

## Research Papers

## Fuel Cell Diagnostics Using Identification Measurement Theory

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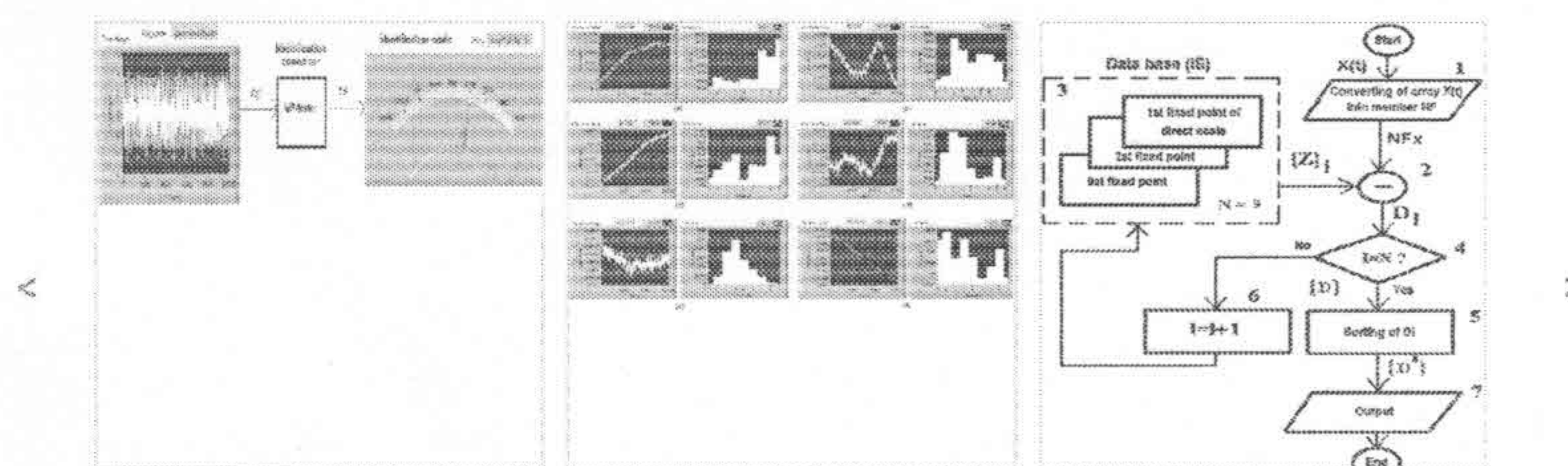
## ARTICLE | REFERENCES | FIGURES | TABLES

### Abstract

Abstract | Introduction | Identification Measurement Theory Elements | Applying SIMT to Diagnostic Problem Solving | Conclusions | Acknowledgements | References

The possibility to use instruments of identification measurement theory to solve the problems of diagnostics of fuel cells according to their noise characteristics is considered in this paper. The offered techniques of diagnostic signals processing are based on the identification measurement of time and probabilistic characteristics, the comparison of model signals with the ones under analysis according to the reading values, the classification of signals according to the waveform parameter and characteristic frequency, the building of hierarchical structures, and the assessment of the signal structures by the fractal indices. All proposed techniques are applicable for the diagnosis of a fuel cell, but thanks to graphical representation of classification trees of noise signals, the more efficient method for experts is the one based on the building of hierarchical structures.

## FIGURES IN THIS ARTICLE



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