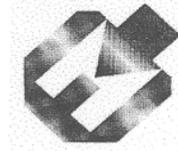




Kenya Society of Electrical  
& Electronic Engineers (KSEEE)



Japan Society of Applied  
Electromagnetics &  
Mechanics (JSAEM)

## 2010 INTERNATIONAL ENGINEERING CONFERENCE

5<sup>th</sup> – 6<sup>th</sup> August 2010

Venue: Multimedia University College of Kenya, Mbagathi, 30305-0010, Nairobi, Kenya

### CALL FOR PAPERS

KSEEE International Conference is an annual event that brings engineers and other stakeholders together to share their expertise and experiences. This year's theme "*Engineering Research and Innovation as a Requirement for Industrialization*" has been carefully selected to stimulate the Conference participants into relating their expertise in the field of engineering to the long-cherished dream of Industrialization in Kenya and in other countries which find themselves in a similar situation like Kenya.

The Conference Organizing Committee is therefore calling for research papers, policy papers and application-oriented papers to be presented during this year's Annual Conference.

#### **MAIN AREAS**

1. Telecommunication
2. High voltage engineering
3. Control and Instrumentation
4. Energy Sources.
5. Information Technology.
6. Other Emerging Technologies;

The Organizing Committee has proposed the following sub-themes. However, prospective authors are free to submit papers on any other related areas.

## **SUB-THEMES**

1. High Frequency Technology and Photonics
  - Optical communication.
  - Microwave photonics.
  - Antennas and propagation.
2. Electromagnetic Interference and electromagnetic compatibility
  - Hybrid methods in numerical field calculations.
  - Treating of cables in planning the EMC of complex systems.
  - Electromagnetic emissions.
3. Electromechanical and Electronic Design
  - Design automation of electronic systems.
  - Electromechanical design.
  - Thermal design.
  - Electromagnetic actuators.
4. Control Systems
  - Methods for analysis and design of control systems.
  - Validation of new methods in case studies.
5. Medical Technological Systems.
  - Signal technologies, bio-signal processing and modeling in biomedical engineering.
  - Technical function support in biomedical systems at cell, tissue, and organ level.
  - Multimodal image processing and auto-stereoscopic visualization and navigation.
6. VLSI Technology
  - Modeling, simulation and design of integrated circuits and systems.
  - Parallel digital and mixed signal VLSI circuits.
  - CMOS image sensors with integrated signal processing.
7. Automation Engineering
  - Automation systems design
  - Industrial automation (closed processes, teleautomation, SPS & motion control).

- Robotics and mechatronics (navigation, mobile robotics, optical computers, opto-mechatronics).

#### 8. Process Control Systems

- Integrated control and information systems
- Support systems in supervisory control.
- Multimodal human-machine interaction.
- User models for analysis and design.

#### 9. Power Electronics

- Power Semiconductors
- Converters
- Power Supplies
- Control of power electronic systems
- Electromagnetic compatibility.

#### 10. Signal/Image Processing

- Processing and Recognition of Speech
- Processing and Recognition of Non-Speech Acoustical Patterns

#### 11. Electrical Machines and Drives

- Modelling, design and optimization of transducer systems.
- Magnetic bearing technology, direct drives and mechatronic drive solutions.
- Renewable electromechanical transducers, esp. for wind energy plants.
- Motor and drive systems in hybrid and electric cars.
- Cooling systems fro electrical machines.
- Converters, industrial electronics for variable speed drive systems and generators.

#### 12. Computational Fluid Dynamics

#### 13. Computational Structural Mechanics

#### 14. High Voltage and High Current Engineering

- Insulation arrangements under DC and Impulse Voltage
- Design and long term behavior of current carrying electrical connectors.

#### 15. Power Systems

- Protection and Control
- Power Quality
- Optimal Network Operation
- Fields in Stations.

The topics are but not limited to:

#### 16. High Frequency Technology and Photonics

- Optical communication.
- Microwave photonics.
- Antennas and propagation.

#### 17. Theory of electromagnetic and electromagnetic compatibility

- Hybrid methods in numerical field calculations.
- Treating of cables in planning the EMC of complex systems.
- Electromagnetic emissions.

#### 18. Electromechanical and Electronic Design

- Design automation of electronic systems.
- Electromechanical design.
- Thermal design.
- Electromagnetic actuators.

#### 19. Control Systems

- Methods for analysis and design of control systems.
- Validation of new methods in case studies.

#### 20. Medical Technological Systems.

- Signal technologies, bio-signal processing and modeling in biomedical engineering.
- Technical function support in biomedical systems at cell, tissue, and organ level.
- Multimodal image processing and auto-stereoscopic visualization and navigation.

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- Parallel digital and mixed signal VLSI circuits.

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## 27. Computational Fluid Dynamics

## 28. Computational Structural Mechanics

### 29. High Voltage and High Current Engineering

-Insulation arrangements under DC and Impulse Voltage

- Design and long term behavior of current carrying electrical connectors.

### 30. Power Systems

- Protection and Control
- Power Quality
- Optimal Network Operation
- Fields in Stations.

### 31. Circuit Design and Network Theory

- Design of high-speed integrated circuits using advanced circuit techniques and technologies.
- High frequency ICS for wireless communications at 1-80 GBit/s
- ICs and architectures for systems with multiple intelligent antennas.

### 32. Telecommunication Technology

- Design and analysis of communication networks protocols.
- Modeling and performance evaluation.
- Traffic engineering, traffic theory, and discrete event simulation.
- Optimization algorithms.

### 33. Communication Theory

- Wireless data transmission systems (baseband signal processing, UWB, WLAN).
- Antennas and propagation.
- Digital signal processing.

### 34. Mobile Communication Systems

- Design and analysis of communication networks protocols.
- Modeling and performance evaluation.
- Traffic engineering, traffic theory and discrete event simulation.
- Optimization algorithms.

### 35. Solid State Electronics

- Pyroelectric sensors
- Piezoresistive sensors

- Modeling and simulation of sensor systems.

36. Electron Devices and Integrated Circuits

- Development of compact models for high-frequency (HF) circuit design.
- Numerical device simulation and investigation of semiconductor devices.
- Simulation and design of integrated circuits.
- Measurements and characterization of HF devices and circuits.
- Nanoscale device modeling and simulation.
- Electronics Packaging

37. Principles of Electrical Engineering

- Nonlinear systems.
- Continuous – discrete systems.
- Statistical analysis and modeling of signals and systems.
- Multimedia in basic Electrical and Electronic education.

**Please *Submit your draft paper* by 15<sup>th</sup> May 2010**

**to the following e-mail addresses:**

*onyango\_d@yahoo.com*

[ksee94@yahoo.com](mailto:ksee94@yahoo.com)

## INSTRUCTIONS FOR KSEEE –JSAEM 2010 CONFERENCE PAPER PREPARATION

**Abstract.** The abstract should summarize the contents of the paper and should contain at least 70 words and at most 150 words. It should be set in 10-point font size and should be inset 1.0 cm from the right and left margins. There should be 2 blank lines (10 point font size) before and after the abstract.

**1 INTRODUCTION.** To ensure conformity and uniformity of appearance it is essential that these instructions are followed. Papers submitted in a technically unsuitable form will be returned for retyping, or cancelled if editing cannot be finished on time.

The paper should have between 4 and 8 pages formatted in Times New Roman font. For the main text, please use 11-font -single-line spacing.

**1.1 Page layout.** The papers will be in a two-column format and A4 size. Margins: top, 2.5 cm; bottom, 2.5 cm; left, 3 cm; right, 3 cm.

**1.2 Page numbers, headers and footers** should not be included in the paper.

**2 TEXT.** The text of the paper will be justified, except title, name of authors with emails and addresses, which will be centred.

**2.1 First page.** Paper title should be typed at 2.5 cm from the top of the page in CAPITALS and bold and must not be underlined; it will be centred and 16 point font size. After title, there will be one blank line (12 point size), and after that, name of the authors (12 point size). Decorations, logos, degrees and professional qualifications should **not** be included.

Next, emails of all of the authors will type without hyperlinks and not underlined. Use 11-point font size for emails. Type emails in the same order than authors, separated with one tabulator, centred.

Leave one blank line (11 point size) and then type centred department, faculty, university or technological centre, postal address, and city and country. If there are authors with different data, use table with 2 or more columns (table and its cells without borders).

Two blank lines 10-point size after addresses, write abstract. At least 70 and at most 150 words. It should be set in 10-point font size and should be inset 1.0 cm from the right and left margins. Justified. There should be 2 blank lines (10 point font size) after the abstract. Next, main text will begin.

The main text of the paper will be justified. Use Times New Roman, 11 point font size. Single-spacing.

**2.2 Headings.** First order or main headings should begin at the left hand margin (without tab) and should be in capitals and bold. Except at the top of a new page the first order heading should be preceded by two blank lines.

Second, third and other minor headings should be in capitals and small letters and in bold.

**2.2.1 Numbering of headings.** First order headings should be numbered, next one blank (without point). Other headings should also be numbered: main order number, point, second order number, blank, heading (for second order headings), main order number, point, second order number, point, third order heading, blank, heading (for third order headings), and so on.

**2.3 No indentation.** Main text should always start at the left hand margin.

**3 EQUATIONS.** Number equations consecutively with Arabic numbers in parentheses placed at the right hand margin. Displayed equations or formulas are centred and set on a separate line (with an extra line or half-line space above and below).

**4 FIGURES AND GRAPHS.** Each figure and graph must be accompanied by a caption and numbered consecutively. Grids and details within the figures must be clearly readable.

**6 REFERENCES.** These should be referred to in the text as Smith (1), Jones and Cole (2) and, for more than two authors, Goitia et al (3). If one work is cited more than once in the text it should at every subsequent mention be referred to only by the number given at the first mention.

A numerical list of the references should be given at the end of the paper typed in close spacing with a line space between each reference cited, with the next format:

- Journals: name of the author(s), title of cited paper, name of the journal, volume number, issue number, page numbers, and year.
- Books or other reports: name of author(s), title of the book or report, editorial, country, year.
- Internet: name of author(s), title of the report, link, year.

1. Opinyo, J., Title of the Paper, International Journal, vol. 2, 7, 102-109, 2002.

2. Jones, F., Cole, G., Title of the Paper, International Journal, vol. 3, 5, 332-340, 2004.

3. Vasant D. M., Title of the Book, Editorial, Italy, 1995.

4. Poyner, Rick, Book Title, Publisher, Page, Year.

5. Bonso, Topic, [www.xse4all.ideal.htm](http://www.xse4all.ideal.htm)