

ACOUSTICAL · SOCIETY · OF · AMERICA



NARRAGANSETT CHAPTER

Serving Southern New England including Rhode Island, Southeastern Massachusetts and Connecticut

<http://acosoc.org/RegChapters/Narragansett/>

Fall Meeting **Tuesday October 26, 2010**

RSVP Please by October 19 to

Frank A. Tito (ASA-NC@att.net) and David A. Brown (dbAcoustics@cox.net)

Sound Sleep: **Arousal Thresholds and Sleep Disruption from Common Hospital Noises**

Jo M. Solet, MS, EdM, PhD, OTR/L

Clinical Instructor in Psychology in the Department of Psychiatry, Harvard Medical School

Clinical Instructor in Psychology, Department of Psychiatry, Cambridge Health Alliance

Brief bio: <http://sleep.med.harvard.edu/people/faculty/899/Jo+M+Solet+MS+EdM+PhD>

Location: Brown University, Location and Room TBA

National healthcare quality surveys have found that noise in hospitals is an urgent concern. The purpose of this study was to develop sleep arousal probability threshold curves to specific hospital-based sounds, demonstrating their impact on all stages of human sleep. Recordings were captured of hospital sound sources corresponding to specific categories identified as salient in the American Institute of Architects' Draft Interim Guideline on Sound and Vibration in Healthcare Facilities. Fourteen sounds were calibrated for dynamic presentation through a speaker array at the sleep lab to deliver rising 5 decibel step exposures from 40 to 70 dBA in a room with 35 dBA background sound from air exchange equipment. Noise-related EEG arousals were quantified using current AASM criteria and summed for each sleep stage by sound stimulus type and equalized and maximum decibel levels to calculate arousal probability threshold curves. The tested stimuli evoked a range of arousal thresholds. The findings provide evidence that repeated arousals to hospital noises in all sleep stages occur even in healthy young adults; responses vary with stimulus types and characteristics and across sleep stages with arousal salience of alarm signals and voices confirmed.

Voluntary Donations: \$10.00 at Door; Students Free

6:00 - 7:00 Social and Light Buffet/Appetizers

7:00 - 8:00 Presentation by Dr. Solet and Discussion

Guests Welcome!

Open to the Public. All are welcome.

Interested in becoming a member?

The Acoustical Society of America – Narragansett Chapter

While the goal of the national chapter of the Acoustical Society of America is "to increase and diffuse the knowledge of acoustics and its practical applications" - the Narragansett Chapter is chartered with promoting acoustic interests in Southern New England and building relationships and contacts for those practicing or interested in the field of Acoustics.

We welcome the expansion of the chapter with the addition of new members, students, or suggestions for speakers and meeting venues. If you are interested in joining, or possibly making a seminar style presentation, or maybe hosting a meeting at a new location contact please one of our board members. For more information visit our website: <http://acosoc.org/RegChapters/Narragansett/>

2010 Chapter Executive Committee Members and Affiliations

President: David A. Brown, Univ. of Massachusetts and BTech Acoustics LLC dbAcoustics@cox.net

Vice President and Treasurer: Cathy A Clark, Acoustician, clarkca1@cox.net

Secretary: Frank Tito, Acoustician, ASA-NC@att.net

Medical Acoustics Chair: Frank Baffoni, Physician – MD, fabmd@cox.net

Social Chair: Dino Roberti, Raytheon, dino_roberti@raytheon.com

WebMaster: Sally Sutherland, Acoustician, sally.sutherland@navy.mil

Member-at-Large: Jack Salisbury, Acoustician, echojack@ieee.org

Directions: The venue is planned for Brown University, Providence, Rhode Island. We will send out another electronic mailing when room location is finalized.

Open to the Public. All are welcome.