

# Paris Session 2022



## Wide Area Monitoring and Protection System for interarea oscillations suppression in the Italian power system

SC C2 - Power system operation and control

PS1 - System Control Room Preparedness + Q 1.9 – Given that most of the procedures and rules in the management of the system operation are usually made available to national regulators should these algorithms also be made available to improve transparency of actions taken and how can developers of such algorithms protect their intellectual property?

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# EXPERIMENTAL RESULTS ON A REAL OSCILLATION EVENT

The paper describes the first real application within the Italian WAMPAC. Such an application refers to the development of an **oscillatory stability logic** that safeguards the Italian power system against undamped interarea oscillations. The mathematical framework of the detection technique based upon **Dynamic Mode Decomposition** is provided together with a proper warning/alarming criterion for the control room operators. The goodness and the efficacious of the implemented logic is verified against a real event occurred in the Italian power system

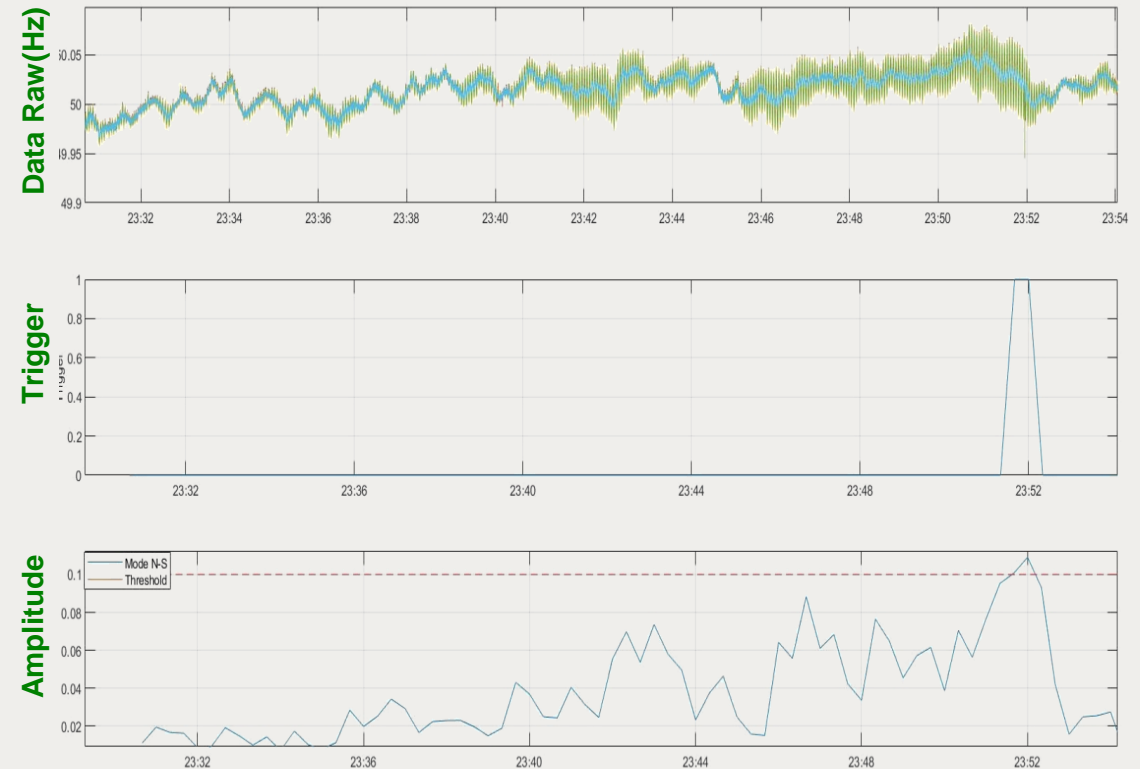
## Intellectual Property Protection



Detailed description of the algorithms adopted for the identification of low damped oscillatory phenomena, and related choice of the optimal tuning parameters is something too specialistic that often does not provide a contribution to the general comprehension of the operational rules and procedure.

Triggering criteria and adopted countermeasures in the case of dangerous situation identification can instead be more usable in understanding how the control room operator react.

In this case intellectual property, independently if from an external supplier or developed internally to the company, can be preserved.



Output **Dynamic Mode Decomposition** and Trigger evaluation