

All [Search Icon]

ADVANCED SEARCH

Conferences > 2020 IEEE Sensors Application...

Back to Results

# Detecting Powerline Noise with Low-Cost Noise Sensors for Power Outage Mitigation

Publisher: IEEE

Cite This

PDF

Steve Chan ; Ika Oktavianti ; Parnmook Nopphawan ; Marco Zennaro ; Ermanno Pietrosemoli ; Marco Rainone All Authors

8 Full Text Views



## Abstract

### Document Sections

- I. Introduction
- II. Background Information on Powerline Noise
- III. Lexicon Primer on Powerline-Related Noise
- IV. Common Sources of Noise Stemming from Electric Utility Equipment
- V. The Challenges of Analyzing Powerline Noise

Show Full Outline

Authors

Figures

References

Keywords

Metrics

## Abstract:

Relatively low-cost noise sensors can be utilized to detect for aberrant powerline noise, which is an early indicator and warning of potential power reliability and stability issues. By taking preemptive action, power outages may be avoided. Accordingly, the practicality as pertains to the utilization of low-cost noise sensors, segueing to scalability and extensibility, is examined. The strategic placement of sensors at key distribution poles has been examined previously. This paper examines how low-cost noise sensors provide an opportunity for comprehensive coverage and more likely detection of certain powerline noise aberrations at the "edge" against a set of compiled heuristics.

Published in: 2020 IEEE Sensors Applications Symposium (SAS)

Date of Conference: 9-11 March 2020

INSPEC Accession Number: 20055662

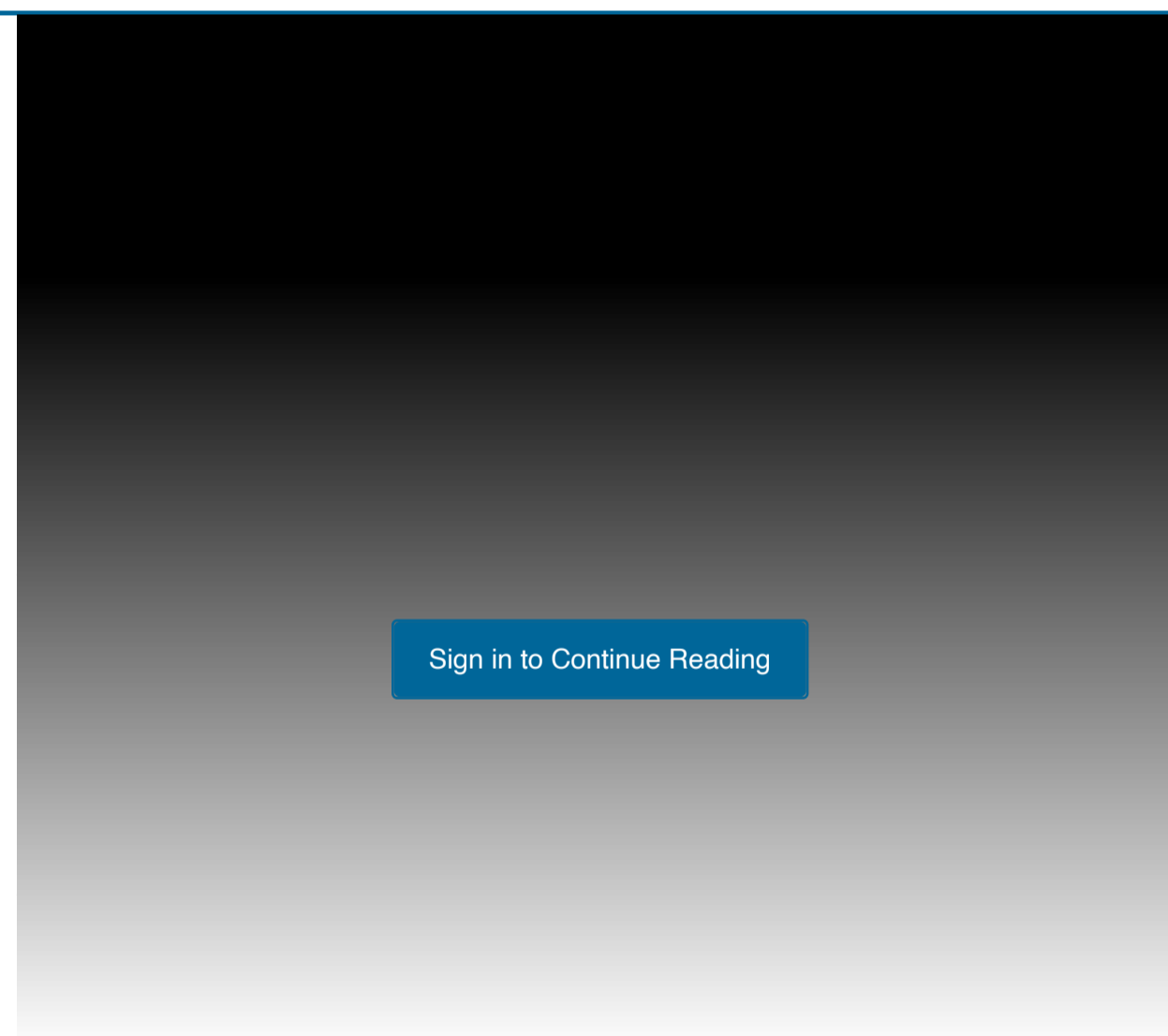
Date Added to IEEE Xplore: 12 October 2020

DOI: 10.1109/SAS48726.2020.9220027

### ISBN Information:

Publisher: IEEE

Conference Location: Kuala Lumpur, Malaysia, Malaysia



**Need Full-Text**  
access to IEEE Xplore for your organization?  
**CONTACT IEEE TO SUBSCRIBE >**

**More Like This**

Geo-lightning grid based on a geographical information system, to improve poles distribution network designs, prioritize maintenance and boost the power system reliability  
IX Latin American Robotics Symposium and IEEE Colombian Conference on Automatic Control, 2011 IEEE  
Published: 2011

Load Response Fundamentally Matches Power System Reliability Requirements  
2007 IEEE Power Engineering Society General Meeting  
Published: 2007

[Show More](#)

**WORKING FROM HOME?**

Logging in to your organization's subscription while working remotely?  
Try these tips to access  
**IEEE Xplore®**  
Digital Library

**LEARN MORE**

IEEE

- Authors
- Figures
- References
- Keywords
- Metrics

### IEEE Personal Account

CHANGE USERNAME/PASSWORD

### Purchase Details

PAYMENT OPTIONS  
VIEW PURCHASED DOCUMENTS

### Profile Information

COMMUNICATIONS PREFERENCES  
PROFESSION AND EDUCATION  
TECHNICAL INTERESTS

### Need Help?

US & CANADA: +1 800 678 4333  
WORLDWIDE: +1 732 981 0060  
CONTACT & SUPPORT

### Follow

