University of Massachusetts Dartmouth
Sigma Xi Scientific Research Honor Society
28th Annual Research Exhibition
April 17-18, 2024

Posters on display Wed 1:00-3:00 and Thurs 10:00-12:00.
Student award winners announced Thursday at 12:30.

Organized by the UMass Dartmouth Chapter of Sigma Xi with financial assistance from the Office of the Chancellor, the Office of Research and Innovation, the College of Engineering, and the Honors College.

For the full Exhibition Program with poster abstracts, visit the Sigma Xi website at umassd.edu/sigmaxi.
Electrical & Computer Engineering

11 Rainfall estimation from hydrophone spectra at different depths
   J Bourgeois (U), J Buck (F), A Tandon (F)

12 An environmentally informed active sonar
   K Bowers (G), R Nilson, P Gendron (F)

13 Passive acoustic source localization of marine mammals in
   hydrophone array recordings with time-domain beamforming
   D Campos Anchieta (G), A DeAngelis, J Buck (F)

14 Large scale parallel rigged telemetry versus large scale series rigged
   telemetry, which is favorable?
   C Fall (U), H Michel (F)

15 Investigating targets to decrease detection probability for infotaxis
   experiments
   C Kramer (U), J Buck (F)

16 Mitigating risk of cascading failures in storage area networks
   G Lyu (G), L Xing (F)

17 Design and evaluation of a toroidal electroacoustic transducer
   D Sahoo (G), A Souza (G), M Bisbano (G), D Brown (F)

18 Spectral projection model applied to scattering of electromagnetic
   waves from cylindrical and ellipsoid surfaces
   V Sivalingam (G), D Kasilingam (F)

Engineering & Applied Science

19 Inaccuracies in reanalysis products: A case study of the Arabian Sea
   from 2017 to 2018
   D Sarkar (G), S Kerhalkar (G), A Tandon (F)

Fisheries Oceanography

   A Giangiardi (G), C Chen (F), L Wang (P), S Li (P)

Mechanical Engineering

21 Fracture characterization of adhesively bonded double network
   hydrogels
   D Joseph (G), V Chalivendra (F)

22 Mixed-mode I/II fracture criterion of 3-D printed ABS-CF composites
   Z Leng (G), V Chalivendra (F)

23 Measurement of mode-I fracture toughness of polyacrylamide-
   amylopectin hydrogels with chitosan interfacial reinforcement using a
   novel testing method
   M Shonar (G), V Chalivendra (F)

Psychology

24 The association between context-inappropriate sadness and
   internalizing behavior in preschoolers
   H Boucher (U), R Locke (F)

25 What the health is health literacy? Examining HL and everyday
   problem-solving in emerging adults
   G Fenner (G), B Ayotte (F)

26 Impacts of genre and individual differences in working memory
   capacity on situation model inference construction
   M Goncalves (U), T Kershaw (F)

27 Longitudinal Analysis of Changes in Statistical Understanding across
   the Psychology Curriculum
   B Guarini (G), T Kershaw (F), M Kayyal (F)

28 Anger expressions linked to chaotic home environments and
   externalizing behavior
   E King (G), K Botelho (U), A Then (U), R Arkerson (F), H
   Goldsmith

(U) = undergraduate, (G) = graduate student, (P) = post-doctoral fellow, (F) = faculty