**Faculty Profile: Diego Turo (One page per faculty member)**

Associate Professor

Department: Mechanical Engineering

School: School of Engineering

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Education: Ph.D., Acoustics, University of Salford, U.K., 2011

Nationality: Italian, Permanent US Alien Resident (green card holder)

**Research Interests and Expertise:**

Modeling sound propagation in heterogeneous atmosphere, through porous materials and metamaterials; Modeling elastic wave propagation in complex materials like living tissues; Modeling linear and nonlinear sound propagation.

**Biography:**

Dr. Diego Turo joined the Catholic University of America in 2014 where he currently is an associate professor in the Department of Mechanical Engineering. His current research, funded by the Office of Naval Research focuses on modeling sound propagation in heterogeneous atmosphere and over rough sea and absorbing surfaces. Prior to joining Catholic University, he was as researcher at the George Mason University in the Department of Biomedical Engineering where he worked on ultrasonic technique for mechanical characterization of living tissues. Dr. Turo publications span in the fields of acoustics of porous media as well as ultrasound atmospheric and underwater acoustics.

**Five Selected Papers:**

1. A. Vecchiotti, T. J. Ryan, F. A. Cobb, J. F. Vignola, **D. Turo**, "Investigation of engineering models for sound propagation in a near-shore environment." Applied Acoustics, 2022
2. N. T. Gangemi, C. F. Sieck, J. F. Vignola, **D. Turo**, A. Ikei, A. Vignola, J. W. Baldwin, S. W. Liskey, A. D. Edmunds, W. B. Wilson, M. A. Boone, G. Yesner, D. M. Photiadis, and B. R. Matis, "Frequency-dependent surface wave suppression at the Dirac point of an acoustic graphene analogue". Physical Review B, 2022
3. J. Williams, F. Corvaro, J. F. Vignola, **D. Turo**, B. Marchetti, Matteo Vitali, "Application of non-invasive active infrared thermography for delamination detection in fresco", International Journal of Thermal Sciences, 2022S. Guan, J. Vignola, J. Judge, and **D. Turo**, “Airgun inter-pulse noise field during a seismicsurvey in an Arctic ultra-shallow marine environment,” Journal of the Acoustical Society of America, 138(6): 3447–3457 (2015).
4. **D. Turo**, P. Otto, M. Hossain, T. Gebreab, K. Armstrong, W. F. Rosenberger, H. Shao, J. P. Shah, L. H. Gerber and S. Sikdar, "Novel use of ultrasound elastography to quantify muscle tissue changes after dry needling of myofascial trigger points in patients with chronic myofascial pain." J. Ultrasound Med., 34, 2149-61 (2015)
5. **D. Turo**, P. Otto, J. Shah, J. Hammond, T. Gebreab, M. Zaazhoa, L. Gerber, S. Sikdar, “Ultrasonic Characterization of the Upper Trapezius Muscle in Patients with Chronic Neck Pain.” Ultrasonic Imaging (2013).
6. **D. Turo**, O. Umnova, “Influence of Forchheimer’s Nonlinearity and Transient Effects onPulse Propagation in Air Saturated Rigid Granular Materials.” J. Acoust. Soc. Am., 134(6), 4763-4774 (2013).

**Professional Activities (please also include STEM education/diversity/outreach activities)**

* Reviewer for the:
  + Journal of Acoustical Society of America
  + Applied Acoustics
  + Acta Acoustica United with Acoustica
  + Materials of MDPI
  + Acoustics of MDPI