DEAR COLLEAGUES!

Moscow Power Engineering Institute and
Youth Section of Russian National Committee CIGRE
are pleased to invite students and young engineers to attend
The 8th International Scientific and Technical Conference "Relay Protection and Automation"

The International Scientific and Technical Conference "Relay Protection and Automation" will be held on October 01-03 in Moscow, Russia.

The conference is a large international framework, which aimed to strengthen scientific links between academia and industry, to attract talented students and young professionals, to provide a possibility to organize research teams for innovation projects maintenance.

PAPER TOPICS

- Conceptual issues of construction and development of relay protection systems, emergency and regime automatics (RPA) and automation systems of electric power facilities with considering of innovative development prospects of the electric power industry and the creation of intelligent networks;
- Development methods for modeling electric power processes considering global experience;
- Increase the accuracy of modeling processes and network elements characteristics;
- Application and development issues of technologies for phasor measurement of energy management parameters for management, control and protection (WAMPACS);
- Conceptual issues of the development and application of the "digital substation", including the evaluation of reliability indicators;
- Issues of energy systems management of power generation nodes, electrical supply systems, and the integration of distributed active consumers and distributed energy sources into power energy system;
- Issues of ensuring cyber security for the protection and automation complexes, and control systems of a digital substation.

TECHNICAL PROGRAM COMMITTEE

Committee Chair:
E.I. Satsuk (JSC «SO UPS », Russia)
S.E. Bankov (Russian Section of IEEERussia)

Committee Co-Chairs:
Janez Zakonjsek (CIGRE SC B5, Relarte Ltd., Slovenia)
A.A. Voloshin (NRU «MPEI», Russia)
A.I. Rasshcheplyayev (JSC « SO UPS »,Russia)
D.M. Dubinin (JSC «SO UPS », Russia)

CONFERENCE SCHEDULE

1	Full Paper Submission Date	02 September 2025
2	Notification of Acceptance Date	15 September 2025
3	Conference opening ceremony	01 October 2025
4	Conference closure ceremony	03 October 2025

GUIDELINES

Bachelor's, master's degree, PhD students and young professionals are eligible to attend the conference as a speaker, while a co-author may be research advisor or consultant. All papers presented in person will be published on the IEEE Xplore site.

The working languages of the Conference – **English**.

Conference papers must be written in English and must not exceed 400 words in length for summaries and must not exceed **2000** words in length for papers. Papers should be submitted before **September 02, 2025**, via the conference website (prior registration is required): https://www.cigre.ru/en/rnk/youth/ieeerpa/

The main body of the text should be in Times New Roman 14 point, 1,5 spaced. The paper title must appear in boldface letters and should be in ALL CAPITALS. The authors' name(s), affiliation(s), contact details appear below the title in capital and lower case letters. Please follow provided paper template.

The review process is organized as the single-blind review.

A paper must be written clearly and include the following: importance of the research problem, novelty of performed research, author's contribution and practical usefulness of results. Before submitting a paper please ensure that it has been carefully read for typographical and grammatical errors. The Organizing Committee reserves the right to reject submissions that do not meet these requirements.

If the author of the paper for any reason does not speak at the conference, his paper will not be published.

Additional information about the conference is available on its website http://www.cigre.ru/en/rnk/youth/ieeerpa/

CONTACT INFORMATION

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APPLICATION OF TECHNOLOGY OF INTERNET OF THINGS IN POWER ENGINEERING FOR IMPLEMENTATION OF OPERATIONAL MONITORING OF DAMAGES IN LOW VOLTAGE ELECTRICAL NETWORKS FOR ESTIMATE TECHNICAL CONDITION OF EQUIPMENT AND CONTROLLING OF RELIABILITY OF POWER DISTRIBUTION ENERGY SYSTEM

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Introduction

In some cases, there is a need for monitoring low-voltage systems with subsequent conservation and systematization of measurements. In conditions of low-level for monitoring energy distribution systems, the use of new technologies based on algorithms of Internet of things, can reduce the costs of maintenance of electrical networks or power distribution systems. During the research, the technology of the Internet of things was used, where the microcontroller ESP8266 and the ACS712 current sensor module were used as a basis for the developed measuring instrument. As a result, we have a constructive solution of the portable meter, allowing measuring the current value in electrical networks with the subsequent systematization of the received information and sending it to a dedicated server. An algorithm for the working of device in the technology of the Internet of things has been obtained. The developed measuring instrument and derived algorithms of network can be used to improve the quality of monitoring in electricity distribution systems, for estimate technical condition of equipment and controlling of reliability of power distribution energy system

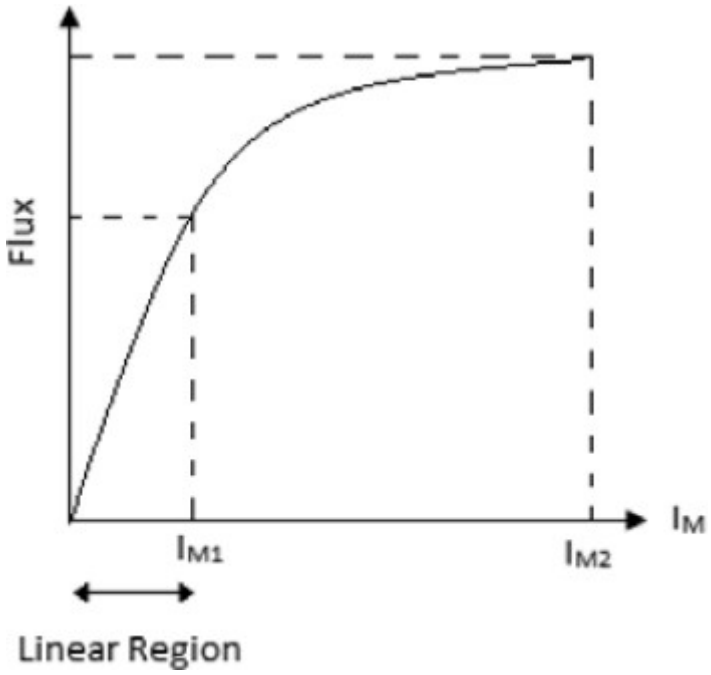

Figure 1 - Magnetization curve of current transformer

Table 1

Example	Example	Example	Example	Example
Example	Example	Example	Example	Example
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References

[1] A.G. Phadke and J.S. Thorp, Synchronized Phasor Measurements and Their Applications, 2nd ed. New York: Springer, 2017, p. 285.

[2] IEEE/IEC International Standard - Measuring relays and protection equipment - Part 118-1: Synchrophasor for power systems - Measurements," in IEC/IEEE 60255-118-1:2018, pp. 1–78, 19 Dec. 2018.