**Sarveshwaran Sampathkumar**

**017387654**

**CECS 543 Lab 1**

**In what publication was this article published? When?**

“The profession of IT: Is software engineering engineering?” article was published in *COMMUNICATIONS OF THE ACM* in the month of *March 2009*

**What is the main problem addressed by the paper?**

The paper examines the reasons for the persistent questions about software engineering and it also suggests directions to overcome them.

**Where did the “1968 NATO conference” on software engineering take place?**

“1968 NATO conference”on software engineering took place at *Garmisch, Germany*.

**What is the general “engineering process” for software development? Name at least two specific ones.**

The general “engineering process” for software development consists of a *repeated cycle through requirements, specifications, prototypes and testing*. There are many process models in software engineering which ranges from highly structed preplanning to unstructured agile. To name a few – *Waterfall, Spirals* which falls under highly structured preplanning and *XP, SCRUM* which falls under unstructured agile

**What on earth is a design metric? Just guess if you can’t figure it out.**

Design metrics are the metrics which describes the allowable stress, tolerance, performance ranges, structural complexities and failure probabilities for various conditions which the system is expected to handle. Basically, Engineers use these metrics in calculations of risk and in sensitivity analyses

**Briefly describe two reasons why software engineering doesn’t quite measure up to physical engineering.**

The following are the reasons why software engineering doesn’t quite measure up to physical engineering. The software engineers do not do well with the following when compared with the physical engineering.

1. *Separation of design from implementation* - In current practice, software engineers do both, design and build. But it is expected to have engineers and architects to design with blueprints and hand off implementation to construction specialists.
2. *Design Metrics* – Software engineers tend to use simple retrospective measures such as lines of code or benchmark performance ranges. The challenge here is to incorporate more of the traditional design metrics into the software development process.