

# rethinking the role of scientific evidence in the italian criminal process



## Conférence publique de l'École des sciences criminelles

20 février 2025, 16:15–17:15

UNIL | Batochime Auditoire 2201

**Professor Elena Maria Catalano**  
University of Insubria, Varese/Como (Italy)



### Abstract

The growing role of scientific evidence is one of the most controversial issues in the current debate over the Italian criminal justice system. On the one hand, the spread of neuroscientific evidence, as well as the applications of artificial intelligence, poses a threat to the survival of the adversarial model of criminal trial. On the other hand, the last decades have witnessed the introduction of concepts and rules which are deeply entrenched in Anglo American culture. The "beyond a reasonable doubt" (BARD) standard of proof and the Daubert criteria for the admissibility of scientific evidence are both cases in point. However, transplanting legal patterns is never a painless operation. Rethinking the topic of scientific evidence also involves issues stemming from a wide gamut of disciplines, ranging from statistics to psychology, as far as judicial fallacies are concerned.

My presentation will be divided into four parts. First, I will address the topics of admission and evaluation of scientific evidence, with an emphasis on the paradoxical role of the judge *peritus peritorum*. Then, I will turn to the problem of the Italian adversarial system faced with the challenges from the CSI effect, with a focus on fallacies in legal reasoning. To conclude, I will discuss how the BARD rule can assist judges in dealing with scientific evidence.

### About the speaker

Elena Maria Catalano is Associate Professor of Criminal Procedure at Insubria University, qualified Full Professor since 2010. She is a criminal defence lawyer in Milan, working in the field of white-collar crime. She also administered courses in Comparative Criminal Procedure at Milano Bicocca University (1999-2004). Her main research interests lie in the field of the law of evidence. Her latest publications include: *Ragionevole dubbio e logica della decisione* (2016); Amodio & Catalano, *La sconfitta della ragione. Leonardo Sciascia e la giustizia penale* (2022); Catalano & Ferrua (eds) *Corderiana. Sulle orme di un maestro del rito penale* (2023).