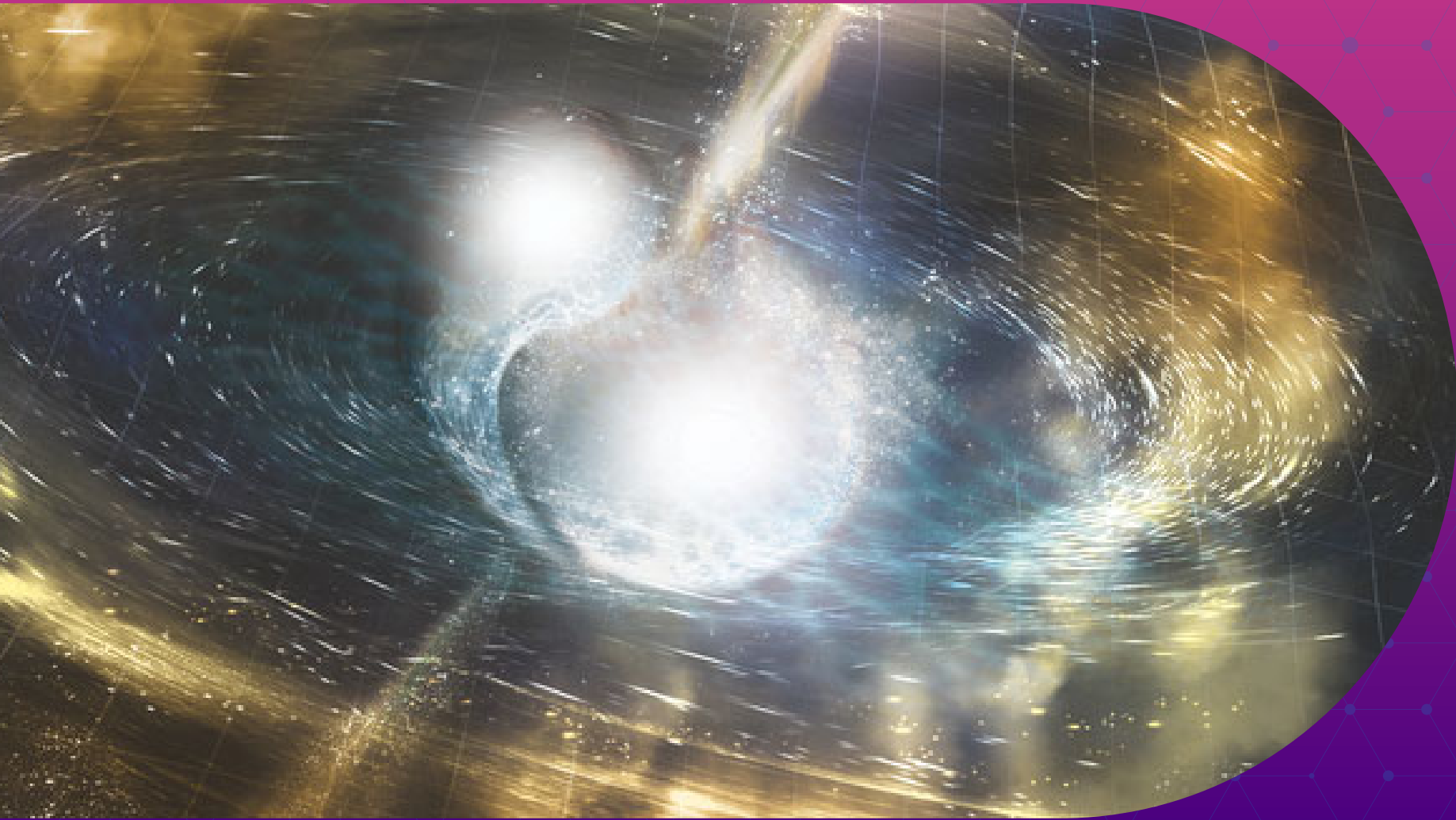


# PHYSICS COLLOQUIA 2024



Gravitational wave transient astrophysics has entered an exciting era with the advent of advanced gravitational wave detectors. These detectors have opened a new window to the cosmos, allowing us to observe and study astrophysical events with unprecedented precision. Artificial Intelligence (AI) has emerged as a groundbreaking technology with the potential to revolutionize various scientific fields. In this seminar, we will explore the impact of AI on gravitational wave transient astrophysics. By training machine learning models to recognize subtle patterns and signals, researchers can improve the efficiency and accuracy of detection algorithms, leading to rapid identification and categorization of transient events. The seminar will present how AI algorithms can enhance the detection and classification of gravitational wave transients. The integration of AI algorithms with real-time data analysis will also be explored, enabling researchers to respond swiftly to gravitational wave events and triggering follow-up observations across different electromagnetic wavelengths.

**Elena Cuoco** | European Gravitational Observatory (EGO) and Scuola Normale Superiore-Pisa (ITA)

## THE IMPACT OF ARTIFICIAL INTELLIGENCE ON GRAVITATIONAL WAVE TRANSIENT ASTROPHYSICS

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**MAY  
24**



**UNIVERSITÀ DEGLI STUDI DI MILANO**  
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