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RESEARCH INTERESTS

Biomedical engineering focus: medical diagnostics based on vibration and acoustics (development of novel sonic / ultrasonic techniques, MR elastography, optical elastography, pulmonary acoustics), biological response to acoustics, The Audible Human Project.

Vibrations, acoustics and dynamic systems: structural acoustics, hysteresis and fractional calculus methods, nonlinear dynamics, smart material systems & structures, musical instrument acoustics, nondestructive evaluation based on vibration and acoustics, vibration isolation of high-precision facilities and instrumentation.

EDUCATION: Ph.D. (1995), M.S. (1992), B.Sc. (1990), Mechanical Engineering, Ohio State University.

PROFESSIONAL EXPERIENCE

- 1) The University of Illinois at Chicago, Department of Bioengineering. Chicago, Illinois, Adjunct Appointment, August, 1999 – 2011; Interim Head, August, 2009 – 2011; *Professor and Head, August 2011 - present.*
- 2) The University of Illinois at Chicago, Department of Mechanical Engineering. Chicago, Illinois, Professor: August 2004 – 2011; Associate Professor: August 2000 – 2004; Assistant Professor: August 1995 – 2000.
- 3) Naval Research Laboratory, Washington, D.C. Summer Faculty Appt, Physical Acoustics Branch, 1997, 1998.
- 4) Argonne National Laboratory, Argonne, Illinois. Summer Faculty Appt, Advanced Photon Source, 1996, 2001, 2009, and Math and Computational Science, 2009.

SELECTED HONORS & AWARDS

- 1) Fellow of the American Institute for Medical and Biological Engineering – AIMBE (2017).
- 2) NIH NIBIB Nagy New Investigator Award (2014).
- 3) Ohio State University Mechanical Engineering Thomas French Alumni Achievement Award (2013).
- 4) University Scholar Award – University of Illinois at Chicago (2009).
- 5) Fellow of the American Society of Mechanical Engineers - ASME (2007).
- 6) The Acoustical Society of America: R. Bruce Lindsay Award (2002).
- 7) National Science Foundation Faculty Early Career (CAREER) Development Award (1998).

PROFESSIONAL MEMBERSHIPS & ACTIVITIES

- 1) Member: International Society for Magnetic Resonance in Medicine (ISMRM) Magnetic Resonance Elastography Guidelines Committee
- 2) Member: American Society of Mechanical Engineers (ASME) Technical Committee on Vibration and Sound.
- 3) Member: Acoustical Society of America (ASA) Technical Committee on Biomedical Acoustics.
- 4) Member: BME Council of Chairs, BMES, AIMBE, ISMRM, ASME, ASA, ASEE
- 5) Assoc. Editor, ASME Journal of Vibration and Acoustics (2008 – 2014), Journal of the ASA (2014 - present)

PUBLICATIONS: h-index = 21-ISI, 28-Google Scholar; 72 archival journal; >150 conference papers & abstracts.

Also see: <http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/44076849/?sort=date&direction=descending>

RESEARCH FUNDING: At UIC, 1995 – present: Intellectual credit: ~\$5 million. PI or Co-PI on external grants totaling: ~\$12 million. Primary research support sources: NIH, NSF, ONR, DOE (Argonne National Lab). *At start-up company Royston Engineering Research, LLC:* Phase I and II DOE STTR Grants: \$850K.

STUDENT MENTORSHIP. Post-Doc: 4 complete; **PhD:** 15 graduated, 5 in progress. **MS-Thesis:** 15 graduated. **Graduate student placements:** *Academia:* Harvard Post-doc, Icahn School of Medicine Post-doc (New York), METU (Turkey) faculty, Koc (Turkey) faculty, Columbia College (Chicago) faculty, UIC Post-doc; *National Labs & Government:* Argonne, Sandia, Edwards AFB, NASA JPL; *Industry:* GE Healthcare, GM Electromotive, Northrup Grumman, Caterpillar, Abbott, Baxter, CBI, Intel, TRW.