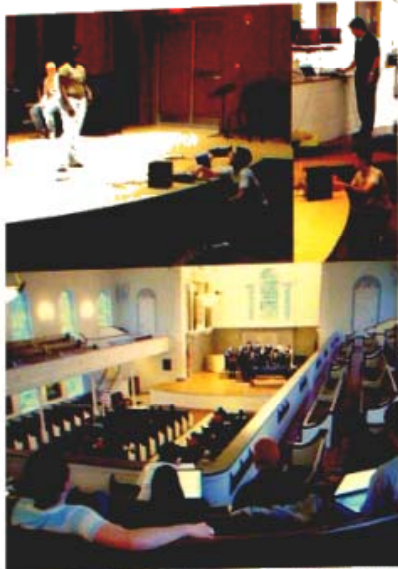


Interdisciplinary Lightning: Collaborations between Music and Electrical Engineering at Union College

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The Music and Electrical Engineering Departments have developed a variety of joint exercises bringing together two classes. Here, electrical engineering students studying acoustics and music students in the Camarata Singers perform a project involving signal processing of recordings of rehearsals and concerts.



Students perform senior capstone projects at the interface of EE and Music. Andy Barhite '09 measures vibrations from a piano using ultrasound, above.

New research collaborations will be made possible by the planned Laboratory for Electrical Engineering and Music Research (Phasor Lab) in the Wold Building, under construction.



The laboratory will include a professional recording studio (designed by architectural acoustics consultants Walters Storyk Design Group) and instrumentation for scientific research in speech acoustics, musical acoustics, audio engineering and signal processing.



ECE370 students performed projects in clavichord construction and harpsichord measurements and theoretical modeling in preparation for a joint event with music students studying Baroque Music history.

Sophomore Kathryn Krakowka machined two clarinets - one from a preset design and the other of her own design.



Audio engineer Jeff Svatek, currently at RPI's EMPAC, presents in ECE370.



Preparatory measurements for Phasor Lab took place at IBM's anechoic chamber.



Interactions with instrument builders leads to projects interesting to both ECE and music students.



An Electrical Engineering senior capstone project (Sami Habayeb '08 and Patrick Cumming '08) in sound and vibration looked at vibrations near Union's Scanning Electron Microscope. Here, Sami and Patrick interact with Will Hoek and David Karlin from the Hagerman Group (Chemistry).