International Roundtable on

POLICY DEVELOPMENT IN LIGHTNING HAZARD MITIGATING STRATEGIES IN COUNTRIES WITH HIGH GROUND FLASH DENSITY

(VIRTUAL MODE)

11-12 MAY 2021

JOINTLY ORGANISED BY

CENTRE FOR SCIENCE & TECHNOLOGY OF THE NON-ALIGNED AND OTHER DEVELOPING COUNTRIES (NAM S&T CENTRE), NEW DELHI, INDIA

CENTER OF EXCELLENCE ON HIGH VOLTAGE ENGINEERING (CEHVE), UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, SOUTH AFRICA

SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS (SAIEE), LIGHTNING CHAPTER, JOHANNESBURG, SOUTH AFRICA

DEPARTMENT OF SCIENCE AND INNOVATION (DSI), PRETORIA, SOUTH AFRICA

ASSOCIATE PARTNERS

INTRODUCTION

Safety and protection aspects of lightning play an important role in preventing human, livestock and economic losses in countries with high ground flash density. Africa, South and South East Asia, and South America can be rated as the regions with the highest lightning impacts in the world. Despite one of the most lethal killers and destroyers of nature, what is the true perception of lightning safety in the standpoint of governments and public of these highly affected regions? The answer to this question is essential in understanding various aspects of this field such as planning future research, strategizing business plans, re-modulating the scientific and professional struggle against systems that have been rejected by major standards, developing models to take the lightning protection and safety into root layers of the society etc.

In contrast to the public perception on electrical safety, fire safety, fall safety, chemical safety etc., the same on lightning safety is insignificant as a matter of concern in most parts of the world. Interestingly, the awareness of correct lightning safety and protection techniques is quite poor even among the electrical engineering communities and commercial sector on lightning protection business itself. This lack of awareness may facilitate fraudulent system manufacturers to deceive the public as any person without a sound knowledge on lightning protection could not discriminate right product from wrong**.**

At the administrative level, issues on lightning safety have been totally overlooked in almost every safety guidelines in both government and non-governmental sectors. This is true for both the developing as well as developed countries. It is interesting to note that the *Occupational Safety and Health Act* published by many countries do not even mention about Lightning Safety and Related issues.

The above outcomes describe evidently the non-proactive perspectives of the state, professional and academic bodies on lightning related risks. Several research reported in the past attributed such observations to the lack of awareness and educational programs on lightning safety among the public and urge the escalation of such programs. However, it is a substantial question that who should be responsible for the low public awareness of lightning safety and protection in many tropical countries. Several prominent scientists at the top level have attributed this situation to the negligence from state level to recognize lightning and thunderstorms as a serious natural extreme event that disrupts public life. As the lightning related scientific community views, a feasible solution will be the incorporation of lightning safety strategies into national disaster mitigation frameworks, roadmaps, guidelines and policy documents.

In order to discuss various issues on the above subject, the Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi; in partnership with the Center of Excellence on High Voltage Engineering (CEHVE), University of the Witwatersrand, Johannesburg; South African Institute of Electrical Engineers (SAIEE), Lightning Chapter; and Department of Science and Innovation (DSI), Pretoria, South Africa, announces the organization of a comprehensive two-days International Roundtable on ***'Policy Development in Lightning Hazard Mitigating Strategies in Countries with High Ground Flash Density'*** during **11-12 May, 2021.** The Roundtable will be hosted by CEHVE, University of the Witwatersrand, Johannesburg and will be organized in **Virtual-Mode**.

OBJECTIVES

The following issues will be addressed during the Roundtable:

- Lightning loss statistics and global hazard distribution
- Available international standards and their adoption
- Development of policies, guidelines and national framework
- Affordable protection measures for developing nations
- Lightning safety promotion modules

TARGET GROUPS

- Government officials who are working on disaster mitigation frameworks
- Leaders/managers of non-governmental organizations that work towards disaster prevention
- Scientists and researchers, especially working on sociological aspects of disaster management
- Postgraduate students who work on the development of disaster risk reduction modules
- Engineers, business community, and entrepreneurs who look forward to start lightning protection industry targeting at mass public

IMPORTANT DATES

ACTIVITY	DATES
Registration Begins	**12 April 2021 (Monday)**
Deadline/Last date of Submission of Applications	**3 May 2021 (Monday)**
Selection of Applications	**4 May 2021 (Tuesday)**
Circulation of E-Brochure and Issue of Online Meeting Link to Participants	**7 May 2021 (Friday)**
Roundtable Dates	**11- 12 May 2021 (Tuesday- Wednesday)**

KEY PARTNERS

NAM S&T Centre, New Delhi

The *Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi* is an Inter-governmental Organization with a Membership of 47 countries spread over Asia, Africa, Middle East and Latin America. The Centre was set-up in 1989 in New Delhi, India in pursuance of the decisions of various NAM Summits with the objective of promoting mutually beneficial cooperation among the NAM and other developing countries for collective self-reliance. The Centre undertakes a variety of programmes, including organization of International Workshops, Conferences and Training Courses, and implementation of Collaborative S&T Projects. It also offers short-term Research Fellowships to Scientists and Technologists from developing countries in association with the Centres of Excellence in various countries. The Centre also brings out books and other scientific publications in different subjects that are of interest to developing countries. The Centre's activities provide opportunity for scientist-to-scientist contact and interactions, familiarizing participants on the latest developments and techniques in the subject areas, identification of the requirements of training and expert assistance, locating technologies for transfer between the Members and other developing countries, and dissemination of STI information etc. In addition, the Centre also encourages Academic-R&D-Industry interactions in the developing countries through its *NAM S&T-Industry Network*.

Center of Excellence on High Voltage Engineering (CEHVE), University of the Witwatersrand, Johannesburg, South Africa

The University of the Witwatersrand, Johannesburg *(https://www.wits.ac.za/)* is a multi-campus South African Public Research University, situated in the northern areas of central Johannesburg. It is more commonly known as Wits University or Wits. The University has its roots in the mining industry, as do Johannesburg and the Witwatersrand in general. Founded in 1896 as the South African School of Mines in Kimberley, it is the third oldest South African university in continuous operation. The 2017 Academic Ranking of World Universities (ARWU) places Wits University, with its overall score, as the highest ranked University in Africa. Wits was ranked as the top University in South Africa in the Center for World University Rankings (CWUR) in 2016. For a long period, Wits has been one of the highest ranked Universities in the African continent. The *Centre of Excellence on High Voltage Engineering* is a key research unit within the Faculty of Engineering and Built Environment at Wits University, dedicated to a wide spectrum of electrical engineering subjects including high voltage and discharge engineering, power system protection, lightning protection, grounding and bonding, and energy security.

South African Institute of Electrical Engineers (SAIEE), Lightning Chapter

Formed in 1909, the South African Institute of Electrical Engineers has grown to the extent that there are approximately 6000 members on its membership roll. Members are professionally engaged in the full range of engineering activities, including academic research, manufacturing, electronics, telecommunications, measurement and control, mining, and power infrastructural services. They make meaningful contributions of the quality of life to the community and to the steady advancement of technology. Their efforts are acknowledged in many countries across the world. The Lightning Chapter of the SAIEE was established with the main objective of curbing the lightning related deaths, injuries, property losses and service interruptions in South Africa by promoting lightning awareness among the public, training lightning protection engineers, advising standard committees and policy makers in scientifically proven lightning protection measures and encouraging members to involve with research and publications related to lightning sciences.

Department of Science and Innovation, South Africa

The Department of Science and Innovation (DSI) seeks to boost socio-economic development in South Africa through research and innovation. To achieve its goals, the Department provides leadership, an enabling environment and resources for Science, Technology and Innovation in support of South Africa's development. Through its Programmes (Administration; Technology Innovation; International Cooperation and Resources; Research Development and Support; and Socio-economic Innovation Partnerships) and several entities that work alongside it, the Department is accomplishing groundbreaking science and enhancing the well-being of all South Africans.

ASSOCIATED PARTNERS

- African Centres for Lightning and Electromagnetics Network (ACLENet), Uganda/USA
- ZaCLIR, Zambia
- The South Asian Lightning Network (SALNet), Nepal

RESOURCE PERSONS

Eminent experts and professionals in the relevant fields from South Africa and various other countries will be invited as Resource Persons for the Roundtable.

CERTIFICATION

E- Certificates will be awarded to participants upon successful completion of the Roundtable.

SUBMISSION OF APPLICATIONS

Experts and professionals desirous of participating in the Roundtable should submit their application electronically to the Director General, NAM S&T Centre, New Delhi at **Email: namstcentre@gmail.com** as early as possible but latest by **3 May 2021 (Monday).**

Interested applicants from South Africa and other African countries (who are not Members of the NAM S&T Centre) should submit their requests directly to Prof. Chandima Gomes, Professor of High Voltage Engineering, School of Electrical & Information Engineering, University of the Witwatersrand, Johannesburg, South Africa at **E-mail: chandima.gomes@gmail.com**.

The following documents must be submitted as e-mail attachments:

i. Filled-in **Application Form** (Blank-form enclosed)

ii. An **Opinion** (a short paragraph; in MS-Word only) on what qualifies you to participate in the Roundtable

iii. A **Short CV** (maximum two pages in the format enclosed; in MS-Word only)

Note: *The documents at (ii) and (iii) above must be in MS-Word format only; PDF or image files will not be accepted. Hard copies of the Nomination Form and the above attachments are* ***NOT REQUIRED*** *to be submitted.*

SELECTION OF APPLICANTS

Selection of applications will be made based on their academic and professional background, and relevance of their current engagements in the relevant field. Successful applicants will be electronically informed about their selection by **4 May 2021 (Tuesday)**.

The details about the virtual-platform that will be used for the Roundtable including the log-in details will also be communicated to all the selected applicants by **7 May 2021 (Friday)**. Other details and terms & conditions for the participation of scientists from various countries will be given to the individual candidates on receipt of their applications.

PROGRAMME

TIME [South African Time] (GMT+2 hrs.)			
Time	**Topic**	**Speaker**	**Affiliation**
Day-1			
01:15 pm – 01:20 pm	Starting of the Program	Prof. Pat Naidoo	Member, SAIEE LC
01:20 pm – 01:25 pm	Welcome Address	Dr. Andreas Beutel	Chairman, SAIEE LC
01:25 pm – 01:30 pm	Introduction	Dr. Amitava Bandopadhyay	Director General, NAM S&T Centre, New Delhi
01:30 pm – 01:35 pm	The Role of South Africa	Mr. Selby Modiba	Deputy Director, Multilateral Cooperation, Dept. of S&T, South Africa
01:35 pm – 01:40 pm	Purpose of the Event	Prof. Chandima Gomes	Director, CEHVE, University of Witwatersrand
01.40 pm – 01.45 pm	Moderators take up the Platform		
Technical Session 1: Introduction of Speakers & Moderation by Dr. Hugh Hunt & Mr. S. Gopakumar			
01:45 pm – 02:00 pm	Accidents and Prevention Strategies Adopted in Sri Lanka	Mr. Nuwan Kumarasinghe	Former Senior Engineer, Met. Dept., Sri Lanka
02:00 pm – 02:15 pm	Thunderstorm Related Risks in South Africa	Dr. Ken Nixon	Member, SAIEE LC
02:15 pm – 02:30 pm	National Heritage in Danger due to Lightning	Dr. Shri Ram Sharma	Director, SALNet, Nepal
02:30 pm – 02:45 pm	Major Challenges in Mitigating Lightning Risk in Africa	Ms. Foster Lubasi,	Director, ZaCLIR, Zambia
02:45 pm – 03:00 pm	Lightning Mitigation Efforts Made in Africa	Prof. Mary Ann Cooper	Director, ACLENet, Uganda/USA
03:00 pm – 03:15 pm	Global Lightning Density Distribution and Loss Statistics –/ VAISALA	Mr. Ronald L. Holle	Senior Scientist, VAISALA

03:15 pm – 03:30 pm	Lightning Safety Module Developed in Colombia	Mr. Daniel Esteban Villamil	Researcher, National University of Colombia
03:30 pm – 04:00 pm	Q&A Session And Conclusion	Moderated by Prof. Pat Naidoo	
Day-2			
Technical Session 2: Introduction of Speakers & Moderation by Prof. Mary Ann Cooper and Ms. Foster Lubasi			
01:30 pm – 01:45 pm	Lightning Protection Standards	Mr. S. Gopakumar,	IEC 62305-TC 81 Mirror Committee, India
01:45 pm – 02:00 pm	Affordable Lightning Safety Structures for Developing Nations	Prof. Chandima Gomes	Director, CEHVE, University of Witwatersrand
02:00 pm – 02:15 pm	Regional Cooperation in Disaster Management Policy Development	Dr. Senaka Basnayake	Climate Resilience Director, ADPC
02:15 pm – 02:30 pm	Real-time Lightning Mapping and its Applications in Africa for Curbing Lightning Accidents	Prof. Robert Jallang'o Akello	Professor, The Technical University of Kenya
02:30 pm – 02:45 pm	Government Plans in Mitigating Lightning Related Losses	Representative of South African Government	
02:45 pm – 03:00 pm	The Government Views on Curbing Lightning Losses	Representative of Zambian Government	
03:00 pm – 04:00 pm	Panel Discussion on Developing National Frameworks for Curbing Lightning Related Losses	Moderated By Prof. Chandima Gomes A Panel of Internationally Reputed Activists in Lightning and Policy Development	
04:00 pm – 04:10 pm	Concluding Remarks	Dr. Amitava Bandopadhyay, Director General, NAM S&T Centre, New Delhi	
04:10 pm – 04:15 pm	Vote of Thanks	Dr. Hugh Hunt	

SECRETARIAT AND ENQUIRIES

NAM S&T CENTRE

Dr. Amitava Bandopadhyay
Director General
Centre for Science & Technology of the Non-Aligned and other Developing Countries
(NAM S&T Centre)
Zone-6A, 2nd Floor, India Habitat Centre, Lodhi Road
New Delhi – 110003, India
Tel: +91-11-24645134, 24644974; Fax: +91-11-24644973
E-mail: namstcentre@gmail.com
Website: http://www.namstct.org

Mr. M. Bandyopadhyay
Senior Adviser, NAM S&T Centre, New Delhi
Tel: +91-11-24645134, 24644974; Fax: +91-11-24644973
E-mail: namstcentre@gmail.com

UNIVERSITY OF THE WITWATERSRAND

Prof. Chandima Gomes
Chair, ESKOM Power Plant Engineering Institute (EPPEI)-HVAC
Director, Center of Excellence on High Voltage Engineering
School of Electrical & Information Engineering
University of the Witwatersrand
Johannesburg, South Africa
Tel: +27672179416
E-mail: chandima.gomes@wits.ac.za

SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS (SAIEE), LIGHTNING CHAPTER

Dr. Hugh Hunt
Vice Chairman
Lightning Chapter, SAIEE House
18a Gill Street, Observatory
Johannesburg, South Africa
Tel: +27117177254
E-mail: hugh.hunt@wits.ac.za

DEPARTMENT OF SCIENCE AND INNOVATION, SOUTH AFRICA

Mr. Selby Modiba
Deputy Director: Multilateral Cooperation
Department of Science and Technology,
Pretoria, South Africa
Tel: +27128436393
E-mail: Selby.Modiba@dst.gov.za

CENTRE FOR SCIENCE AND TECHNOLOGY OF THE NON-ALIGNED AND OTHER DEVELOPING COUNTRIES
(NAM S&T CENTRE)

INTERNATIONAL ROUNDTABLE
ON
POLICY DEVELOPMENT IN LIGHTNING HAZARD MITIGATING STRATEGIES IN COUNTRIES WITH HIGH GROUND FLASH DENSITY

11-12 MAY 2021
(IN VIRTUAL MODE)

APPLICATION FORM

PLEASE TYPE OR USE BLOCK CAPITALS
(NO COLUMN SHOULD BE LEFT BLANK)

SECTION –A

(To be filled in by the Nominee)

1 First Name (Prof. /Dr. /Mr. /Mrs. /Ms.): .....

Middle Name: ..... Last Name: .....

2 Father's / Spouse Name: .....

3 Designation (Position held): .....

4 Nationality: .....

5 Date of Birth: .....

Place of Birth (City) .....(Country).....

6 Name of the Parent Institution (Employer): .....

Full Address (Office): .....

.....

Phone: ..... Fax: .....

E-mail: .....

7 Full Address (Home): .....

.....

Phone: ..... Mobile: .....

Fax: ..... E-mail: .....

8 Educational Qualifications: Highest Degree. .....

Year of Award: ..... University: .....

Field of Study: .....

9 Brief Bio data (CV): ……

(Maximum two pages in MS Word only; to be attached on separate sheet as per the attached format)

10 A Write-up (in MS-Word format only) on what qualifies you to attend the Roundtable

Date: ..... Signature: .....

SECTION –B

ENDORSEMENT BY THE NOMINATING AUTHORITY

(The Applicant in a member country of the NAM S&T Centre must get the Nomination Form endorsed by the Focal Point of the Centre in his/her country, if he/she wishes to take advantages extended to the official nominee of the country. For the list of member countries and names/ addresses of the Focal Points please visit the Centre's official website; www.namstct.org.)

Signature: .....

Name (in full): .....

Designation: .....

Date: .....

SEAL

Enclosures:

1. A Brief CV (maximum two pages, as per attached format; in MS Word only)
2. An Opinion (in MS-Word format only) on what qualifies you to attend the Roundtable

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CENTRE FOR SCIENCE AND TECHNOLOGY OF THE NON-ALIGNED AND OTHER DEVELOPING COUNTRIES
(NAM S&T CENTRE)

CURRICULUM VITAE

1. Personal Details:

Name: *(Prof. /Dr. /Mr. /Mrs. /Ms.)* ***Font Name:*** *Times New Roman*

Designation: *Position Title* ***Font Size:*** *12*

Present Employer: *Full Address (Office)*

City/State/Province:

Country:

Nationality:

Date of Birth: *dd/mm/yyyy*

Proficiency in English Language:

Permanent Address: *Full Address (Home)*

Gender:

Contact: Mobile:

Telephone Office: **Fax:**

E-mail: **Alternative e-mail:**

2. Academic Qualifications: *In chronological order*

Qualification Awarded *Degree/Diploma/Certificate*	**Major Subject**	**University/ Institution**	**Year** *(From-To)*

3. **Professional Experience:** *In chronological order*

Organisation/ Institution	**Position Title**	**Year** *(From-To)*	**Nature of duties**
i.			
ii.			

Total number of years of relevant experience –

4. **Research Experience:** In chronological order

Research Title	**Duration**	**Status**

5. **Administrative Experience:** *Not more than 100 words*

6. **Experience with respect to the title of the Workshop:**

7. **Details of Awards/Recognitions (if any):**

8. **Any other information:** *Not more than 50 words*

9. **Recent Publications:** *Only five recent publications to be mentioned*