

# STEM Society Meeting, July 14, 2015

James Emery

Last Edit: 7/21/2015

## Contents

<b>1</b>	<b>About the STEM Society and the STEM Society Website</b>	<b>1</b>
<b>2</b>	<b>The July Meeting Announcement</b>	<b>2</b>
<b>3</b>	<b>Charlie Montesana Presentations on Piezoelectricity</b>	<b>3</b>
<b>4</b>	<b>Jim Emery: Music and Mathematics</b>	<b>3</b>

## **1 About the STEM Society and the STEM Society Website**

STEM is an abbreviation for Science, Technology, Engineering and Mathematics. The acronym STEM is commonly associated with K-12 education, but our use of the term is only slightly bound to this meaning. There are over one hundred people on the mailing list, although a much smaller group attends any one meeting. We meet on the second Tuesday of each month at the Trailside Center at 99th and Holmes in Kansas City, Missouri. The meetings are open to all. The start time is 6PM. We make presentations, have discussions, and have demonstration experiments. These relate to Science, the History of Science, Mathematics, Engineering, Philosophy and Technology at all levels. The topics have ranged from a technical discussion of the mathematics of General Relativity to scientific experiments for young students.

These meeting notes contain links to many other documents, which may be viewed or downloaded by clicking the link. A partial list of documents can be reached by clicking the heading **Documents**. The meeting notes may also be viewed in an archive file (archive.pdf), which is in the list of documents. Many of the documents are PDF files. They may be viewed or downloaded to the computer by clicking, provided Adobe Reader, or another program capable of reading PDF files, is present. There are many more documents available at the site than are listed under **Documents** because the documents.htm file is not at all up to date. The last time I checked, about March 2014, there were about 350 document files on the site. We are in the process of creating better techniques for finding documents and authors. The first meeting of the STEM Society was in November of 2006. For several years we used the content management program called Joomla. It had a fancy looking interface, but was hard to use. It overran the space somehow at our internet provider Bluehost. So we now have a very simple HTML site. It is not so slick looking as Joomla, but is very easy to maintain and modify.

**The web site is:**

<http://www.stem2.org/>

**Direct to the documents list:**

<http://www.stem2.org/je/documents.htm>

**Direct to the archive file:**

<http://www.stem2.org/je/archive.pdf>

## **2 The July Meeting Announcement**

The July meeting of the STEM Society will take place on the second Tuesday of the month, July 14, 2015, at the Trailside Center at 99th and Holmes in Kansas City, Missouri. The starting time is 6PM.

Possible Topics:

(a) The Mathematics and Acoustics of Music. Musicians bring your instruments. Gene Jacobi might bring his grand piano and perform the Goldberg

Variations better than Glen Gould will ever perform them again.

(b) Highlights of last weekends Maker Faire.

(c) How to lay out a brass sheet, fold it, braze it, and hammer it into a trombone.

(d) Vibration and Piezoelectricity.

(e) But there is more, should attendees choose to bring additional things, ideas, or presentations.

### 3 Charlie Mentessana Presentations on Piezo-electricity

**stemsoc031312.pdf** Title: *Stem Society Meeting, March 13, 2012*, Charlie Mentessana: piezo motor pictures, T-FLEX modeler Dave Theilen, mathematical writing Latex Bob Kessler Turing's Cathedral, Four Laws of Thermodynamics, a calculus problem, Drawing a Tribar, Statistics regression, David Frazee liquifying gases, algebraic topology, geometry, M-Theory.

**stemsoc041012.pdf** Title: *Stem Society Meeting, April 10, 2012*, Charlie Mentessana driving piezoelectric motors, Kent Smith Chris Sanderson building a spectroscope, Bob Kestler Buddhism and Science, Jim Emery Arduino Demo.

**stemsoc081109.pdf** Title: *Stem Society Meeting, August 11, 2009* charlie mentessana, Goldwave, piezo electricity, Excell Fast Fourier Transform, cecil calculating base 26, function generator

### 4 Jim Emery: Music and Mathematics

See the following titled **Music and Mathematics**:

[stem2.org/je/musicmath.pdf](http://stem2.org/je/musicmath.pdf)