



College of Engineering Research Seminar

Friday, October 20
3:00 p.m.
101 Roberts Hall

Psychoacoustic Research and Real-World Applications

*Durand R. Begault Ph.D.; Human Information Processing Research
Branch of NASA Ames Research Center, Moffett Field, CA*

Departments

Chemical & Biological
Engineering

Civil Engineering

Computer Science

Electrical & Computer
Engineering

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Engineering

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Dr. Begault will review the basic and applied research context of his work over the last 18 years at NASA Ames Research Center, focusing on acoustic engineering and applied psychoacoustics for aerospace communications and avionics displays. Research into optimizing the design of auralization systems for simulating acoustic environments and the advantages of including haptic (vibratory) information within simulations will also be discussed. The use of an iterative approach to research and development for advanced acoustic displays will be emphasized.

Dr. Begault (AES Fellow, 2002) is recognized worldwide as an important figure in the field of virtual acoustic “3-D audio” systems and displays. His peer-reviewed journal publications, patents, and books are cited in 57 US patents, and over one hundred scientific and engineering journal publications. His 1994 book “3-D sound for virtual reality and multimedia” sold over 3000 copies; he is also author of an interactive CD-ROM on computer audio production, and of chapters in several reference books. Dr. Begault’s research activities include development and evaluation of new audio and multi-modal technologies for aeronautic and space applications. These technologies involve psychophysical evaluation of spatial hearing, speech intelligibility, and performance in virtual environment systems; room acoustic analysis and simulation; and improvement of communications and warning systems. He is also active as an expert witness and acoustical consultant, and serves as Director of the Audio Forensic Center, Charles M. Salter Associates, San Francisco. He is a member of the Acoustical Society of America, the Audio Engineering Society, and the Institute of Noise Control Engineering.

Seminar sponsored by MSU’s College of Engineering
For information on the speaker, contact Dr. Rob Maher, Dept. Electrical
and Computer Engineering

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