

ACTIVITIES OF THE GEORGIA TECH STUDENT CHAPTER

Jason A. Kulpe, Katherine F. Woolfe, Bernard D. Shieh, Shane W. Lani,
Brendan V. Nichol, and Ellen A. Skow

Georgia Institute of Technology
Atlanta, Georgia 30332

Editorial Note

The Acoustical Society of America currently has 18 Traditional Regional Chapters, and 9 Student Chapters. A listing of these chapters and relevant links can be found at the web site

http://www.acosoc.org/RegChapters/index_files/Page333.htm

Over the years such chapters have come and gone. A typical problem results from the evolution of the officers of chapters. A Chair of a chapter ordinarily serves for one year. Also, the Chair is ordinarily responsible for calling meetings of the Chapter and for the conduction of elections. Chairs, of course, have varying amounts of enthusiasm for the activities of the chapter. In the course of time, the chairmanship can eventually evolve to a person with no enthusiasm, and who does not schedule meetings and who does not arrange for elections. It is awkward for anyone else to step in and rectify the situation, and time goes by and eventually the matter comes to the attention of the National Organization of the ASA, and the chapter is declared “inactive” or defunct.

One of the casualties of this process was the Georgia Chapter of the ASA, which was formed in the late 70’s and which continued on for the order of 10 years. The Georgia Chapter included members from various cities in Georgia,

“Chapter volunteers bring a growing suite of acoustic demos with them to share, with a focus on interactivity and excitement.”

and it attempted to have meetings at different times in different cities. It was responsible for the organization of the Spring 1980 meeting of the ASA in Atlanta. Chair of the meeting was Clifford M. Bragdon, who had an acoustical consulting firm in Atlanta, and the technical chair was N. N. Reddy, who was a research engineer at Lockheed Georgia.

It is difficult to pinpoint the exact date when the Georgia Chapter went bottom up, but bottom up it did indeed go, with the last Chair living in Athens, Georgia, a city located about 60 miles from Atlanta, and matters in regard to a regional chapter in Georgia remained dormant for many years. In the meanwhile, acoustics as a research discipline and as a subject for study continued to flourish and grow at the Georgia Institute of Technology, which was the organization with which most of the members of the earlier regional chapter had been associated.

Also, over the intervening years, student chapters of the ASA began to be formed, and these drew heavily on the enthusiasm of the students at particular institutions which were concerned with the teaching of acoustics.

Emergence of the Georgia Tech Student Chapter

In 2007, looking to cultivate student interest in acoustics, graduate students and faculty at the Woodruff

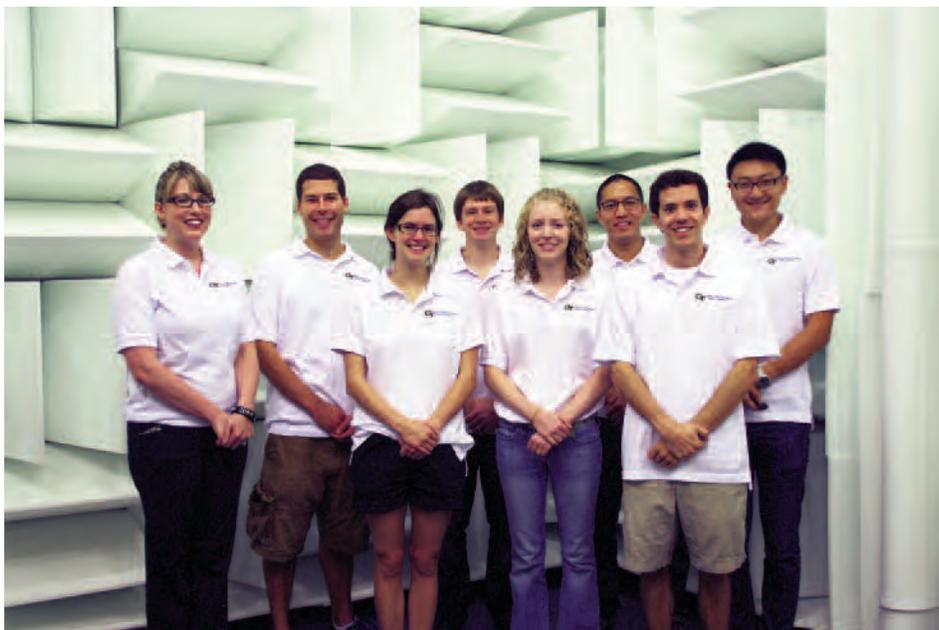


Fig. 1. The ASA Georgia Tech chapter in the hemi-anechoic test chamber.

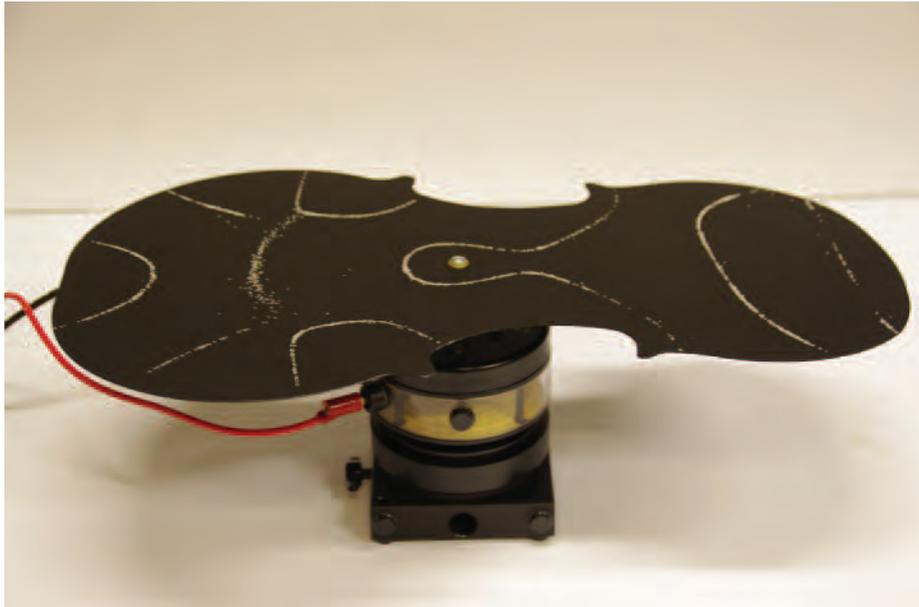


Fig. 2. Demonstration of standing waves on a vibrating plate.

School of Mechanical Engineering came together and founded the Georgia Tech Student Chapter of the ASA. Starting as a lecture series featuring local professors and industry professionals, the Georgia Tech student chapter has grown from a humble start to an organization with over fifty active members. In the last two years GT-ASA has continued to expand its chapter activities. Regular annual events now include social gatherings, a student conference,

field trips, and an educational outreach program featuring acoustics-related demonstrations for K-12 schools in the local Atlanta area.

As part of its core mission to increase interest in acoustics, the chapter invites professors and industry experts to give talks on a wide range of topics, including wave propagation, speech signal processing, residential noise control, acoustic consulting, and commercialization



Fig. 3. Wave propagation demo at the 2012 KITES fair.

of academic research. The chapter also hosts an annual student conference--modeled after the international ASA gatherings--where students are given an opportunity to formally present their ongoing research work in acoustics. The chapter also holds a number of social events; an end-of-semester barbeque, tours of on-campus acoustics facilities, and organized trips to local chamber concerts are a few recent examples.

Outreach Program

In addition to hosting events for chapter members and the greater Georgia Tech community, the GT-ASA group also aims to foster interest in science and acoustics in today's youth. The chapter's outreach program collaborates with K-12 programs throughout the Atlanta metropolitan area, such as After School All Stars (ASAS) and Kids Interested in Technology, Engineering, and Science (KITES), by engaging young students in hands-on activities that demonstrate various acoustical phenomena. Chapter volunteers bring a growing suite of acoustic demos with them to share, with a focus on interactivity and excitement. Examples of demos include using extra-long slinky to demonstrate longitudinal and transverse waves, showing how a tuning fork produces sound through vibrations, and demonstrating how sand poured on a vibrating plate can be used to visualize its mode shapes. Students are also taught about sound levels and how hearing protection can prevent permanent hearing loss.

The GT-ASA outreach program is continuing to expand to reach a wider audience. Currently, the outreach program is developing an open and easy-to-use set of acoustics demonstration modules targeted for use by educators, especially those without expertise in acoustics. The GT chapter welcomes any new suggestions and is eager to



Fig. 4. Tuning fork vibration demo at the 2013 KITES fair.

share ideas and lessons-learned with other ASA groups interested in developing their own outreach initiatives.

Various figures illustrating some of these demonstration modules are included with this article.