



Seminar Aircraft Operations Course

Aircraft Accidents: Technical Investigations and Flight Safety (the *Ustica case*)

The paradigm of the importance of accurate, independent and transparent technical investigations

The technical ascertainment of the causes of an aircraft accident is a fundamental element for flight safety, the protection of victims, and the advancement of technical knowledge. This seminar takes the *Ustica case* as a starting point to examine the methodologies, limitations and practical implications of technical investigations: collection and analysis of physical evidence, radar reconstruction and flight dynamics, data interpretation, and the role of independent expert reports in politically sensitive contexts. The objective is to discuss technical tools and organizational processes that can ensure rigorous, reproducible investigations capable of producing effective safety recommendations.

Seminar objectives

- Illustrate the main phases of a technical aircraft-accident investigation: evidence collection, analysis of flight and communications data, dynamic modelling, and integration of findings.
- Present advanced forensic methodologies applied to aeronautics and the instrumental and procedural limitations that can hinder reconstruction.
- Discuss the role and value of independent technical expert reports in promoting transparency, accountability and improvements in safety.
- Highlight the interactions among technical, legal and political aspects that emerge in complex investigations.
- Provide practical insights for practitioners, researchers and students interested in accident investigation and flight safety.

<p>Host</p> <p>Prof. Vincenzo Cusati: Aircraft Operations Course Lecturer</p> <p>Date and Location:</p> <ul style="list-style-type: none">• 27th November• 10:00 – 13:00 PM• T-A5 room Agnano – Napoli <p>Contact info: vincenzo.cusati@unina.it</p>	<p>Panelists</p> <p>Prof. Leonardo Lecce: Member of the second expert commission (Blasi, 1984) and co-author of a technical report on the Ustica case in 2011.</p> <p>Prof. Agostino De Marco: Renowned expert in accident reconstruction.</p> <p>Prof. Danilo Ciliberti: Specialist in Flight Dynamics Analysis.</p>
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The Ustica Accident:

Date: June 27, 1980

Aircraft: McDonnell Douglas DC-9, Itavia Flight 870

Location: Tyrrhenian Sea, near Ustica Island

Fatalities: 81 passengers and crew

Controversy: Disputed causes include a missile strike, bomb explosion, or structural failure. The case involves military operations and complex international relations.

Contributions of the Panellists

Prof. Leonardo Lecce played an integral role in uncovering the details of the Ustica incident. As a member of the **Blasi Commission in 1984**, he participated in the comprehensive analysis of the wreckage and other critical evidence related to the crash. This commission focused on uncovering the technical causes of the incident amidst its political and social controversy. In 2011, Prof. Lecce co-authored a detailed **technical report** that served as vital evidence in civil litigation on behalf of the victims' families. His work combined technical expertise and forensic analysis, shedding light on previously unexplored aspects of the case.

Prof. De Marco brings extensive experience in accident reconstruction methodologies, particularly as applied to the Ustica case. His technical insights have been instrumental in uncovering the potential sequence of events leading to the incident. Collaborating with Prof. Lecce in 2011, Prof. De Marco contributed to the technical report that provided critical evidence in legal proceedings, combining technical rigor with a commitment to justice for the victims' families.

Key Findings and Reports

The **Blasi Commission (1984)** conducted an exhaustive investigation, focusing on analysing radar data, debris, and other physical evidence. The commission's findings pointed to the possibility of a missile strike as a probable cause of the crash, given the patterns observed in the wreckage and the nature of the incident. This report highlighted the complexities of the case, which involved significant international political and military implications. In **2011**, a subsequent **technical report** leveraged advanced forensic methodologies to revisit and expand upon the findings of earlier investigations. This report provided updated insights, crucially supporting the legal cases of victims' families in civil court. The meticulous attention to detail and technological advancements utilized in this report underscored the importance of continuous reevaluation in long-standing cases.