Wichita State University
Department of Communication Sciences & Disorders
The Auditory Research Laboratory

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The Laboratory offers state-of-the-art equipment for both teaching and research activities of the department. Students of the AuD program work on their class assignments and practice clinical techniques in the classes such as acoustics and instrumentation, otoacoustic emissions, and auditory evoked potentials. Some of them also complete their capstone research projects and PhD students conduct research projects and dissertation studies here.

Recent Studies

Wideband energy reflectance measurements: Normative studies; effects of non-pathological factors, applications in diagnosing middle ear disorders.

Applications of otoacoustic emissions and ABRs: Noise-induced hearing loss; Simultaneous recording of ABRs and TEOAEs.
Tympanometry and multi-frequency tympanometry in human ears with experimentally-induced and naturally-occurring negative middle ear pressure.

Effect of negative middle ear pressure on acoustic transmission in ASSR and ABR measurements.

**People**

Mitchell Frye (AuD student, graduate assistant)
“Contralateral wideband middle ear muscle reflex measurements: Test-retest reliability”

Bailey Brown (AuD student)
“ Ipsilateral wideband middle ear muscle reflex measurements: Test-retest reliability”

**Previous Student Researchers:**

Mitchell Frye (AuD)

Junhua Bian (AuD, graduate assistant)

**Laina Burdiek** (AuD, graduate assistant), 2012-2013

Carla Domínguez-Carazo (AuD, graduate assistant), 2012-2013

Rachael Cavenee (AuD, graduate assistant), 2011—2012

April Slaven-McCaslin (AuD), 2011—2012

Kayla Eldridge (PhD, graduate assistant), 2010—2011

Teresa Lynn (AuD, graduate assistant), 2011

Holly Nguyen (AuD), 2010—2011

Huyen Luong (AuD), 2010—2011

Carly Sturm (AuD), 2009—2010

Nguyen-Kieu Nguyen (AuD), 2009—2010

Ann Sellers (AuD), 2009—2010

Jason Harader (AuD), 2008—2009

Mandi Popp (AuD), 2006—2008

Yori Kanekama (PhD), 2006—2008

Mark Shaver (PhD, graduate assistant), 2005—2010

**Research Presentations/Publications**

KSHA, 2014.

WSU GRASP, 2014; AAA, 2014.

JSLHR (2014);

AAA, 2013; WSU GRASP, 2013;


AAA, 2012.

AAA, 2011; KSHA, 2011.

AAA, 2011.

WSU GRASP, 2010.

WSU GRASP, 2009.

KSHA, 2008.

KSHA, 2006.

AAS, 2007, 2011;

Equipment

1) Two sound-attenuated booths (Industrial Acoustics Co.).
2) GSI 60 DPOAE system: DPOAE and SOAE measurements.
3) Otodynamics ILO Echoport OAE system: TEOAE, DPOAE and SOAE measurements.
5) Intelligent Hearing Smart OAE system: TEOAE, DPOAE and SOAE measurements.
6) Intelligent Hearing Smart Audiometry system: Audiometric tests.
7) 2EOAE System (Software developed by Dr Doug Keefe): SFOAE, DPOAE, and TEOAE measurements.
8) ReflWin system (Software developed by Dr Doug Keefe): Wideband acoustic transfer function in the ear canal, being used to predict the function of the middle ear, and to test acoustic reflex thresholds.
9) Shared instruments with other labs: Interacoustics AC40 Clinical Audiometer; GSI Tymstar Clinical Middle-ear Analyzer, Wideband Research Tympanometry system (Interacoustics).