 2010 (In Portuguese: Calibração dinâmica de acelerômetros em baixas frequências no INMETRO).
- MICHELI G. B., GARCIA G. A., RIPPER, G. P. **“Implementation of a primary shock calibration system in Lavib - Inmetro”**. In: Proc. Simpósio de Metrologia 2010, Querétaro, Mexico, October 27-29, 2010.
- RIPPER, G. P.; FERREIRA C. D.; TEIXEIRA, D. B.; DIAS, R.S., MICHELI G.B. **“A new system for primary calibration of vibration transducers at low frequencies”**. In: Proc. IMEKO 2010 TC3, TC5 and TC22 Conferences, pp. 253-257, November 22–25, 2010, Pattaya, Chonburi, Thailand.

ULTRASOUND:

- COSTA-FÉLIX, R. P. B. **“Measurement uncertainty for ultrasound applications: a fundamental tool for improving experimental reliability”**, In Proc. of Ultrasonics 2025 – 7th International Caparica Conference on Ultrasonic-based Applications from Analysis to Synthesis, 2025, Caparica, Portugal.
- MAYWORM, R. C.; WEBSTER, E.; ALVARENGA, A. V.; DAVIDSON, S.; COSTA-FÉLIX, R. P. B. **“The Kibble balance of the Ultrasound Laboratory of Inmetro”**, Acta IMEKO, v. 14, n. 2, pp. 1–6, June 2025.

- BARBOSA, C. R. H.; LOUZADA, D. R.; COSTA-FÉLIX, R. P. B. **“Introductory notes for the Acta IMEKO thematic issue on the 2023 SBM Metrology Conference – part 1”**, Acta IMEKO, v. 14, n. 2, pp. 1–3, June 2025.
- ROBERTO H. B. C.; LOUZADA, D.; COSTA-FELIX, R. **“Introductory notes for the Acta IMEKO thematic issue on the 2023 SBM Metrology Conference - part 1”**. ACTA IMEKO, v. 14, p. 1-3, 2025.
- MIQUELETI, S. A.; COSTA-FÉLIX, R. P. B.; CERNICCHIARO, G. **“Acoustic impedance measurement using spherical waves”**, Measurement, v. 225, 2023.
- COSTA-FÉLIX, R. P. B.; MAIA, A. Q. A.; FERMAM, R. K. S. **“Práticas de modelos de gestão de pessoas em laboratórios acreditados.”** SUSTINERE: REVISTA DE SAÚDE E EDUCAÇÃO, v. 11, p. 273-295, 2023.
- OLIVEIRA, P. A.; BAESSO, R. M.; ALVARENGA, A. V.; COSTA-FÉLIX, R. P. B. **“Assessment of glycerol in biodiesel using an ultrasonic measurement method”**. JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012007, 2023.
- CHACON, I. T.; OLIVEIRA, J. T. G. S. B.; OZANAN, R. O.; COSTA-FÉLIX, R. P. B. **“Risk analysis in conformity assessment of positive displacement flowmeter.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012006, 2023.
- MORAIS, G. C.; MAYWORM, R. C.; GIOSA, D. T.; FONTÃO, F. N. G. K.; GRANJEIRO, J. M.; COSTA-FÉLIX, R. P. B. **“Polymer blocks homogeneity concerning the speed of sound for in vitro studies in implant dentistry.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012014, 2023.
- MIQUELETI, S. A.; COSTA-FÉLIX, R. P. **“A method to extend the calibration beyond the defined periodicity.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012005, 2023.
- SILVA, J. G. D.; ALVARENGA, A. V.; COSTA-FÉLIX, R. P. B. **“Metrological perspective on the use of ultrasound physiotherapy equipment in Brazil.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012008, 2023.
- DOURADO, T. C.; SANTOS, F. S.; SANTOS, E. W. J.; GAIOFATTO, R. L.; COSTA-FÉLIX, R. P. B. **“Correlation between ultrasonic velocity and strength in the early ages of concrete from a metrological approach.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012009, 2023.
- PINTO, E. S. F.; SHIUAN, W. B.; SANTOS, E. W. J.; DOURADO, T. C.; COSTA-FÉLIX, R. P. B. **“Basic procedures in the production of reference materials for ultrasonic non-destructive testing.”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012013, 2023.
- SOUZA, R. M.; COSTA-FÉLIX, R. P. B.; ALVARENGA, A. V. **“The importance of proper storage of agar phantom”** JOURNAL OF PHYSICS: CONFERENCE SERIES (ONLINE), v. 2606, p. 012012, 2023.
- DOURADO, T. C.; PETERS, F. C.; MANSUR, W. J.; COSTA-FÉLIX, R. P. B. **“Comparison between linear frequency-modulated ultrasonic excitation signals and pure tones for concrete applications”**; Applied Acoustics, Volume 198, September 2022, 108977. <https://doi.org/10.1016/j.apacoust.2022.108977>.
- DOURADO, T. C.; PETERS, F. C.; MANSUR, W. J.; COSTA-FÉLIX, R. P. B. **“Simultaneous use of pulse-echo and through-transmission methods in determining a combined reflection coefficient”**; Applied Acoustics, Volume 192, April 2022, 108700. <https://doi.org/10.1016/j.apacoust.2022.108700>.

- R.M. SOUZA, M.K.M. DE ASSIS, R.P.B. DA COSTA-FÉLIX, A.V. ALVARENGA; **“Speed of sound in the IEC tissue-mimicking material and its maintenance solution as a function of temperature”**, Ultrasonics, Volume 118, January 2022, 106564. <https://doi.org/10.1016/j.ultras.2021.106564>.
- S P ROBINSON, P M HARRIS, B FORD, J ABLITT, CHEN YI, ALPER BIBER, ATA CAN CORAKCI, RODRIGO COSTA-FELIX, STEVEN CROCKER, ALEXANDER ISAEV, VUMILE TYALIMPI AND G LATHA, **“Final report - key comparison CCAUV.W-K2: calibration of hydrophones in the frequency range from 250 Hz to 500 kHz”**, 2022 Metrologia **59** 09003, DOI: 10.1088/0026-1394/59/1A/09003
- R.C. MAYWORM, E. WEBSTER, S. DAVIDSON, A.V. ALVARENGA, R.P.B. COSTA-FELIX; **“Developing a Kibble balance for measuring ultrasonic radiation force at 1 megahertz”**; In: Proc. of IMEKO 24th TC3, 14th TC5, 6th TC16 and 5th TC22 International Conference, 11–13 October 2022, Cavtat-Dubrovnik, Croatia, DOI: 10.21014/tc3-2022.100
- R.C.MAYWORM; A.V. ALVARENGA; R.P.B. COSTA-FELIX; **“A metrological approach to the time of flight diffraction method (ToFD)”**. Measurement Vol. 167, 1 January 2021, 108298.
- ANDRÉ V. ALVARENGA; CÉSAR A.D. TEIXEIRA; MARCO A. VON KRÜGER; WAGNER. C.A. PEREIRA; **“Method for estimating average grey-level's measurement uncertainty from ultrasound images for non-invasive estimation of temperature in different tissue types”**. Ultrasonics, Vol. 106, August 2020, 106139.
- DUARTE, M.A.; PEREIRA, W.C.A.; ALVARENGA, A.V.; **“Calculating Texture Features from Mammograms and Evaluating their Performance in Classifying Clusters of Microcalcifications”**. In: Proc. 15th Mediterranean Conference on Medical and Biological Engineering and Computing (Medicon 2019), Coimbra, Portugal, 26-28 September 2019.
- SOUZA, R.M.; MOSQUEIRA DE ASSIS, M.K. COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **“Metrological approach for characterizing ultrasonic properties of soft tissue-mimicking material”**. In: Proc. 15th Mediterranean Conference on Medical and Biological Engineering and Computing (Medicon 2019), Coimbra, Portugal, 26-28 September 2019.
- ALVARENGA, A.V.; FABRICIO, M.; SILVA, C.E.R.; COSTA-FÉLIX, RODRIGO P. B.; **“Characterization of bone demineralization by ultrasound using convolutional neural networks”**. In: Proc. 8th International Symposium on Ultrasonic Characterization of Bone (ISUCB 2019), Frejus, France, 24-26 June 2019.
- BAÊSSO, R.M.; COSTA-FELIX, R.P.B.; MILORO, P.; ZEQUIRI, B.; **“Ultrasonic parameter measurement as a means of assessing the quality of biodiesel production”**. Fuel (Elsevier), Volume 241, p. 155-163, 1st April 2019, <https://doi.org/10.1016/j.fuel.2018.12.032>.
- TEIXEIRA, C.A.; PASTRANA-CHALCO, M.; SIMÕES, R.J.; PEDROSA, A.; VON KRÜGER, M.A. ; ALVARENGA, A.V. ; FONTES-PEREIRA, A.J. ; PEREIRA, W.C. A.; **“On the feasibility of ultrasound imaging enrichment by medium-temperature changes”**, Ultrasonic Imaging. Vol. 41, Issue 1, p.17-34, 1st January 2019, doi: 10.1177/0161734618800660.
- MORGADO, G.; MIQUELETI, S.A.; COSTA-FELIX, R.P.B.; **“Ultrasound Power Measurement with a water-based Calorimeter”**, In: Proc. of XXVI Brazilian Congress on Biomedical Engineering. IFMBE Proceedings, vol 70/1, Búzios - Rio de Janeiro, October 2018, https://doi.org/10.1007/978-981-13-2119-1_134

- OLIVEIRA, P.A.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.. **“Ultrasonic output power measurement according to IEC 61161:2013”**, In: Proc. of XXVI Brazilian Congress on Biomedical Engineering. IFMBE Proceedings, vol 70/1, Búzios - Rio de Janeiro, October 2018, https://doi.org/10.1007/978-981-13-2119-1_133.
- SILVA, J.G.; ALVARENGA, A.V.; **“Evaluating the Reliability and Validity of a Questionnaire Used to collect data about the Periodic Evaluation of Ultrasound Therapy Equipment”**, In: Proc. of XXVI Brazilian Congress on Biomedical Engineering. IFMBE Proceedings, vol 70/1, Búzios - Rio de Janeiro, October 2018, DOI: 10.1007/978-981-13-2119-1_128.
- SOUZA, R.M.; COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **“Attenuation coefficient variation as a function of temperature in a cortical bone phantom”**, In: Proc. of XXVI Brazilian Congress on Biomedical Engineering. IFMBE Proceedings, vol 70/1, Búzios - Rio de Janeiro, October 2018, https://doi.org/10.1007/978-981-13-2119-1_125.
- SOUZA, R.; COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **“Uncertainty model of the temperature rise measurements in the applied part of ultrasound physiotherapy equipment”**, In: Proc. of XXVI Brazilian Congress on Biomedical Engineering. IFMBE Proceedings, vol 70/1, Búzios - Rio de Janeiro, October 2018, https://doi.org/10.1007/978-981-13-2119-1_135.
- OLIVEIRA, PÂMELLA A.; BAESSO, RAPHAELA M.; MORAES, GABRIEL C.; ALVARENGA, ANDRÉ V.; COSTA-FÉLIX, RODRIGO P.B.; **“Chapter 7: Ultrasound Methods for Biodiesel Production and Analysis”**. Book: Biofuels - State of Development, editor: Krzysztof Biernat, IntechOpen, March 5th 2018, DOI: 10.5772/intechopen.74303.
- ALMEIDA, R.O.; AGUIAR JÚNIOR, E.A.; COSTA-FELIX, R.P.B.; **“Regulation of flow computers for the measurement of biofuels”**. Journal of Physics: IOP Conference Series - 9th Brazilian Congress on Metrology (Metrologia 2017), Volume 975, p. 012017, 2018, DOI: 10.1088/1742-6596/975/1/012017.
- OLIVEIRA, P.A.; SILVA, R.M.B.; MORAIS, G.C.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; **“Speed of sound in biodiesel produced by low power Ultrasound”**. Journal of Physics: IOP Conference Series - 9th Brazilian Congress on Metrology (Metrologia 2017), Volume 975, p. 012019, 2018.
- MORGADO, G; MIQUELETI, S; COSTA-FELIX, R P B.; **“Measurement of ultrasound power using a calorimeter”**, Journal of Physics: IOP Conference Series - 9th Brazilian Congress on Metrology (Metrologia 2017), Volume 975, p. 012010, 2018.
- SOUZA, R M; COSTA-FELIX, R P B; ALVARENGA, A.V.; **“The influence of temperature on the speed of sound of cortical bone phantom: a metrological view”**. Journal of Physics: IOP Conference Series -9th Brazilian Congress on Metrology (Metrologia 2017), Volume 975, p. 012021, 2018.
- SOUZA, R M ; MONTEIRO, R M; COSTA-FELIX, R P B ; ALVARENGA, A V. **“Ultrasonic properties of a four years old tissue-mimicking material”**. Journal of Physics: IOP Conference Series - 9th Brazilian Congress on Metrology (Metrologia 2017), Volume 975, p. 012025, 2018.
- SALES, E.; SILVA, C.E.R.; LETICHEVSKY, S.; SANTOS, R.; LEITAO, R.; SANTOS, C.T.; DE OLIVEIRA, L.F.; DE AVILLEZ, R.; MONTEIRO, M.; COSTA-FELIX, R.P.B.; PACIORNIK, S.; ANJOS, M.; **“Chemical induced demineralization study in cortical boné”**. Journal of Instrumentation - 24th International congress on x-ray optics and microanalysis (ICXOM24), Volume 13, p. C05010-C05010, 2018.

- OLIVEIRA, D.P.; PEREIRA, W.C.A.; COSTA-FÉLIX, R.P.B.; **“Design, confection and calibration of a flow phantom with ultrasound applications”**. Journal of Physics: IOP Conference Series - 2017 Joint IMEKO TC1-TC7-TC13 Symposium: Measurement Science Challenges in Natural and Social Sciences, Volume 1044, p. 012020, 2018.
- JUNIOR, D.S.; BRAZ, D.S.; SILVA, C.E.R.; COSTA-FELIX, R.P.B.; **“Proficiency test on thickness measurement using ultrasound: a metrological aid to improve safety in transportation of dangerous products”**. Measurement (Elsevier), Volume 1044, p. 012020, 2018.
- FIGUEIREDO, M.K.K.; SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“Relating speed of sound and echo amplitude with biodiesel manufacture”**. Chemical Engineering Research and Design (Elsevier), Volume. 136, p. 1, 2018.
- VIEIRA, R. C.; COSTA-FELIX, R.P.B.; **“Ultrasound measurement apparatus for liquids characterization”**. IOP Conference Series: Journal of Physics, Volume. 975, p. 012026, 2018.
- COSTA-FELIX, R.P.B.; FIGUEIREDO, M.K.K.; ALVARENGA, A.V.; **“An ultrasonic method to appraise diesel and biodiesel blends”**, Fuel, Vol. 227, 1st September 2018, p. 150-153, <https://doi.org/10.1016/j.fuel.2018.04.077>.
- SOUZA, R.M.; MONTEIRO, R.M.; COSTA-FELIX, R.P.B.; ALVARENGA, A.V.; **“Ultrasonic properties of a four years old tissue-mimicking material”**. IOP Conference Series: Journal of Physics, Vol. 975, 012025, 2018, DOI: 10.1088/1742-6596/975/1/012025.
- SOUZA, R.M.; COSTA-FELIX, R.P.B.; ALVARENGA, A.V.; **“The influence of temperature on the speed of sound of cortical bone phantom: a metrological view”**, IOP Conference Series: Journal of Physics, Vol. 975, 012021, 2018, <https://doi.org/10.1088/1742-6596/975/1/012021>.
- BAESSO, R.M.; OLIVEIRA, P.A.; MORAIS, G.C.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; **“Using ultrasonic velocity for monitoring and analysing biodiesel production”**, Fuel (Elsevier), Vol. 226, 15th August 2018, Pages 389-399, <https://doi.org/10.1016/j.fuel.2018.04.039>.
- COSTA-JÚNIOR, J.F.S.; CORTELA, G.A.; MAGGI, L.E.; ROCHA, T.F.D.; PEREIRA, W.C.A. ; COSTA-FELIX, R.P.B.; ALVARENGA, A.V.; **“Measuring uncertainty of ultrasonic longitudinal phase velocity estimation using different time-delay estimation methods based on cross-correlation: Computational simulation and experiments”**, Measurement (Elsevier), Vol. 122, July 2018, p. 45-56, <https://doi.org/10.1016/j.measurement.2018.01.073>.
- DANTAS, T.M.; COSTA-FELIX, R.P.B.; MACHADO, J.C.; **“Nonlinear frequency modulated excitation signal and modified compressing filter for improved range resolution and side lobe level of ultrasound echoes”**, Applied Acoustics (Elsevier), Vol. 130, p. 238-246, 15th January 2018, <https://doi.org/10.1016/j.apacoust.2017.10.008>.
- BAÊSSO, R.M.; OLIVEIRA, P.A.; MORAES, G.C.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“Chapter 11: Ultrasound as a Metrological Tool for Monitoring Transesterification Kinetics”**. Book: Advanced Chemical Kinetics, Editor: Muhammad Akhyar Farrukh, IntechOpen, December 20th 2017, DOI: 10.5772/intechopen.70501.
- MAYWORM, R.C.; COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **“Aspectos Metrológicos da Técnica Tempo de Voo da Onda Difrata (ToFD) para Utilização em Ensaios Não Destrutivos (ENDs) por Ultrassom”**. Revista Soldagem e Inspeção, 2017, <http://dx.doi.org/10.1590/0104-9224/si2104.02>.

- FIGUEIREDO, M.K.-K.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B. **“Ultrasonic attenuation and sound velocity assessment for mixtures of gasoline and organic compounds”**. Fuel, v. 191, p. 170-175, 2017. ELSEVIER.
- SANTOS, T.Q.; ALVARENGA, A.V.; OLIVEIRA, D.P.; COSTA-FÉLIX, R.P.B.; **“Metrological Validation of a Measurement Procedure for the Characterization of a Biological Ultrasound Tissue-Mimicking Material”**. Ultrasound in Medicine & Biology, v. 43, p. 323-331, 2017. ELSEVIER.
- HALLER, J.; KOCH, C.; COSTA-FELIX, R. P. B.; DUBEY, P.K.; DURANDO, G.; KIM, Y.T.; YOSHIOKA, M.; **“Final report on key comparison CCAUV.U-K3.1”**. Metrologia, v. 53, Tech. Suppl., 09002, 2016.
- COSTA, R.M.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; OMENA, T.P.; VON KRÜGER, M.A.; PEREIRA, W.C.A.; **“Thermochromic Phantom and Measurement Protocol for Qualitative Analysis of Ultrasound Physiotherapy Systems”**. Ultrasound in Medicine & Biology, v. 42, p. 299-307, 2016.
- ALVARENGA, A.V.; SILVA, C.E.R.; COSTA-FÉLIX, R.P.B.; **“Monte Carlo uncertainty assessment of ultrasonic beam parameters from immersion transducers used to non-destructive testing”**. Ultrasonics (Guildford) v. 69, p. 144-151, 2016.
- OLIVEIRA, D.P.; MATTEO, L.L.; KRUGER, M.A.V. ; PEREIRA, W.C.A.; COSTA-FÉLIX, R.P.B.; **“Confecção e Caracterização de Phantom de Fluxo com Aplicações em Ultrassom”**. In: Proc. of XXV Congresso Brasileiro de Engenharia Biomédica, 2016.
- OLIVEIRA, D.P.; SANTOS, T.Q.; MAYWORM, R.C.; SOUZA, R.M.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“Standard Operating Procedure of Acoustic Properties Characterization and Preparing of Agar Phantoms”**. In: Proc. of XXV Congresso Brasileiro de Engenharia Biomédica, 2016.
- MIQUELETI, S.A.; MARTINS C.A.O; RIBEIRO, C.E.P; COSTA-FELIX, R.P.B., **“Hydro Acoustic Transducer's Calibration by the Reciprocity”** Conference Series (Online), v. 575, p. 012007, 2015. Journal of Physics.
- SILVA, C.E.R.; BRAZ, D.S.; MAGGI, L.E.; COSTA FELIX, R.P.B.; **“Ultrasonic Transverse Velocity Calibration of “Standard Blocks for Use in Non-Destructive Testing”**. Conference Series (Online), v. 575, p. 012006, 2015. Journal of Physics.
- OLIVEIRA, E.G.; MACHADO, J.C.; COSTA-FELIX, R.P.B.; **“Hydrophone's Sensitivity Calibration Based on its Complex Transfer Function”**. Conference Series (Online), v. 575, p. 012004, 2015. Journal of Physics.
- ABRUNHOSA, V.M.; COSTA, M.L.; MERMELSTEIN , C.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; **“Uncertainty Assessment in Measurement of Myotube Thickness in Cells Culture Treated With and Without Therapeutic Ultrasound”** Conference Series (Online), v. 575, p. 012002, 2015. Journal of Physics.
- FIGUEIREDO, M.K.K.; SILVA, C.E.R., ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; **“Monitoring Biodiesel Reactions of Soybean oil and Sunflower oil Using Ultrasonic Parameters”**. Conference Series (Online), v. 575, p. 012001, 2015. Journal of Physics.
- ALVARENGA, A.V.; DOMINGUES, C.A.; VON KRÜGER, M.A.; ALBUQUERQUE PEREIRA, W.C. COSTA-FELIX, R.P.B.; **“Uncertainty Evaluation From Non-Invasive Estimation of Temperature Variation Using B- Mode Ultrasonic Images From a Plastic Phantom”**. London. Print, v. 69, p. 189-194, 2015, Measurement.
- COSTA-FELIX, R.P.B.; MACHADO, J.C.; **“Output Bandwidth Enhancement of a Pulsed Ultrasound System Using a Flat Envelope and Compensated Frequency-**

- Modulated Input Signal: Theory and Experimental Applications**". London. Print, v. 69, p. 146-154, 2015. Measurement.
- OLIVEIRA, E.G.; COSTA-FÉLIX, R.P.B.; MACHADO, J.C.; **"Primary Reciprocity-Based Method for Calibration of Hydrophone Magnitude and Phase Sensitivity: Complete Tests at Frequencies from 1 to 7 MHz"**. Guildford, v. 58, p. 87-95, 2015, Ultrasonics.
 - DUARTE, M.A.; ALVARENGA, A.V.; AZEVEDO, C.M.; CALAS, M.J.G. ; INFANTOSI, A.F.C.; PEREIRA, W.C.A.; **"Evaluating Geodesic Active Contours in Microcalcifications Segmentation on Mammograms"**. Computer Methods and Programs in Biomedicine (Print), v. 122, p. 304-315, 2015.
 - COSTA-FÉLIX, R.P.; MAYWORM, R.; ALVARENGA, A.V.; **"A Metrological Based Realization of Time-of-Flight Diffraction Technique"** Physics Procedia, v. 70 p. 590-593, 2015. Proceedings of the 2015 ICU International Congress on Ultrasonics, Metz, France.
 - COSTA-FÉLIX, R. P.; FERREIRA, J.R.; **"Comparing Ultrasound and Mechanical Steering in a Biodiesel Production Process"**. Physics Procedia, v. 70 p. 1066-1069, 2015. Proceedings of the 2015 ICU International Congress on Ultrasonics, Metz, France
 - BRAZ, D.S.; SILVA, C.E.; ALVARENGA, A.V.; JUNIOR, D.S.; COSTA-FÉLIX, R.P.B.; **"Metrology Applied to Ultrasound Characterization of Trabecular Bones Using the AIB Parameter"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - OLIVEIRA, P.A.; BAÊSSO, R.M.; MORAIS, G.C.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **"Speed of Sound as a Function of Temperature for Ultrasonic Propagation in Soybean Oil"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - BAÊSSO, P.A, OLIVEIRA, P.A.; MORAIS, G.C.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **"Use of Ultrasound to Monitor Physical Properties of Soybean Oil"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - SOUZA, R.M.; ALVARENGA, A.V.; BRAZ, D.S.; PETRELLA, L.I.; COSTA-FÉLIX, R.P.B.; **"Uncertainty Evaluation of Dead Zone of Diagnostic Ultrasound Equipment"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - SOUZA, R.M.; SANTOS, T.Q.; OLIVEIRA, D.P.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **"Standard Operating Procedure to Prepare Agar Phantoms"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - MAYWORM, R.C.; ALVAREGA, A.V.; COSTA-FÉLIX, R.P.B; **"Metrological Evaluation of a Flaw Detector Used in Non-destructive Testing by Ultrasound"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - SANTOS, T.Q.; ALVAREGA, A.V.; OLIVEIRA, D.P.; MAYWORM, R.C.; SOUZA, R.M.; COSTA-FÉLIX, R.P.B; **"Experimental Findings on the Underwater Measurements Uncertainty of Speed of Sound and the Alignment System"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - MIQUELETI, S.A., COSTA-FÉLIX, R. P.B.; **"On the Importance of Measurement System Calibration for Underwater Passive Monitoring"**. In: Proc. of 8º Congresso Brasileiro de Metrologia, Bento Gonçalves/RS, 2015.
 - FIGUEIREDO, M.K.K.; SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **"Monitoring biodiesel reactions of soybean oil and sunflower oil using ultrasonic parameters"**. Journal of Physics. Conference Series (Online), v. 575, p. 012001, 2015.

- ABRUNHOSA, V.M.; COSTA, M.L.; MERMELSTEIN, C.; ALVARENGA, A.V.; COSTA-FÉLIX, R P B.; **“Uncertainty assessment in measurement of myotube thickness in cells culture treated with and without therapeutic ultrasound”**. Journal of Physics. Conference Series (Online), v. 575, p. 012002, 2015.
- OLIVEIRA, E.G.; MACHADO, J.C.; COSTA-FELIX, R.P.B.; **“Hydrophone's sensitivity calibration based on its complex transfer function”**. Journal of Physics. Conference Series (Online), v. 575, p. 012004, 2015.
- SILVA, L.S.F.; BIBIANO, D.S.; FIGUEIREDO, M.K.K.; COSTA-FÉLIX, R.P.B.; **“Effects of the concentration of emulsion of oil-in-water on the propagation velocity and attenuation”**. Journal of Physics. Conference Series (Online), v. 575, p. 012005, 2015.
- SILVA, C.E.R.; BRAZ, D.S.; MAGGI, L.E.; COSTA-FELIX, R.P.B.; **“Ultrasonic transverse velocity calibration of standard blocks for use in non-destructive testing”**. Journal of Physics. Conference Series (Online), v. 575, p. 012006, 2015.
- MIQUELETI, S.A.; MARTINS, C.A.O.; RIBEIRO, C.E.P.; COSTA-FELIX, R.P.B.; **“Hydro acoustic transducer's calibration by the reciprocity”**. Journal of Physics. Conference Series (Online), v. 575, p. 012007, 2015.
- OLIVEIRA, E.G.; COSTA-FELIX, R.P.B.; MACHADO, J.C.; **“Primary reciprocity-based method for calibration of hydrophone magnitude and phase sensitivity: Complete tests at frequencies from 1 to 7MHz”**. Ultrasonics (Guildford), v. 58, p. 87-95, 2015.
- COSTA-FELIX, R ; MACHADO, J C.; **“Output bandwidth enhancement of a pulsed ultrasound system using a flat envelope and compensated frequency-modulated input signal: Theory and experimental applications”**. Measurement (London. Print), v. 69, p. 146-154, 2015.
- ALVARENGA, A.V. ; TEIXEIRA, C.A.D ; VON KRÜGER, M.A. ; PEREIRA, W.C.A.; COSTA-FÉLIX, R.P.B.; **“Uncertainty evaluation from non-invasive estimation of temperature variation using B-mode ultrasonic images from a plastic phantom”**. Measurement (London. Print), v. 69, p. 189-194, 2015.
- MAYWORM, R C.; ALVARENGA, A V.; COSTA-FELIX, R P B.; **“A Metrological Based Realization of Time-of-Flight Diffraction Technique”**. Physics Procedia, v. 70, p. 590-593, 2015.
- COSTA-FELIX, R.P.B.; FERREIRA, J.R.L.; **“Comparing ultrasound and mechanical steering in a biodiesel production process”**. Physics Procedia, v. 70, p. 1066-1069, 2015.
- FERREIRA, E.; VICENTE, J.; SILVA, R.C.D.; NELE, M.; NUNES, E.; COSTA-FÉLIX, R.P.B.; **“A methodology free of pyridine for measuring hydroxyl value in polymers and oils”**. Polymer Testing, v. 33, p. 16-20, 2014.
- ABRUNHOSA, V.M.; SOARES, C.P.; POSSIDONIO, A.C.B.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B. ; COSTA, M.L.P.S.; MERMELSTEIN, C.S.; **“Induction of Skeletal Muscle Differentiation In Vitro by Therapeutic Ultrasound”**. Ultrasound in Medicine & Biology, v. 40, p. 504-512, 2014.
- PETRELLA, L.I.; MAGGI, L.E.; SOUZA, R.M.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“Influence of subcutaneous fat in surface heating of ultrasonic diagnostic transducers”**. Ultrasonics (Guildford), v. 54, p. 1476-1479, 2014.
- JUNIOR, D.S.; BRAZ, D.S.; SILVA, C.E.R.; COSTA-FELIX, R.P.B.; **“Proficiency testing as a tool to assure metrological canfiability on thickness measurement with ultrasound”**. Revista Abende, v. VIII, p. 49-55, 2014 (In Portuguese: “Ensaio de Proficiência como ferramenta para garantir a confiabilidade metrológica de medição de espessura por ultrassom”).

- MARTINS, C.A.O.; MIQUELETI, S.A.; RIBEIRO, C.E.P.; COSTA-FELIX, R.P.B.; **“Underwater transducer calibration by reciprocity using tone burst and frequency modulated signals”**. Revista Pesquisa Naval, v. 26, p. 114-117, 2014 (In Portuguese: “Calibração de transdutores hidroacústicos por reciprocidade empregando salvas de sinais monotônicos e de frequência modulada”).
- TEIXEIRA, C.A. ; ALVARENGA, A.V. ; CORTELA, G. ; VON KRUGER, M.A. ; PEREIRA, W.C.A.; **“Feasibility of non-invasive temperature estimation by the assessment of the average gray-level content of B-Mode images”**. Ultrasonics (Guildford), v. 54, p. 1692-1702, 2014.
- DUARTE, M.A.; ALVARENGA, A.V.; AZEVEDO, C.M.; CALAS, M.J.G.; INFANTOSI, A.F.C.; PEREIRA, W.C.A.; **“Segmenting mammographic microcalcifications using a semi-automatic procedure based on Otsu’s method and morphological filters”**. Revista Brasileira de Engenharia Biomédica (Impresso), v. 98, p. 377-388, 2013.
- OLIVEIRA, E.; COSTA-FELIX, R.P.B.; MACHADO, J.; **“Reciprocity-based method for magnitude and phase calibration of hydrophone sensitivity”**. In: Proc. International Ultrasonic Symposium IEEE-UFFC, 21-25 July 2013, Prague, Czech Republic.
- MARTINS, C.A.O.; MIQUELETI, S.A.; PARENTE, C.E.; COSTA-FELIX, R.P.B.; **“Reciprocity calibration of hydroacoustic transducers using swept-sines (chirps)”**. In: Proc. IEEE/OES Acoustics in Underwater Geosciences Symposium, Rio Acoustics 2013, 24-26 July 2013, Rio de Janeiro, Brazil.
- CORTELA, G.A.; MAGGI, L.E.; KRUGER, M.A.; NEGREIRA, C.A.; PEREIRA, C.A.W.; **“Ultrasonic attenuation and speed in phantoms made of polyvinyl chlorideplastisol (PVC) and graphite powder**. In: Proc. ICA 2013, 2-7 June 2013, Montreal, Canada.
- FIGUEIREDO, M.K-K.; SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“In-line monitoring of biodiesel production using ultrasound”**. In: Proc. 36ª Reunião Anual da Sociedade Brasileira de Química – May 2013, Águas de Lindóia, S.P., Brazil (In Portuguese: Monitoramento da produção do biodiesel “in line” utilizando o ultrassom).
- ALVARENGA, A.V.; INFANTOSI, A.F.C.; PEREIRA, W.C.A.; AZEVEDO, C.M.; **“Assessing the combined performance of texture and morphological parameters in distinguishing breast tumors in ultrasound images”**. Medical Physics (Lancaster), v. 39, p. 7350, 2012.
- FIGUEIREDO, M.K-K.; COSTA-FELIX, R.P.B. ; MAGGI, L.E.; ALVARENGA, A.V.; ROMEIRO, G.A.; **“Biofuel ethanol adulteration detection using an ultrasonic measurement method”**. Fuel (Guildford), v. 91, p. 209-212, 2012.
- ABRUNHOSA, V.M.; COSTA-FÉLIX, R.P.B. ; VON KRUGER, M.A.; PEREIRA, W C.A.P.; **“Determining physiotherapy ultrasonic transducer sensitivity by self-reciprocity”**. Revista Brasileira de Engenharia Biomédica (Impresso), v. 28, p. 23-35, 2012 (In Portuguese: “Determinação da sensibilidade de transdutores ultrassônicos para fisioterapia pelo método da autorreciprocidade”).
- SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **“Nondestructive testing ultrasonic immersion probe assessment and uncertainty evaluation according to EN 12668-2:2010”**. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, v. 59, p. 2338-2346, 2012.
- ALVARENGA, A.V.; TEIXEIRA, CA.D.; VON KRÜGER, M.A.; PEREIRA, W.C.A.; **“Non-Invasive Assessment of Temperature Variation in Ex-vivo Renal Tissue by**

- Tracking Average Grey-Level from B-Mode Images**". In: Proc. International Ultrasonic Symposium - IEEE 2012, 7-10 October 2012, Dresden, Germany.
- FIGUEIREDO, M.K-K.; SILVA, C.E.R.; ALVARENGA, A.V. COSTA-FÉLIX, R.P. B.; **"Using ultrasound to monitor in-line biodiesel production"**. In: Proc. International Ultrasonic Symposium - IEEE 2012, 7-10 October 2012, Dresden, Germany.
 - PETRELLA, L.I.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B; **"Measurement of pressure fields of ultrasonic diagnostic equipment and uncertainty assessment preliminar study"**. In: Proc. XXIII Congresso Brasileiro de Engenharia Biomédica (CBEB), 1-5 October 2012, Porto de Galinhas, PE, Brazil.
 - DUARTE, M.A. ALVARENGA, A.V.; AZEVEDO, C.M.; INFANTOSI, A.F.C.; PEREIRA, W.C.A.; **"Estimating the pectoral muscle and the nipple positions in mammographies using morphological filters"**. In: Proc. XXIII Congresso Brasileiro de Engenharia Biomédica (CBEB), 1-5 October 2012, Porto de Galinhas, PE, Brazil.
 - DUARTE, M.A.; ALVARENGA, A.V.; AZEVEDO, C.M.; INFANTOSI, A.F.C.; PEREIRA, W.C.A.: **"Segmentation of microcalcifications in mammographies using active geodesic contours"**. In: Proc. XXIII Congresso Brasileiro de Engenharia Biomédica (CBEB), 1-5 October 2012, Porto de Galinhas-PE, Brazil (In Portuguese: Segmentação de microcalcificações em mamografias utilizando contornos ativos geodésicos).
 - DOMINGUES, I.; ALVARENGA, A.V.; CARDOSO, J.S.; PEREIRA, W.C.A.; **"SVM classification of breast tumors on ultrasound images using morphological features"**. In: Proc. XXIII Congresso Brasileiro de Engenharia Biomédica (CBEB), 1-5 October 2012, Porto de Galinhas-PE, Brazil.
 - TEIXEIRA, C.A.; ALVARENGA, A.V.; CORTELA, G.; VON KRUGER, M.A.; PEREIRA, W.C.A.; **"Bi-dimensional Temperature Profile Assessment by Average Gray-level from Bmode images in Homogeneous Biological Tissue"**. In: Proc. XXIII Congresso Brasileiro de Engenharia Biomédica (CBEB), 1-5 October 2012, Porto de Galinhas-PE, Brazil.
 - COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **"Statistical analysis of different absorber targets for ultrasonic radiation force measurement"**. In: Proc. XX IMEKO World Congress, 10-14 September 2012, Busan, Republic of Korea.
 - ABRUNHOSA, V.M.; **"Biological response in vitro of skeletal muscle cells treated with different intensity continuous and pulsed ultrasound fields"**. In: Proc. World Physical Therapy 2011, June 2011, Amsterdam / Nederland.
 - SILVA, C.E.; COSTA-FÉLIX, R.P.B.; **"Desenvolvimento de métodos ultrassônicos de calibração e certificação de blocos padrão V1 e V2"**. In: Proc. 11ª Conferência sobre Tecnologia de Equipamentos – COTEQ, May 2011, Pernambuco, Brazil.
 - FIGUEREDO, M.K.K.; COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; **"Análise utilizando padrão ultrassônico para identificação de adulteração em etanol combustível"**. In: Proc. 34ª Reunião da Soc. Brasileira de Química. May 2011. Florianópolis, Brazil.
 - TEIXEIRA, C.A., ALVARENGA, A.V.; CORTELA, G.A.; PEREIRA, A.J.F.; VON KRÜGER, M.A.; PEREIRA, C.A.; **"On the reproducibility of the average gray-level for noninvasive temperature estimation in the hyperthermia range"**. In: Proc. Pan American Health Care Exchanges - PAHCE 2011. March, 2011. Rio de Janeiro, Brazil.
 - ABRUNHOSA, V.M.; SOARES, C.P.; COSTA-FELIX, R.P.B.; COSTA, M.L.; MERMELSTEIN, C.S.; **"Effects of treatments with different ultrasound fields in**

- skeletal muscle cell cultures**". In: Proc. ICCB 2012 / Congresso internacional de biologia celular, July 2012, Rio de Janeiro, Brazil.
- COSTA-FELIX, R.P.B; DANTAS, T.; MACHADO, J; **"Improved range resolution and side lobe level of ultrasound echoes using nonlinear frequency modulated excitation signal and modified compressing filter"** In: Proc. IEEE - International Ultrasonics Symposium 2011, October, 2011. Orlando – USA.
 - COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; HEKKENBERG, R. **"A fully automated system for ultrasonic power measurement and simulation accordingly to IEC 61161:2006"**. Journal of Physics. Conference Series (Online), v. 279, p. 012004, 2011.
 - SILVA, C.E. R.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B. **"Ultrasonic immersion probes characterization for use in nondestructive testing according to EN 12668-2:2001"**. Journal of Physics. Conference Series (Online), v. 279, p. 012025, 2011.
 - MAGGI, L.E.; SOUZA, A.B.B.; ICHINOSE, R.M.; PEREIRA, W.C.A.P.; VON KRUGER, M.A.; COSTA-FELIX, R.P.B. **"The importance of expression of uncertainty of acoustical parameters of ultrasonic phantoms"**. Journal of Physics. Conference Series (Online), v. 279, p. 012027, 2011.
 - FIGUEIREDO, M.K-K ; COSTA-FÉLIX, R.P.B. ; MAGGI, L.E.; ALVARENGA, A.V.; ROMEIRO, G.A. **"Sensibility of hydrous ethanol adulteration detection using ultrasonic parameters validated in a metrological base"**. Journal of Physics. Conference Series (Online), v. 279, p. 012028, 2011.
 - MAGGI, L.E.; SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B. **"Ultrasonic calibration and certification of V1 and V2 type reference standard blocks for use in Non-Destructive Testing"**. Journal of Physics. Conference Series (Online), v. 279, p. 012029, 2011.
 - FIGUEIREDO, M. K-K. ; COSTA-FÉLIX, R.P.B. ; ALVARENGA, A.V.; MAGGI, L.E.; ROMEIRO, G.A. **"A study of the factors that influence the attenuation assessment in liquids"**. Metrologia & Instrumentação, v. 234, p. 66-75, 2011 (In Portuguese: "Um estudo dos fatores que influenciam o cálculo de atenuação em líquidos").
 - CALAS, M.J.G.; ALVARENGA, A.V.; GUTFILEN, B.; PEREIRA, W.C.A. **"Evaluation of morphometric parameters assessed from breast lesion boundaries from ultrasonography for distinction of categories in BI-RADS system"**. RB. Radiologia Brasileira (Impresso), v. 44, p. 289-296, 2011 (In Portuguese: "Avaliação de parâmetros morfométricos calculados a partir do contorno de lesões de mama em ultrassonografias na distinção das categorias do sistema BI-RADS").
 - PETRELLA, L.I.; ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B.; **"Requirements for a measurement system to evaluate safety and essential performance of ultrasound diagnostic equipment"**. In: Proc. Metrologia 2011, September 2011, Natal, Brazil.
 - Figueiredo, M.KK. ; COSTA-FÉLIX, R.P.B.; A. V. ALVARENGA.; **"Detection of gasoline adulteration using an ultrasonic measurement method"**. In: Proc. Metrologia 2011, September 2011, Natal, Brazil.
 - COSTA-FÉLIX, R.P.B, SILVA, C.E.R.; **"Measurement uncertainty determination of the thickness gauging by ultrasound as a non-destructive testing"**. In: Proc. Metrologia 2011, September 2011, Natal, Brazil.

- DOMINGUES, R.C., SANTOS, E., VICENTE, J., COSTA-FÉLIX, R.P.B, NELI, M.; **“Validação de metodologia de dosagem de diclofenaco ácido por titrimetria ácido base”**. In: Proc. Metrologia 2011, September 2011, Natal, Brazil.
- ALVARENGA, A.V.; Silva, C.E.R.; COSTA-FÉLIX, R.P.B.; **“Uncertainty estimation of the ultrasonic beam divergence from NDT probes using Monte Carlo method”** In: Proc. Metrologia 2011, September 2011, Natal, Brazil.
- FIGUEIREDO, M.K.K.; ROMEIRO, G.A.; SILVA, R.V.S.; PINTO, P.A.; DAMASCENO, R.N.; D’AVILA, L.A.; FRANCO A.P.; **“Pyrolysis oil from the fruit and cake of jatropha curcas produced using a Low Temperature Conversion (LTC) process: Analysis of a pyrolysis oil-diesel blend”**. Energy and Power Engineering, 3, pp. 332-338, 2011, doi:10.4236/epe.2011.33041.
- FIGUEIREDO, M.K.K.; COSTA-FÉLIX, R.P.B.; MAGGI, L.E.; ALVARENGA A.V.; ROMEIRO, G.A.; **“Sensibility of hydrous ethanol adulteration detection using ultrasonic parameters validated in a metrological base”**. The Journal of Physics: Conference Series **279** 012028, 2011, doi:10.1088/1742-6596/279/1/012028.
- COSTA-FÉLIX, R.P.B.; ALVARENGA, A.V.; HEKKENBERG, R.; **“A fully automated system for ultrasonic power measurement and simulation accordingly to IEC 61161:2006”**. The Journal of Physics: Conference Series **279**. 012004, 2011, doi:10.1088/1742-6596/279/1/012004.
- SILVA, C.E.R.; ALVARENGA A.V.; COSTA-FÉLIX, R.P.B.; **“Ultrasonic immersion probes characterization for use in nondestructive testing according to EN 12668-2:2001”** The Journal of Physics: Conference Series **279** 012025, 2011 doi:10.1088/1742-6596/279/1/012025.
- MAGGI, L.E.; SOUZA, A.B.B.; ICHINOSE, R.M.; PEREIRA, W.C.A.; VON KRUGER, M.A.; COSTA-FELIX, R.P.B.; **“The importance of expression of uncertainty of acoustical parameters of ultrasonic phantoms”**. In: The Journal of Physics: Conference Series **279** 012027, 2011, doi:10.1088/1742-6596/279/1/012027.
- ABRUNHOSA, V.M.; MERMELSTEIN, C.S.; COSTA, M.L.P.S ; COSTA-FÉLIX, R.P.B. **“Biological response in vitro of skeletal muscle cells treated with different intensity continuous and pulsed ultrasound fields”**. Journal of Physics. Conference Series (Online), v. 279, p. 012022, 2011.
- DUARTE, M.A.; ALVARENGA, A.V.; AZEVEDO. C.M.; INFANTOSI A.F.C.; PEREIRA W.C.A.; **“Segmenting microcalcifications by top-hat morphological operators and histogram filtering”**. In: Proc. XXII Congresso Brasileiro de Engenharia Biomédica (CBEB), November 21-25, 2010, Minas Gerais, Brazil.
- ALVARENGA, A.V.; TEIXEIRA, C.A.; CORTELA, M.A.; VON KRUGER, M.A.; PEREIRA, W.C.A.; **“Mode images in estimating non-invasive temperature increase in ex-vivo tissue during ultrasound therapy”**. In: Proc. XXII Congresso Brasileiro de Engenharia Biomédica (CBEB), November 21-25, 2010 Minas Gerais, Brazil.
- FRANCA, D.N.; ALVARENGA, A.V.; PEREIRA, W.C.A.; **“Desenvolvimento de sequências de operadores morfológicos para a filtragem de imagens médicas”**. In: Proc. XXII Congresso Brasileiro de Engenharia Biomédica (CBEB), November, 21-25, 2010, Minas Gerais, Brazil.
- FIGUEIREDO, M K-K; COSTA-FÉLIX, R. P. B.; ALVARENGA, A V; MAGGI, L E; ROMEIRO, G A. **“A study of the factors that influence the attenuation uncertainty assessment in liquids”**. Produto & Produção, v. 11, p. 55-66, 2010 (In Portuguese: “Estudo de fatores que influenciam o cálculo de incerteza da medição de atenuação em líquidos”).

- COSTA-FÉLIX, R.P.B.; ALVARENGA, A V. **“Effective radiating area and beam non-uniformity ratio of ultrasound transducers at 5MHz, according to IEC 61689:2007”**. Ultrasonics (Guildford), v. 50, p. 329-331, 2010.
- ALVARENGA, A.V.; COSTA-FÉLIX, R.P.B. **“Metrological aspects on therapeutic ultrasound parameters: effective radiating area and non-uniformity ration”**. Physics Procedia, v. 3, p. 643-649, 2010.
- NOGUEIRA, B M.; CARRETONI, C.; SILVA, R.C.D.; FREITAS, S.; MELO JR., P.A. ; COSTA-FÉLIX, R.P.B.; PINTO, J.C.; NELE, M. **“Microwave activation of enzymatic catalysts for biodiesel production”**. Journal of Molecular Catalysis. B, Enzymatic (Print), v. 67, p. 117-121, 2010.
- ALVARENGA, A V.; TEIXEIRA, C. A. D.; RUANO, M. G. ; PEREIRA, W C A. **“Influence of temperature variations on the entropy and correlation of the Grey-Level Co-occurrence Matrix from B-Mode images”**. Ultrasonics (Guildford), v. 50, p. 290-293, 2010.
- GÓMEZ, W.; LEIJA, L.; ALVARENGA, A.V.; INFANTOSI, A.F.C.; PEREIRA, W.C.A. **“Computerized lesion segmentation of breast ultrasound based on marker-controlled watershed transformation”**. Medical Physics (Lancaster), v. 37, p. 82-95, 2010.
- ALVARENGA, A.V.; INFANTOSI, A.F.C.; AZEVEDO, C.M.; PEREIRA, W.C.A. **“Assessing the performance of morphological parameters in distinguishing breast tumors on ultrasound images”**. Medical Engineering & Physics, v. 32, p. 49-56, 2010.
- PEREIRA, W.C.A; ALVARENGA, A.V.; INFANTOSI, A.F. C; MACRINI, L; PEDREIRA, C.E. **“A non-linear morphometric feature selection approach for breast tumor contour from ultrasonic images”**. Computers in Biology and Medicine, v. 40, p. 912-918, 2010.
- SILVA, C.E.R.; MAGGI, L.E.; COSTA-FELIX, R.P.B.; **“Ultrasonic calibration and certification of reference standard blocks types V1 and V2 for use in Non Destructive Testing”**. In: Proc. AMUM - Advanced Metrology for Ultrasound in Medicine, London, UK, May 12 – 14, 2010.
- SILVA, C.E.R.; ALVARENGA, A.V.; COSTA-FELIX, R.P.B.; **“Ultrasonic immersion probes characterization for use in Non Destructive Testing accordingly to EN 12668-2:2001”**. In: Proc. AMUM - Advanced Metrology for Ultrasound in Medicine, London, UK, May 12 – 14, 2010.
- COSTA-FELIX, R.P.B.; ALVARENGA, A.V.; HEKKENBERG, R.; **“A fully automated system for ultrasonic power measurement and simulation accordingly to IEC 61161:2006”**. In: Proc. AMUM - Advanced Metrology for Ultrasound in Medicine, London, UK, May 12 – 14, 2010.
- FIGUEIREDO, M.K-K; MAGGI, L.E.; ALVARENGA, A.V.; PORTILHO, M.F., ROMEIRO, G.A.; COSTA-FELIX, R.P.B.; **“Sensibility of hydrous ethanol adulteration detection using ultrasonic parameters validated in a metrological base”**. In: Proc. AMUM - Advanced Metrology for Ultrasound in Medicine, London, UK, May 12 – 14, 2010.
- ABRUNHOSA, V.M.; CAMPOS, L.M.; MERMELSTEIN, C.S.; MANOEL L.P.S.; COSTA-FELIX, R.P.B.; **“Biological response of breast skeletal muscle of chick *in vitro* embryos treated in different intensity pulsed ultrasound fields”**. In: Proc. AMUM - Advanced Metrology for Ultrasound in Medicine, London, UK, May 12 – 14, 2010.