

# STEM Society Meeting, July 9, 2013

James Emery

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## **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.

The set of meeting notes may be viewed by going down the list of notes appearing on the front page of the site. These notes contains links to documents, which may be viewed or downloaded by clicking the link. Other documents can be reached by clicking the heading "Documents and Downloads" that appears on the left side of the front page. Then click on "documents." The meeting notes may also be viewed in an archive file in the list of documents. Most of the documents are PDF files. They may be viewed or downloaded to the computer by clicking, provided Adobe Reader is present, or another program capable of reading PDF files. There are usually more documents available at the site than are listed under "Documents" because they are not in the documents.htm file.

**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>

**Last Months Notes:**

<http://www.stem2.org/je/stemsoc040913.pdf>

## **2 The July Meeting Announcement**

The July meeting of the STEM Society will take place on the second Tuesday of the month, July 9, 2013, at the Trailside Center at 99th and Holmes in Kansas City, Missouri. The starting time is 6PM.

A List of Possible Topics:

(1) A review of the 2013 Maker Faire held at Union Station June 29 to June 30. Some of the items we had in our display, which was called **Mathematics and Physics**, will be brought to the meeting. We will go over some of the other things displayed. One of the reasons that we have participated in this maker Faire is to counteract the decline in Science and Mathematics in the United States, which may be going on in other parts of the world also.

Perhaps we can talk about evidence for this and its causes.

(2) A talk on the many proofs of the Pythagorean Theorem and how the Pythagorean theorem has affected advanced Mathematics and Physics.

(3) Cecile is now back from Paris and perhaps she and Dave will make an appearance. George Orwell wrote a book called **Down and Out in Paris and London**. Perhaps Cecile is writing a similar book called **Down and Out in Paris and Gorcy**

(3) Bring your book reviews, thoughts, and new tatoos.

(4) As always, we expect there will be impromptu topics, projects, shows and tells, new theoremd, experiments, book reports, problems and solutions in mathematics, physics, engineering, biology, scientific biographies, et cetera.

#### **Future Topics:**

(1) Optimization Theory, Lagrange Multipliers, and the Golden Section Search.

(2) More Electronics and Circuits.

(3) Experimental Apparatus and Machine Building.

(4) The Calculation of Energy Levels in Semiconductors.

(5) Number Theory.

(6) The Postulates of Quantum Mechanics. See **Quantum Mechanics in Chemistry**, Melvin W Hanna, 3rd edition, p46. Messia, **Quantum Mechanics, 2 Volumes**

#### **The STEM Society Website:**

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

### **3 Makerfaire 2013 Displays**

<http://www.stem2.org/je/makerfaire2013.pdf>

## **4 Many Proofs of the Pathagorean Theorem and Its Ramifications**

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