

## **PAPER ORGANIZATION**

The technical paper shall be organized as follows:

- Paper Title
- Challenge Question
- Introduction
- Main Body of Paper
- Conclusion

All major sections in the paper should be numbered consecutively, starting with the Introduction as Section 1 and continuing with sections 2, through the Conclusion.

### **Title Page and Challenge**

This is the first page of the paper, and it contains the conference header, Draper header, author's name; name of institution to which the author is affiliated; the location of the institution (city and state), and the "challenge question". See "sample title page" below for wording, format, and font size. The "challenge question" paragraph should be taken from one of four challenge questions presented. The challenge question paragraph should fit completely on the title page.

### **Introduction, Body of Paper, and Conclusion**

The Introduction should start at the top of the second page. Continue with the Body of the Paper through the Conclusion, numbering each section and subsection. All solutions submitted must be no more than 750 words, excluding title page and citations, double spaced.

### **References**

References cited in the text should be listed on a separate and last page. The formatted references cited in the text should be based on IEEE standards. For additional information, you can visit the following website: <http://www.ieee.org/documents/ieecitationref.pdf>

**National Society of Black Engineers Region 1 Regional Conference  
October 29 - November 1, 2015 Rochester, New York**

**DRAPER LABORATORY  
TECHNICAL CHALLENGE COMPETITION**

**for**

**NSBE STUDENTS**

I.M. Student  
State University of Boston  
Boston, Massachusetts

**CHALLENGE**

**Implantable Device Biocompatibility:**

Biocompatibility and the option of implantable is an important factor in the design of new medical devices. While much of the device is often of an electrical nature, concerns governing the biocompatibility are generally of a mechanical and/or chemical nature. Technologies that enable the advancement and miniaturization of implantable medical devices (e.g., neural recording and stimulation) are in need in order to complement advances in sensing, stimulation, and repair technologies. Design an implantable device that addresses a major health issue (e.g. Bloods clots, returned cancer cells, etc.). Potential topics include in-vivo degradation and accelerated lifetime testing, hermetic electronics micro-packaging, biocompatibility enhancements, energy efficient bio-telemetry circuits, neural stimulator circuits, and optical fiber sensors. Your approach can focus on a specific discipline (e.g. electrical, mechanical, biological, chemical).